

Deterring Nonstate WMD Attacks

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A terrorist group armed with a weapon of mass destruction (WMD) is arguably the greatest threat to the United States and its allies in the current era.¹ Porter Goss, former Director of Central Intelligence, starkly made this point in 2005 testimony before Congress. “Al Qaeda is intent on finding ways to circumvent U.S. security enhancements to strike Americans and the Homeland. It may be only a matter of time before Al Qaeda or another group attempts to use chemical, biological, radiological, and nuclear weapons.”² The U.S. government has reason to be afraid. Recent terrorist attacks in London, Madrid, and Bali were horrific, but were carried out with conventional explosives. The physical, economic, and psychological damage from a terrorist WMD attack could easily equal or exceed that of the 11 September 2001 attacks, to say nothing of its effects on the pace of globalization, which may explain why al Qaeda leader Osama bin Laden has voiced an interest in acquiring WMD.³

Acquiring [WMD] weapons for the defense of Muslims is a religious duty. If I have indeed acquired these weapons, then I thank God for enabling me to do so. And if I seek to acquire these weapons, I am carrying out a duty. It would be a sin for

¹ For the purposes of this article, WMD include nuclear, radiological, chemical, and biological weapons.

² *Current and Projected National Security Threats to the U.S.: Hearings before the Senate Select Committee on Intelligence*, 109th Cong., 1st Sess (testimony of Porter Goss, 16 February 2005, 2). Also see National Intelligence Council, *Mapping the Global Future* (Washington DC: Government Printing Office, 2004), 93–95. For similar comments in 2003, see *The International Terrorist Threat: Hearings before the House International Relations Committee, Subcommittee on International Terrorism*, 108th Cong., 1st Sess. (testimony of Cofer Black, 26 March 2003). As Audrey Cronin notes, religious terrorists show little restraint in the conduct of war (*jus in bello*) once they have justified going to war (*jus ad bellum*). Audrey Cronin, “Rethinking Sovereignty,” *Survival* 44 (Summer 2002): 119–139.

³ Thomas Friedman, *The World is Flat* (New York: Farrar, Straus and Giroux, 2005), 391–413.

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Muslims not to try to possess the weapons that would prevent the infidels from inflicting harm on Muslims.⁴

Of equal and related concern, there have been repeated attempts to smuggle chemical and nuclear WMD materials from former Soviet territory over the last several years.⁵ More recently have come revelations that one or more Pakistani scientists provided uranium enrichment technology, expertise, and nuclear warhead designs to Libya, Iran, North Korea, and possibly, even to Syria and Iraq.⁶ Allegations have circulated that these same officials may have passed information to al Qaeda on how to construct a radiological “dirty bomb.”⁷ Other allegations exist that arms traffickers from the former Soviet Union have been approached by al Qaeda for nuclear materials.⁸

Two things are surprising, given the seriousness of a potential terrorist WMD attack. First, the idea that religiously oriented terrorists cannot be deterred from attacking Western interests or from using WMD if the terrorists acquire such weapons is a relatively unexplored assumption, based on anecdotal evidence.⁹ Nonetheless, this assumption is consistently made by most academicians and the U.S. government. Consider that the heart of the George W. Bush administration’s preemption doctrine is the idea that terrorist groups

⁴ John Parachini, “Comparing Motives and Outcomes of Mass Casualty Terrorism Involving Conventional and Unconventional Weapons,” *Studies in Conflict and Terrorism* 24 (September 2001): 389–406.

⁵ William Potter, “Nuclear Smuggling from the Former Soviet Union” in David Marples and Marilyn Young, eds., *Nuclear Energy and Security in the Soviet Union* (Boulder, CO: Westview Press, 1997): 139–159; John Berryman, “Russia and the Illicit Arms Trade,” *Crime, Law and Social Change* 33 (March 2000): 85–104; Joby Warrick, “Smugglers Enticed by Dirty Bomb Components,” *The Washington Post*, 30 November 2003; and Tom Parfitt, “The Nuclear Nightmare,” *The Times* (UK), 3 March 2004.

⁶ Peter Slevin, John Lancaster, and Kamran Khan, “At Least Seven Nations Tied to Pakistani Nuclear Ring,” *The Washington Post*, 8 February 2004; William Broad, “Libya’s A-Bomb Blueprints Reveal New Tie to Pakistani,” *The New York Times*, 9 February 2004.

⁷ Owais Tohid, “Pakistan and its Proliferator,” *The Christian Science Monitor*, 6 February 2004, 1.

⁸ Lyudmila Zaitseva and Kevin Hand, “Nuclear Smuggling Chains,” *American Behavioral Scientist* 46 (February 2003): 822–844.

⁹ Joseph Leggold, “Hypotheses on Vulnerability: Are Terrorists and Drug Traffickers Coerceable?” in Lawrence Freedman, ed., *Strategic Coercion: Concepts and Cases* (Oxford: Oxford University Press, 1998), 131–150; Gerald Post, “Psychological and Motivational Factors in Terrorist Decision-making: Implications for CBW Terrorism” in Jonathan Tucker, ed., *Toxic Terror: Assessing the Terrorist Use of Chemical and Biological Weapons* (Cambridge, MA: Harvard University Press, 2000), 271–290; Daniel Byman, “Scoring the War on Terrorism,” *National Interest* 72 (Summer 2003): 75–84; Paul Davis and Brian Jenkins, *Deterrence and Influence in Counterterrorism* (Santa Monica, CA: RAND, 2002), 12–14; Adam Dolnik, “Die and Let Die: Exploring Links between Suicide Terrorism and Terrorist Use of Chemical, Biological, Radiological, and Nuclear Weapons,” *Studies in Conflict and Terrorism* 26 (January–February 2003): 17–35; and Thomas Friedman, “War of Ideas, Part 1,” *The New York Times*, 8 January 2004. For somewhat opposing views, see Gerald Steinberg, “Rediscovering Deterrence After September 11, 2001,” *Jerusalem Letters/Review*, no. 467, 2 December 2001; John Parachini, “Putting WMD Terrorism into Perspective,” *The Washington Quarterly* 26 (Autumn 2003): 37–50; Lawrence Freedman, *Deterrence* (Malden, MA: Polity Press, 2004), 124.

cannot be deterred from launching attacks on the United States. Second, there is little discussion in academic or policy circles as to how terrorists might acquire WMD, other than to assert that state sponsors of terrorists should be deterred or coerced to withhold such material, or that weapons stockpiles should be consolidated and better guarded and that weapons scientists should be paid a living wage.¹⁰

This article rectifies both points. I first explore the general problem of how one might deter WMD attacks by terrorist actors. In essence, this is a demand-side question, in that Western deterrence would be aimed at decreasing terrorist demand for WMD. Key to understanding the problem of deterring terrorist groups is reexamining the fundamental tenets of deterrence theory and assessing whether the past inability to deter terrorists was due to some intrinsic characteristics of those groups or instead to the incomplete application of deterrence theory by nation-states. I argue that both are true and to a large extent unavoidable. Deterring terrorists by threatening punishment is extremely difficult, given terrorist motivations and liberal democratic values, and may even be self-defeating. A deterrence strategy that would deny terrorists any gains from mass casualty WMD strikes is also difficult for nation-states to sustain, even for states as powerful as the United States.

Given the difficulties associated with deterring a terrorist WMD attack, I then discuss how to deny terrorists the *means* to launch devastating attacks. This is a supply-side question. I focus attention on transnational organized crime as a likely source of WMD and WMD materials and argue that deterrence threats can work when aimed at such groups. A wide literature on organized crime groups, and on the deterrence relationship between threatened punishment and criminal behavior, supports the idea that transnational organized crime groups should be susceptible to deterrence threats, given particular, achievable circumstances. In short, I advocate a strategy of preventing WMD terrorist attacks by deterring potential nonstate WMD suppliers via a deterrence strategy. I conclude by reviewing the policy implications of my argument.

THE CALCULUS OF DETERRENCE

The supposed track record of deterring terrorists is not good, even for powerful states or states willing to retaliate after an attack. For instance, unrivaled hegemonic power has not kept the United States safe from terrorist attack; nor has often-brutal retaliation deterred suicide attacks in Russia or Israel. The

¹⁰ For examples of the former perspective, see Derek Smith, "Deterrence and Counterproliferation in an Age of WMD," *Security Studies* 12 (Summer 2003): 152–197; Andrew Newman, "Arms Control, Proliferation and Terrorism," *Strategic Studies* 27 (March 2004): 59–88. The Cooperative Threat Reduction initiative is a cornerstone of the latter perspective. Our ability to deter state proliferation to terrorists is at the heart of the President's statements that "You are either with us or against us." See Jason Castillo, "Nuclear Terrorism: Why Deterrence Still Matters," *Current History* (December 2003): 426–431.

problem is that in the former case, it is unclear that the United States has actually signaled a broad deterrence threat against terrorists. Instead, we have vowed to kill or capture any terrorists we find, regardless of whether they have attacked us. A similar dynamic is at work in the Russian and Israeli cases, compounded by the fact that neither country has offered an alternative inducement to the Chechens or the Palestinians, respectively, to provide them an incentive to stop fighting. Given these and other more general problems associated with attributing deterrence success and failure, this paper explores the dynamics involved in deterring a terrorist WMD attack in the abstract. I find that terrorist groups should indeed be hard to deter, due to both terrorist motivations and the inherent (and proper) constraints that liberal democracies place on their own behavior. But before applying any deterrence model, it is important to define terms.

Deterrence is a dynamic, interactive process between at least two entities. Deterrence policies are predicated on threatening an adversary with pain if that adversary changes its behavior in ways that you find detrimental to your interests. The threatened pain can take any number of forms, from military violence to financial penalties to diplomatic ostracism. You do not actually have to inflict the pain to be successful at deterrence. In fact, resorting to retaliation means that your deterrence policy has failed. Instead, successful deterrence relies on influencing an adversary's perceptions and expectations of pain. You must make them believe that you will inflict pain if they change their behavior in ways that you do not like, regardless of whether you actually plan on causing pain should deterrence fail. You also may need to promise to withhold your threat should the adversary not change their behavior, and have that promise believed (or there is no reason for the adversary to comply with your demands). For all of these reasons, deterrence success is heavily dependent both on signaling the adversary of your intentions and on that adversary interpreting your signals correctly. Communication, through words and deeds, is thus central to a deterrence relationship.

For deterrence to work against an individual, a terrorist or crime group, or a nation-state, you must either increase the costs that the entity has to pay, or decrease the benefits they get, should they change their behavior. In the parlance of deterrence, threatening to increase the adversary's costs is often referred to as deterrence by punishment.¹¹ American threats of massive nuclear retaliation against Soviet cities, had the Soviets invaded western Europe, is an example of deterrence by punishment. Threatening to decrease or nullify the benefits reaped by an adversary should it change its behavior is often referred to as deterrence by denial. Targeting Soviet weapons and troops in the field was a Cold War example of deterrence by denial, in that their destruction would deny the Soviets the ability to control western Europe.

¹¹ Glen Snyder, *Deterrence and Defense: Toward a Theory of National Security* (Princeton, NJ: Princeton University Press, 1961).

A deterrence-by-denial strategy is often equated with defensive measures in standard treatments of deterrence. But whereas defense is the use of brute force to repel or defeat an attack, deterrence by denial uses the *threat* of defeat to prevent the attack before it occurs. To use a concrete example, homeland security capabilities are pure defenses to the extent that they can defeat a terrorist attack. They are a deterrent only if their existence changes a terrorist's perceptions of likely success, leading to an abandonment of the terrorist attack.

Distinguishing deterrence from defense yields two related points. First, deterrence by denial is usually discussed in the context of potentially violent conflicts in which what is being denied is a military objective. The concept of denial could just as easily be applied to nonmilitary objectives, however, such as the broader political or religious goals of a terrorist movement. The deterrent policy attempts to create the perception that a terrorist's goals cannot be achieved, which should decrease the rationale for violent terrorist attacks. Second, deterrence by denial has often been applied to confrontations between opposing military forces, yet a deterrence-by-denial strategy could employ nonmilitary means. For example, an opposition party's threat to boycott an election should the government party prohibit international observers is an example of a nonmilitary deterrence-by-denial strategy, at least if opposition participation is crucial to the election's legitimacy and the government values such legitimacy. The opposition's threats are not defensive; they do not prohibit votes for the government party. Instead they threaten to conditionally deny the government any benefit from the election, thus qualifying as deterrence by denial.

Deterrence by punishment is a difficult but possible strategy against nonstate actors. It requires convincing signals that we could identify *whom* to retaliate against. In other words, do our potential adversaries believe that we can link those responsible for an attack to the events themselves? Second, we have to convincingly signal that we can identify *what* to retaliate against to inflict pain. That is, we must be able to identify what an adversary values. As I discuss below, terrorist and crime groups have numerous component parts, including leaders, foot soldiers, financiers, logisticians, etc. A crucial facet of a deterrence-by-punishment strategy is signaling that we know what is valued by each component of a nonstate organization and where it is located. Third, we have to signal that we have the *will* and *capabilities* to inflict pain against those things valued by each actor's component parts. That is, we must demonstrate that our threats are credible. Doing so may require everything from publicly maintaining appropriate capabilities, to overcoming the legal and organizational impediments for their use, to the public release of successful instances of retaliation. Most importantly, our deterrence threats stand a better chance of appearing credible if we demonstrate that we have no choice but to implement our threats should that be necessary.¹²

¹² Thomas Schelling, *The Strategy of Conflict* (Cambridge, MA: Harvard University Press, 1960); Thomas Schelling, *Arms and Influence* (New Haven, CT: Yale University Press, 1966).

Deterrence by denial, as defined here, has different requirements. To deny an opponent any benefit from an attack on us requires that we identify the opponent's *goals* with some specificity. This requires excellent intelligence capabilities regarding the adversary's priorities and decision-making apparatus. It also requires that we understand the consequences of the steps we take to deny the adversary their goals. For instance, threatening military retaliation for terrorist attacks on us may be counterproductive, in that military retaliation could enhance the adversary's goals of martyrdom or appearing as victims of Western imperialism.

We must also convincingly signal that we have the ability to *prevent* an opponent from achieving its goals (preferably whether or not we retaliate for an attack). If the power to hurt is bargaining power, then denying that power to opponents diminishes their power.¹⁵ For instance, if a terrorist's goals would be advanced via the destruction of a specific class of targets (that is, embassies, ships, aircraft, etc.) or through the use of particular forms of attack (that is, computer attacks, car bombs, WMD, etc.) deterrence could be enhanced if the opponent believed that we were aware of its plans and/or had the ability to defend against them, rendering those plans relatively harmless. If a terrorist group wants the United States out of the Middle East, maintaining a robust U.S. presence in the region, regardless of the cost, threatens that terrorist goal.

There are a number of potential problems associated with each type of deterrence. Deterrence by punishment requires excellent intelligence, particularly when applied to terrorists. Without good intelligence, we cannot identify the perpetrators of attacks or appropriate retaliatory measures. Punishing terrorists also may require relaxing the laws of war to allow for the targeting of noncombatants, with all the serious repercussions that this would entail. On the other hand, a deterrence-by-denial strategy could require public signals that we know an enemy's targets or goals, which could lead to alternative targets being selected or create domestic panic. In addition, we must publicly disseminate at least some information regarding our defensive measures, if defenses are to act as a deterrent, or our political intent, if denying broad terrorist goals is our intent. The result of doing either could be that those very defenses or that political intent would be undermined, or that terrorists would choose a softer target or shift goals. Finally, defenses and demonstrating political staying power are both potentially expensive.

This short conceptual discussion points to serious dilemmas associated with deterring WMD attacks using either threats of punishment or denial. Moreover, any solution will of necessity have limited applicability if attempted across the spectrum of nonstate organizations and possible scenarios of attack. Indeed, deterrence requires a case-by-case approach, because nonstate actors vary tremendously in terms of their goals, organization, and support. The following

¹⁵ Branislav Slantchev, "The Power to Hurt: Costly Conflict with Completely Informed States," *American Political Science Review* 97 (February 2003): 123–135.

section discusses the difficulty of deterring WMD attacks from extreme religious terrorist groups.

DETECTING TERRORIST WMD ATTACKS

The United States is currently most concerned about preventing attacks from religious fundamentalist groups such as al Qaeda, particularly those attacks that might produce mass casualties and/or involve WMD. Indeed, this section will demonstrate that it is almost impossible to devise an effective deterrent threat against terrorist WMD attacks by religious fundamentalist groups, for multiple, reinforcing reasons.¹⁴ First, such terrorists are highly motivated, and deterrence tends to fail against such opponents. Our notion of retaliatory punishment may in fact benefit (and even encourage) such terrorists. Second and related, we may undermine our own effort. The response of religious terrorists to our threatened implementation may be exactly the opposite of what we intended, because we do not understand the impact of our retaliation on a terrorist group's standing in their own communities. Moreover, our overriding need to defend against terrorist attacks may in some instances undercut our deterrence threats. Third and finally, terrorist actors may be difficult to locate, because they are transnational in nature and blend in with civilian populations, and we cannot credibly threaten pain against those we cannot find.

Deterrence by Punishment

Terrorist motivations and their consequences. Deterrence by punishment is one possible but extremely daunting means of preventing such attacks. Detering an al Qaeda WMD attack via threats of U.S. punishment requires understanding what to retaliate against and how to do so for the greatest effect. As Thomas Schelling noted in the 1960s, knowing what an opponent values is a necessary condition for deterrence success. The motivations of al Qaeda operatives, therefore, are crucially important to this facet of the deterrence equation. To summarize a voluminous literature, al Qaeda is a group that feels threatened by the secular modern world and oppressed by corrupt Middle East regimes. As a result, al Qaeda aims to drive the United States out of the Middle East and overthrow those regimes friendly to the West. In their place would be created a Muslim caliphate, governed by strict adherence to Islamic law. But that said, al Qaeda is an evolving entity. The group increasingly has taken on the status of a movement or an ideology rather than a formal organization.¹⁵ In that sense, al Qaeda and its affiliated groups are like a cancer growing in the modern world and seeking to destroy that world from within.

¹⁴ Cronin, "Rethinking Sovereignty," 130; Davis and Jenkins, *Deterrence and Influence*, 3–7.

¹⁵ Raymond Bonner and Don Van Natta, "Regional Terrorist Groups Pose Growing Threat, Experts Warn," *The New York Times*, 8 February 2004; Jamie Glazov, "Symposium: Diagnosing Al Qaeda," *Front Page Magazine*, 12 August 2003; Byman, "Scoring the War on Terrorism."

But knowing what motivates this movement as a whole is not enough for determining an appropriate form of threatened punishment. Members of al Qaeda are not all alike or interchangeable, and al Qaeda is not the only group of concern when it comes to potential WMD attacks. The movement comprises different types of people with different levels of training and expertise. Most importantly, each component part may respond differently to retaliatory deterrence threats—responses that may seem counterintuitive at first glance.

Paul Davis and Brian Jenkins disaggregate al Qaeda into senior leaders, lieutenants, foot soldiers, recruiters, and supporters among the populace and among religious leaders. Bruce Hoffman groups the organization into leaders, professional cadres, trained amateurs, local walk-ins, and affiliated groups. Regardless of what specific categories one uses, al Qaeda seems to have relatively few senior leaders, a greater number of highly trained lieutenants, anywhere from 50,000 to 70,000 trained foot soldiers from its camps in Sudan and Afghanistan, and an indeterminate (but increasing) number of relatively untrained volunteers like Richard Reed, Jose Padillo, and an unknown number of recruits in Iraq.¹⁶ Add to that, the movement actively recruits new volunteers through appeals in mosques, on the Internet, and in Arab language media. The movement receives financial support from a host of sources, ranging from direct donations from individuals and front organizations, to profits from drug smuggling, to indirect donations siphoned from legitimate charities.

Any deterrence strategy must incorporate the fact that each component of a terrorist organization may have different specific motivations and values. For instance, senior al Qaeda leaders have not led suicide missions in the United States or Iraq, or fought to the death in the mountains of Afghanistan, even though they claim not to fear death. Instead, they have been deeply involved in the planning, logistics, and financing of such attacks, leaving implementation to their lieutenants. If senior leaders are averse to dying, then threatening their lives could be a useful deterrent to the mass-casualty, “spectacular” attacks that senior al Qaeda leaders are alleged to plan and direct.¹⁷ Were such a strategy to work, it would obviate the need to worry about WMD attacks by lower level members.

Two possible consequences could undermine such a deterrence strategy, however. First, assassination is morally repugnant to many, and advocating it absent an attack and a clear evidentiary trail to the correct perpetrators might create a public backlash, particularly given current skepticism regarding intelligence claims.¹⁸ Second, we would have to credibly commit to spare terrorist

¹⁶ Davis and Jenkins, *Deterrence and Influence*.

¹⁷ Bruce Hoffman, “The Leadership Secrets of Osama Bin Laden,” *The Atlantic Monthly* 291 (April 2003): 26–27.

¹⁸ Brian Jenkins, *Should our Arsenal against Terrorism Include Assassination?* (Santa Monica, CA: RAND, 1987); and Catherine Lotrionte, “When to Target Leaders,” *Washington Quarterly* 26 (Summer 2003): 73–86.

leaders that withheld WMD attacks if threatened assassination were to work as a deterrent. Terrorists have no incentive to restrain themselves absent our credible commitment on that score. The implications are profound. Withholding U.S. action in the name of deterrence, absent attack, contravenes the stated U.S. policy of degrading terrorist capabilities whenever possible. One cannot do both. But it is unclear whether an elected official can survive politically by arguing that the country should engage in a risky and by no means certain attempt to deter a terrorist attack at the expense of leaving a terrorist group's capabilities intact.

If we cannot deter terrorist leaders, perhaps we can deter lower level operatives. Unfortunately, threats of lethal punishment are unlikely to deter lieutenants and foot soldiers either. These lower level operatives seem to embrace martyrdom to a much greater extent than do their leaders. Death in combat with the infidel is seen as a benefit, not a punishment, which makes deterrence threats self-defeating; they simply increase the enemy's motivation to attack. Extreme threats such as threatening to bomb Islamic holy sites or to bury so-called martyrs in pig fat to deny them entry to heaven would only reinforce accusations that the West was engaged in a clash of civilizations against the Muslim world and could increase terrorist recruitment, much as rumors of rifle cartridges lubricated with pig grease hastened the nineteenth-century Indian mutiny against the British.

Deterrence may not work even against those terrorists who choose martyrdom as a means of providing material and psychological benefits to their families—as has been the case with some suicide bombers in Israel—rather than for promised rewards in the afterlife.¹⁹ In those cases, threatening the lives or livelihood of (presumably) innocent family members of known or suspected terrorists might work as a deterrent, but is morally reprehensible to many. Moreover, the record of Israeli reprisals when family members of suspected terrorists have been killed (intentionally or not) does not hold out much promise for this tactic.

Deterrence is complicated by one final, potentially unintended consequence. To deter a terrorist group requires signaling our abilities and intent. Given that we have no private, direct communication link with terrorist groups, we must communicate indirectly, with the significant possibility of that becoming public knowledge, or communicate publicly for the world to hear. Yet we face a dilemma if a terrorist group does not take responsibility for an attack. Intentional or inadvertent public linkage of an attack to a terrorist group may build our reputation for good intelligence, but doing so also may bolster that group's image or drive them into hiding, to say nothing of possibly compromising intelligence sources and methods.²⁰ The result is that the communication necessary for deterrence by punishment may strengthen the very groups we want to stop.

¹⁹ Dolnik, "Die and Let Die," 29.

²⁰ Davis and Jenkins, *Deterrence and Influence*, xii.

This does not mean that deterrence is doomed to fail, but it does mean that over time, we may have to deter an increasingly popular opponent.

Operational difficulties. There are a number of practical difficulties that make deterrence by punishment unattractive. We have to find the terrorists to punish them, and liberal democracies have so far shown little ability to locate even the most senior leaders of terrorist organizations, to say nothing of the vast numbers of terrorist underlings. Remember that successful deterrence by punishment requires that we demonstrate that we can identify who is behind an attack. This is hard to do on our own soil, as we saw with the stymied investigations into the anthrax- and ricin-laden letters sent to the U.S. Senate. Finding the perpetrators of an attack overseas arguably is more difficult. Intelligence failures associated with the September 11 attacks, with Operation Iraqi Freedom, and in the continuing hunt for bin Laden signal the world community that our intelligence assets may not be capable of correctly identifying the perpetrators of a terrorist attack.

Changing international perceptions on this score is a difficult although not insurmountable task. What we cannot do is jump to unsubstantiated conclusions in a rush to lay blame for a future attack. Being wrong will only reinforce the impression of faulty or politicized intelligence that the U.S. government already suffers from. If we can avoid that temptation, social psychologists tell us that we need attribute blame correctly in only a few instances to get the reputation that we can do so on a regular basis.²¹ We may even get help from the terrorists themselves. After all, terrorist groups thrive on publicity, as witnessed by bin Laden's boasts after the September 11 attacks. Such boasts may be a terrorist's recruiting tool, but they also help us attribute blame. Whether the same behavior would hold true in the aftermath of a WMD attack is unknown.

Overall then, significant difficulties must be overcome for a successful deterrence-by-punishment strategy aimed at religiously oriented terrorist groups. It is by no means self-evident that such groups can be swayed by threats of punishment. Yet to be successful, we must minimize the consequences of our retaliatory actions. We must demonstrate that we can attribute blame for an attack to the proper group and then carry out our threatened punishment. And we must possess intelligence on how specific groups are organized, what is valued by each part of a terrorist organization, and what the group's center of gravity is for specific types of attacks.²² Each of these requirements is daunting in and of itself. Combined, they support the conclusion that deterrence by punishment is not a viable stand-alone option when it comes to religiously motivated terrorist groups.

²¹ Jonathan Mercer, *Reputation and International Politics* (Ithaca, NY: Cornell University Press, 1996).

²² Davis and Jenkins, *Deterrence and Influence*, 43.

Deterrence by Denial

Terrorist motivations. A denial strategy relies on demonstrating the ability to deny terrorists the achievement of their goals. Yet, as with deterrence by punishment, this is not a straightforward task. Al Qaeda differs from some of its affiliated groups when we consider its overall goals. Al Qaeda desires a Muslim caliphate free from Western interference and influence. While some regional or local terrorist groups may share that desire (Islamic Jihad or Jemaah Islamiyah, for example), many have separatist (for example, the Liberation Tigers of Tamil Eelam in Sri Lanka or the Chechens in Russia) or political agendas (Hamas, for example). Three specific goals stand out as worthy of consideration if we limit our discussion to groups motivated by radical religious ideologies. First and most immediately, groups such as al Qaeda need operational successes to keep their movements strong. Second, they want the West out of the Islamic holy lands. Third and finally, they want to overthrow those governments friendly to the West and replace them with Islamic republics that follow Shari'a law. A WMD attack in the United States would achieve the first goal and could arguably advance the second goal. A WMD attack against Middle Eastern regimes would also achieve their first goal and could advance the second and third goals, depending on international reactions.

Assuming that this is a valid portrayal, how could we demonstrate our ability to prevent those goals from being realized? Most immediately, we could take steps to thwart terrorist attacks by enhancing the active defense of U.S. and friendly territory. Demonstrating our success would weaken the international appeal of the terrorist group because local groups are drawn to the al Qaeda brand name for its global cachet; or to put it another way, the affiliated individuals and groups join up to be part of a larger successful cause. Group psychology—being part of a successful al Qaeda movement—becomes more important than the individual judgment (and possibly more cautious behavior) of any one individual or local group.²³ Or to use a different analogy, the al Qaeda leadership acts like venture capitalists in the broader terrorist movement.²⁴ An equally apt metaphor is of a large corporation (for example, McDonalds, Starbucks, etc.) that is willing to lend its brand name to local “franchises” on the condition that the local groups abide by certain standards of behavior, share profits with the parent organization, and periodically report back to the corporate office for direction. Senior al Qaeda leaders do not direct or control all operations but instead solicit ideas from affiliated groups or entrepreneurial individuals. As these operations develop, al Qaeda leaders provide inspiration and occasional oversight and correction of those

²³ Gerald Post, “Psychological and Motivational Factors,” 273.

²⁴ Bruce Hoffman, “Rethinking Terrorism and Counterterrorism since 9/11,” *Studies in Conflict and Terrorism* 25 (September–October 2002): 303–316.

groups.²⁵ Failure of individual franchises or the corporate headquarters degrades the franchise name.

Operational difficulties. Successful attacks help maintain the movement's allure and its ability to recruit and inspire martyrdom in its recruits. Thwarting terrorist attacks decreases that allure. The key problem with effective defenses, of course, is that they are tremendously expensive and are rarely perfect. Increased port and rail security, for example, is widely seen as a necessary defensive measure, but the United States has yet to implement the required procedures, due to their cost. Another long-term, deterrence-by-denial initiative could involve threatening a terrorist group's standing in its religious community as a way of ensuring that existing regimes are not overthrown in favor of fundamentalist rule. Unfortunately for opponents of terrorism, there is no accepted canon of religious law or church hierarchy in the Muslim world that could be turned against proponents of mass-casualty terrorism. Individual Muslims are free to make religious decrees, or *fatwas*, regardless of their formal training or standing as an Islamic scholar. Western states have made little headway in convincing the majority of Muslim clerics to discredit these terrorists.

Unintended consequences. Deterrence by denial can produce unintended consequences. Increasing defenses in one area may divert attacks to softer targets rather than deterring the attacks altogether.²⁶ This would seem to be especially true of a terrorist WMD attack. Or consider that maintaining a Western presence in the Islamic world would serve to deny terrorists another of their goals. Yet a long-term presence can actually backfire. In the three-and-a-half years since the beginning of the Iraq war, a large military presence in Iraq arguably has galvanized the jihadists against the United States rather than deterring terrorist attacks.²⁷

Deterrence by denial thus suffers from many of the same problems as deterrence by punishment, if to a different degree. Deterrence by punishment challenges our moral code; it requires better intelligence to find terrorists and near-perfect homeland defenses so that we could dare to withhold going after terrorists absent attacks. None of this is likely in the near term. Deterrence by denial is only slightly more attractive.²⁸ Denial does not require us to make the difficult choice between deterrence and degrading the terrorists' capabilities. Indeed, attrition of terrorist capabilities complements a deterrence-by-denial

²⁵ David Jones, Michael Smith, and Mark Weeding, "Looking for the Pattern: Al Qaeda in Southeast Asia—The Genealogy of a Terror Network," *Studies in Conflict and Terrorism* 26 (November–December 2003): 443–457.

²⁶ Bonner and Van Natta, "Regional Terrorist Groups"; Hoffman, "Leadership Secrets."

²⁷ Dana Priest, "Iraq New Terror Breeding Ground: War Created Haven, CIA Advisers Report," *The Washington Post*, 14 January 2005.

²⁸ Leppard, "Hypotheses on Vulnerability," 144.

strategy. Both weaken a terrorist group's ability to achieve its goals and, by extension, weaken its appeal in the Muslim world and ultimately, threaten the group's continued existence. Yet at the same time, denial strategies suffer from operational problems (that is, there is no such thing as a perfect defense) and can lead to undesired consequences, such as attracting more adversaries through a greater presence in the Middle East. In sum, additional actions are needed to decrease the likelihood of WMD attacks against the United States or U.S. interests.

DETECTING ORGANIZED CRIME

Preventing WMD from falling into the hands of terrorists is a crucial—perhaps *the* crucial—step in preventing a terrorist WMD attack absent perfect defenses.²⁹ Even if there is little chance of deterring those terrorists who would actually launch WMD attacks, we may still be able to cut off the supply of WMD material by threatening those who fund or supply WMD or technical expertise to terrorist groups. Indeed, if most terrorist groups lack the expertise to build their own WMD, our focus should be on how a terrorist group could acquire such weapons.

I concentrate on transnational criminal groups because they are arguably the crucial and most likely intermediaries between suppliers of WMD material and terrorist end-users.³⁰ According to Lyudmila Zaitseva and Kevin Hand, the vast majority of WMD suppliers are not governments or government-sanctioned entities. Instead, they are individual civilians, rogue military personnel and security officials who operate WMD production and storage facilities. So-called rogue states are unlikely to transfer WMD materials to nonstate actors, because such states will not want to part with the few weapons or weapons components they possess; they would risk international condemnation, sanctions, or worse if they were caught, and would have little if any control over how those weapons might be used, to include against their own territory. Amateur suppliers, on the other hand, tend not to have the contacts or expertise to transport and sell WMD materials to terrorist groups.

The most effective and dangerous intermediaries are organized criminals, who seek to acquire WMD from suppliers (either through bribes or coercion) and then sell them for a profit to states and terrorists.³¹ The danger is that in searching for profits, a crime group could sell WMD, component parts, or delivery vehicles to a terrorist group. That is because “the most common type of relationship between criminal organizations and terrorist groups is likely to

²⁹ Charles Ferguson and William Potter, *The Four Faces of Nuclear Terrorism* (Monterey, CA: Monterey Institute of International Studies, 2004), 6–11.

³⁰ Gavin Cameron, “Weapons of Mass Destruction Terrorism Research, Past and Future” in Andrew Silke, ed., *Research on Terrorism* (Portland, OR: Frank Cass, 2004), 72–90.

³¹ Zaitseva and Hand, “Nuclear Smuggling Chains,” 832.

be simply a matter of business and involve supplier–customer dealings.”³² Deterring such behavior is the subject of the remainder of this article.

Deterrence by Punishment

The literature on crime and deterrence suggests that there is significant promise in using threats of punishment to deter transnational criminal groups or arms traffickers from acquiring, transporting, and then distributing WMD to terrorists. Beginning with the work of Gary Becker in the late 1960s, a large number of studies suggest that domestic crime rates are “a negative function of the probability and expected severity of criminal sanctions.”³³ In other words, enforceable criminal penalties have a deterrent effect on crime, at least when the criminal is capable of evaluating the risk of being caught, the severity of threatened punishment, the expected gains from the crime, and the need for those expected gains.³⁴ Perhaps that is why the deterrent effect of punishment is less pronounced when violent crime is compared to property crime, in that violent crimes are often crimes of passion.³⁵ The deterrent effect of punishment is also less pronounced in localities suffering from severe corruption, which again is consistent with the assumption that most criminals are capable of reasoned calculation as to the expected risks, costs, and benefits of crime.³⁶

The above begs the question as to whether behavioral patterns—and the prospects for deterrence—are similar between transnational criminal groups and more-mundane domestic criminals engaged in nonviolent crime. For our purposes, the crucial factor is the motivation of each group. If both types of criminal groups are reasoning entities, as opposed to behaving in response to gross passions, and both groups have similar motivations, then we might expect transnational criminals and traffickers to be deterred by increases in the likelihood of being caught or the severity of expected punishment once they are caught, just as their domestic counterparts are deterred by such threats.

³² Phil Williams, “Terrorism and Organized Crime” in Brad Roberts, ed., *Hype or Reality? The New Terrorism and Mass Casualty Attacks* (Alexandria, VA: Chemical and Biological Arms Control Institute, 2000), 137; Mark Phythian, “The Illicit Arms Trade: Cold War and Post-Cold War,” *Crime, Law and Social Change* 33 (March 2000), 1–52.

³³ William Niskanen, “Crime, Police, and Root Causes” (Cato Policy Analysis No. 218, The Cato Institute, Washington DC, 14 November 1994). For earlier works on the subject, see: Gary Becker, “Crime and Punishment: An Economic Approach,” *Journal of Political Economy* 76 (March–April 1968): 169–217; Isaac Erlich, “Participation in Illegitimate Activities,” *Journal of Political Economy* (May–June 1973): 521–567; Steven Craig, “The Deterrent Impact of Police,” *Journal of Urban Economics* 21 (May 1987): 298–311; William Trumbull, “Estimation of the Economic Model of Crime Using Aggregate and Individual Level Data,” *Southern Economic Journal* 26 (October 1989): 423–439.

³⁴ Larry Siegel, *Criminology*, 4th ed. (St. Paul, MN: West Publishing, 1992): 131–133.

³⁵ Niskanen, “Crime, Police, and Root Causes”; Siegel, *Criminology*, 133.

³⁶ Maurice Kugler, Thierry Verdier, and Yves Zenou, “Organized Crime, Corruption and Punishment” (working paper, The Research Institute of Industrial Economics, Stockholm, Sweden, 2003).

The literature on transnational crime and arms trafficking suggests that this is indeed the case. There is widespread agreement that transnational criminals are motivated predominately by profit and personal power, just as are domestic perpetrators of property crimes.³⁷ As Mark Pythian notes, “To a significant extent the [arms] trade has been depoliticized since the end of the Cold War, with involvement now motivated more by profit than policy considerations.”³⁸ A number of people are attracted to the arms trade “who see it as a way of getting rich quickly.”³⁹ For instance, A.Q. Khan is said to have been motivated by personal avarice—to the tune of an alleged \$40 million personal fortune—and only secondarily by a sense of loyalty to the Muslim world.⁴⁰ Another example is Victor Bout, who works out of the former Soviet Union and, by some accounts, is the world’s biggest arms trafficker after only fifteen years in the business. He is said to be motivated by money, not ideology, and is willing to sell arms to anyone (he is reported to have made a \$50 million profit from an arms sale to the former Taliban regime in Afghanistan).⁴¹ In the words of a Bout associate, “He’s not here to change the world.”⁴² Indeed, the continued viability of the Western world is crucial for organized crime’s very existence, as a source of expertise, financing, and materiel. In a crude sense, these groups are parasites on the modern world.

The implication, then, is that criminal groups should be susceptible to deterrence, even if religiously oriented terrorists are not.⁴³ Transnational criminals look for business opportunities that provide large payoffs with minimal risks and therefore should be much more susceptible to coercion and much less likely than religious terrorists to sacrifice their own lives for their cause.⁴⁴ After all, it is

³⁷ Bartosz Stanislawski and Margaret Hermann, “Transnational Organized Crime, Terrorism, and WMD” (paper prepared for the Conference on Non-state Actors, Terrorism and Weapons of Mass Destruction, College Park, MD, Center for International Development and Conflict Management, University of Maryland, 15 October 2004); Zaitseva and Hand, “Nuclear Smuggling Chains,” 827–833; Phil Williams and Roy Godson, “Anticipating Organized and Transnational Crime,” *Crime, Law and Social Change* 37 (June 2002): 311–355; Berryman, “Russia and the Illicit Arms Trade.”

³⁸ Pythian, “The Illicit Arms Trade,” 1.

³⁹ *Ibid.*, 2.

⁴⁰ “Pakistan’s Nuclear Secrets Sold,” 6 February 2004, accessed on the website of *The Economist* at http://www.economist.com/world/asia/displaystory.cfm?story_id=E1_NOTNJSG, 11 October 2006; William Broad, David Sanger, and Raymond Bonner, “A Tale of Proliferation: How Pakistani Built His Network,” *The New York Times*, 12 February 2004; Paul Haven, “Pakistan Nuke Scientist Bought Loyalty,” Associated Press, 17 February 2004.

⁴¹ Zaitseva and Hand, “Nuclear Smuggling Chains,” 831.

⁴² Peter Landesman, “Arms and the Man,” *New York Times Magazine*, 17 August 2003, 57.

⁴³ For a summary of the differences between these two types of groups, see Williams, “Terrorism and Organized Crime.” For an argument that the two groups are growing increasingly similar, see Thomas Sanderson, “Transnational Terror and Organized Crime,” *SAIS Review* 24 (Winter 2004): 49–62; Tamara Makarenko, “A Model of Terrorist-Criminal Relations,” 1 August 2003, accessed at *Jane’s Intelligence Review*, at www.janes.com, 4 October 2006; Jane Schneider and Peter Schneider, “The Mafia and Al-Qaeda: Violent and Secretive Organizations in Comparative and Historical Perspective,” *American Anthropologist* 104 (September 2002): 776–783.

⁴⁴ Williams and Godson, “Anticipating,” 325; Leggold, “Hypotheses on Vulnerability,” 140.

impossible to enjoy the benefits of material wealth if you are dead. Instead, the leaders of criminal organizations prioritize their needs: their own safety and wealth first, then the continued viability of their organizations, and finally, their specific merchandise and personnel.⁴⁵ So while these individuals and groups may be willing to develop, transport, or steal a WMD device and sell it to rogue states or terrorist groups, they are unlikely to risk getting caught in an overly dangerous ploy, to say nothing of risking injury or death by detonating the WMD device themselves.⁴⁶ Members of transnational crime groups, therefore, should be vulnerable to deterrence threats that threaten their livelihood, freedom, or very existence. That said, as with any deterrence initiative, basic requirements must be met to increase the chances of success.

Identifying the opponent. Knowing whom we are trying to deter is the first requirement for deterrence by punishment. In general, we would like to deter all organized crime groups from trafficking in WMD or WMD-related technologies. Yet no state can unilaterally gather the necessary intelligence to identify every known and emerging WMD trafficker. Demonstrating publicly that other states will share intelligence on WMD smuggling is thus a crucial element in any deterrence-by-punishment strategy. Norms of cooperation on that front are still in their formative stages (see below) and are hampered by the tolerance shown by much of the industrialized world to the clandestine shipment of conventional arms. A lack of transparent intelligence sharing, unless corrected, will complicate the task of making credible deterrence threats against those criminals who traffic in WMD.

Transnational criminal groups are often intertwined with legitimate governments and government officials, which complicates multilateral coordination and hinders intelligence cooperation. Remember that in the literature on domestic crime, an important finding is that judicial and police corruption can increase crime rates rather than deter crime.⁴⁷ International WMD traffickers can attempt to influence government officials through payoffs and threats. Traffickers can even be part of existing governments. In some instances, traffickers are a key revenue source for local (and even national) economies. A.Q. Khan's proliferation network used each of these techniques. Kahn was a high-ranking official in control of a large government program. The secret nature of his work made him immune from outside scrutiny. He is reported to have engaged in extensive bribes and payoffs to maintain the loyalty of government officials, subordinates, and journalists.⁴⁸ Khan had the alleged support of two high-ranking army generals, both of whom supposedly authorized his sales to rogue states.⁴⁹

⁴⁵ Williams and Godson, "Anticipating," 337–338.

⁴⁶ Dolnik, "Die and Let Die," 29.

⁴⁷ Kugler, Verdier, and Zenou, "Organized Crime," 4.

⁴⁸ Haven, "Pakistan Nuke Scientist."

⁴⁹ Tohid, "Pakistan and Its Proliferator; "Pakistan's Nuclear Secrets Sold."

His subordinate, Bukhari Tahir, was a well-connected businessman in Malaysia who used his businesses as a cover for his smuggling operation. He and his immediate family insulated themselves from scrutiny by partnering with members of the ruling elite—including members of the prime minister's and foreign minister's families—on these legitimate business ventures.⁵⁰

Tangible progress must occur in international cooperation if we are to credibly deter potential traffickers in WMD. Working in favor of deterrence is the fact that WMD are in a category different from most trafficking (that is, guns, drugs, or people), and states realize that WMD sales can come back to haunt a government that looks the other way. We also can overcome international resistance to investigations (and possible punishment) of potential WMD traffickers through the use of rewards and punishments. An initiative containing both would be for governments to pledge not to publicize information on WMD thefts or smuggling that might occur on another country's soil, so long as that country immediately notified its international partners. Keeping the information out of the public light would decrease the international stigma that might attach to a country that cannot control its own technology. In return, however, we would demand full (if private) disclosure of all relevant information associated with the smuggling. The implicit threat here would be the public disclosure of the theft—and perhaps even military reprisals—if we found out about it before being notified. Another use of rewards and punishments for improving international cooperation would be to link foreign assistance to intelligence sharing. States that cooperated fully on intelligence matters would get modest increases in foreign assistance. States that withheld information would get less assistance. Each measure would improve international cooperation and, by extension, increase the threat to punish traffickers in WMD and related materials.

How to retaliate. The second requirement of deterrence by punishment is to know what the opponent values and to hold that at risk. As noted earlier, leaders of organized crime groups are motivated by a desire for profit and personal power, and less so by the organization's future viability and specific merchandise or underlings. The key to a deterrence-by-punishment strategy is realizing that organized crime groups “as business people can presumably be induced to stop or change locations if the operating costs become too great.”⁵¹ The lives of individual leaders and their physical assets (homes and property, yachts and planes, etc.) are particularly attractive targets to threaten with retaliation, seizure, or confiscation. Secondary targets of retaliation might include the distribution facilities, warehouses, and transportation assets needed to smuggle precursor chemicals or WMD technology such as centrifuges. Other targets could include any legitimate firm owned or invested in by criminal leaders.

⁵⁰ Broad, Sanger, and Bonner, “A Tale of Proliferation.”

⁵¹ Leggold, “Hypotheses on Vulnerability,” 140.

Credible will and capabilities. Arguably, the most difficult task of deterrence by punishment is to demonstrate the capability and will to credibly implement threatened reprisals. There is no doubt that modern states have the military capabilities to strike individual criminal leaders and facilities used to traffic in WMD. On the financial front, the United States and its allies now have a much greater capability to freeze financial assets, compared to their capabilities before 11 September 2001. Two issues remain outstanding, however, both related to demonstrating our credible will to implement our deterrence threat. They are first, demonstrating to traffickers that they cannot escape threatened punishment through the protection of corrupt officials, justices, or police, and second, establishing the necessary international regimes to routinize international cooperation against WMD traffickers.

The key to solving these problems is to strengthen existing international norms against the trafficking in WMD with an international legal framework that requires international cooperation on WMD trafficking and legitimizes a military response, not just a judicial response, to discoveries of trafficking. Such a combination should decrease the opportunities for corruption while increasing the domestic and international impediments to corruption. Two recent initiatives establish precedents for such a normative and legal framework: the May 2003 Proliferation Security Initiative (PSI) and the passage of UN Security Council (UNSC) Resolution 1540 in April of 2004.

The PSI is an informal agreement among fifteen nations that establishes informational exchanges and cooperation on interdiction of WMD and delivery technologies.⁵² Originally announced on 31 May 2003 and agreed upon by eleven founding states on 4 September 2003, the PSI focuses on three main tasks:

- Undertaking effective measures, either alone or in concert with other states, for interdicting the transfer or transport of WMD, their delivery systems, and related materials to and from states and nonstate actors of proliferation concern;
- Adopting streamlined procedures for rapid exchange of relevant information concerning suspected proliferation activity;
- Reviewing and working to strengthen their relevant national legal authorities where necessary to accomplish these objectives.⁵³

⁵² Department of State, "Proliferation Security Initiative Frequently Asked Questions," 26 May 2005, accessed at www.state.gov/t/isn/rls/fs/46839.htm, 4 October 2006. See also: Michael Byers, "Policing the High Seas: The Proliferation Security Initiative," *American Journal of International Law* 98 (July 2004): 526–540; Chaim Braun and Christopher Chyba, "Proliferation Rings: New Challenges to the Nuclear Nonproliferation Regime," *International Security* 29 (Fall 2004): 5–49; Ferguson and Potter, *Four Faces*, 323; Michael Evans, "U.S. Plans to Seize Suspects at Will," *London Times*, 11 July 2003; and "Eleven Countries Join Forces to Combat the Trade in Weapons of Mass Destruction," *London Financial Times*, 11 July 2003.

⁵³ Department of State, "The Proliferation Security Initiative: Statement of Interdiction Principles," 4 September 2003, accessed at www.state.gov/t/isn/rls/fs/23764.htm, 4 October 2006.

The PSI now boasts fifteen current partner states, four of which are permanent members of the UN Security Council. Sixty additional nations have agreed to more limited cooperation with PSI states on a case-by-case basis. By the end of 2004, at least twenty public multilateral interdiction exercises had been held. Liberia, Panama, and the Marshall Islands, countries that serve as flags of convenience for innumerable foreign vessels, have agreed to allow their flagged vessels and aircraft to be boarded and inspected by PSI nations if suspected of transporting WMD.⁵⁴

The PSI is both defensive and deterrent in nature.⁵⁵ In the case of an imminent threat from a WMD shipment, PSI states can participate directly in “defensive” interdiction, ask other PSI nations to do so, or coordinate in other ways as warranted. Within its first year of existence, according to Dr. Mitchell Reiss, the former Director of the State Department’s Office of Policy Planning, “cooperation among PSI partners has resulted in the seizure of shipments of sensitive materials,” the most famous of which was the *BBC China*, caught transporting WMD equipment to Libya.⁵⁶ In terms of deterrence, the Bush administration argues that “over time, proliferators, and others involved in supporting proliferation activities, will learn that there are countries determined to work together to take all possible steps to stop their efforts.”⁵⁷ Indeed, Reiss has argued that “it is thought that the existence of the PSI has deterred many [WMD trafficking] attempts due to fears of being caught.”⁵⁸

The PSI was soon followed by the passage of UNSC Resolution 1540, which called upon states to “adopt and enforce appropriate, effective laws which prohibit any non-state actor to manufacture, acquire, possess, develop, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery.” It also called upon states to “develop and maintain appropriate, effective border controls and law enforcement efforts” to prevent the illicit trafficking in these materials.⁵⁹

⁵⁴ Sean Murphy, “Proliferation Security Initiative for Searching Potential WMD Vessels,” *American Journal of International Law* 98 (April 2004): 355–357; Jofi Joseph, “The Proliferation Security Initiative,” *Arms Control Today* (June 2004) accessed at www.armscontrol.org/act/2004_06/Joseph.asp, 4 October 2006; Andrew Winner, “The Proliferation Security Initiative: The New Face of Interdiction,” *Washington Quarterly* 28 (Spring 2005): 129–143. For an example of the flag of convenience agreements, see Department of State, “Proliferation Security Initiative Ship Boarding Agreement with Panama,” 12 May 2004, accessed at www.state.gov/t/isn/trty/32858.htm, 4 October 2006.

⁵⁵ Winner, “Proliferation Security Initiative,” 134.

⁵⁶ Mitchell Reiss, “Steps to a Brighter Future: The Bush Administration’s Non-Proliferation Policy,” 21 June 2004, accessed at www.state.gov/s/p/rem/34267.htm, 4 October 2006; Winner, “Proliferation Security Initiative,” 137.

⁵⁷ Department of State, “What is the Proliferation Security Initiative?” 26 May 2005, accessed at www.state.gov/t/isn/rls/other/46858.htm, 4 October 2006.

⁵⁸ Reiss, “Steps to a Brighter Future.”

⁵⁹ Sean Murphy, “UN Security Council Resolution on Nonproliferation of WMD,” *American Journal of International Law* 98 (July 2004): 606.

UNSC 1540 is an important development on a number of fronts. First, it requires states to enact strong national controls over WMD and related materials, as well as to “address the threat posed by non-state actor involvement in any aspect of WMD proliferation,” through improved border controls, law enforcement capabilities, and related initiatives.⁶⁰ Second, the resolution provides international legal authorization for PSI-related interdiction of WMD trafficking. According to the State Department, “If an activity is authorized under a UNSC resolution, then it could be cited by a PSI participant as authority for its participation in an interdiction. ... UNSC 1540 and the PSI SOP are mutually reinforcing and are legally and politically compatible.”⁶¹ Third, the resolution requires that states compile regular, comprehensive reports on their efforts at complying with UNSC 1540. A nonproliferation committee of Security Council members has been constituted to receive these reports. Security Council members can, at their discretion, enforce compliance with the resolution’s reporting requirement or other terms of the resolution under Chapter VII of the UN Charter. And while the Bush administration does not envision having to enforce UNSC 1540 requirements, they have made it plain that they are willing—and have the international legal authority—to do so if necessary.⁶²

Combined, these initiatives provide the practical and international legal basis for action against WMD traffickers by both the military and law enforcement community of every UN member state, with additional, self-imposed enforcement responsibilities taken on by the PSI nations. Moreover, these combined initiatives are promising signs of an emerging international norm against the trafficking in WMD and related materials. Both developments should increase the possibilities of international cooperation in opposition to WMD trafficking. Although it is impossible to know definitively as of this writing, together these and related initiatives (that is, the Cooperative Threat Reduction [CTR], Export Control and Related Border Security Assistance, the Terrorist Interdiction Program, and the G-8’s Global Partnership initiative) also may very well have increased the perceived costs of trafficking in WMD.

Operational difficulties. As promising as the aforementioned initiatives are, why should we believe that deterring WMD trafficking can be any more successful than our abysmal record at deterring drug trafficking? Indeed, after decades of the war on drugs, with billions spent on eradication and interdiction, illegal drugs trafficked to the United States actually cost less on the street than they did twenty years ago, signifying a relatively unfettered market. If we cannot stop or deter tons of drugs from coming across the border each year, how

⁶⁰ Andrew Semmel, “UN Security Council Resolution 1540: The U.S. Perspective,” 12 October 2004, accessed at <http://www.state.gov/t/isn/rls/rm/37145.htm>, 11 October 2006.

⁶¹ Department of State, “Proliferation Security Initiative Frequently Asked Questions.”

⁶² *Ibid.*

are we to deter WMD trafficking? Our dilemma is summarized by the joke that asks “How do you smuggle a nuclear bomb into the country?” and answers “You stuff it inside a bag of pot!”

There are a number of differences between drug trafficking and trafficking in WMD, however, which call into question comparisons across the two issue areas. The demand for drugs is very different from the demand for WMD materials. Of the three most commonly trafficked drugs (heroin, cocaine, and marijuana) two are extremely addictive and are used by millions worldwide. The demand for the third, marijuana, is even higher, to say nothing of being extremely common across the globe. A 2003 survey found that in the United States alone, roughly 46 percent of the population aged twelve and older (over 110 million people) had used illegal drugs at least once in their lifetimes, and of those, almost 35 million people had used illegal drugs in the last year.⁶³ According to a 2005 Congressional Research Service (CRS) report, “more than 14 million Americans buy illicit drugs and use them at least once per month.”⁶⁴ In 2003, the UN estimated that the total annual number of drug abusers worldwide aged fifteen and over was at least 200 million people.⁶⁵ Demand for WMD and related materials is much, much less, by several orders of magnitude.

There is a huge supply of illicit drugs, swamping anything related to WMD. And while WMD supplies are concentrated in relatively select parts of the world and are technologically challenging to store safely, the supply of drugs is very diffuse and requires rudimentary technology to produce and store. Drug production is technically easy, can be accomplished at low cost, and can be shifted from locale to locale with relatively little effort. As a result, worldwide production of opium, coca, and marijuana has risen dramatically over the last decade.⁶⁶ According to CRS, “World production and supply of illicit drugs vastly exceeds world demand.”⁶⁷ The same is not true of WMD materials. If anything, the supply of such materials is being constricted, albeit slowly, through CTR programs.

Enforcement is extremely variable across the globe when it comes to illicit drugs, in large part because there is little consensus on the detrimental effects of drug use.⁶⁸ Consider that while the U.S. federal government has stiff penalties for drug production and use, U.S. localities have challenged those guidelines in a number of instances. International enforcement is at least as variable. Casual

⁶³ U.S. Department of Health and Human Services, “Results from the 2003 National Survey on Drug Use and Health: National Findings,” September 2004, accessed at www.drugwarfacts.org/druguse.htm, 17 January 2005.

⁶⁴ Raphael Perl, *Drug Control: International Policy and Approaches*, CRS Issue Brief IB88093 (Washington DC: Congressional Research Service, 13 April 2005), 1.

⁶⁵ UN Office on Drugs and Crime, “Global Illicit Drug Trends 2003” (Vienna, Austria, June 2003) accessed at www.drugwarfacts.org/druguse.htm, 17 January 2005.

⁶⁶ Perl, *Drug Control*, 1.

⁶⁷ *Ibid.*, 8.

⁶⁸ *Ibid.*, 5.

drug use is a relatively accepted—and even legal—behavior in many Western countries, including Spain, Italy, Portugal, Luxembourg, and Denmark. In contrast, there is a growing, perhaps near-global, consensus that trafficking in WMD harms everyone, regardless of their locality, as witnessed by UNSC Resolution 1540.

Enforcement of anti-drug-trafficking initiatives also is harmed because of the relatively low priority that drug policy has in many nations. Consider that U.S. anti-drug initiatives at the federal level are routinely countermanded when they contradict or complicate higher priority foreign policy initiatives, such as counter-terrorism or counter-proliferation policies. As an example, consider that the United States has resisted labeling North Korea as a state sponsor of drug trafficking because such a designation would “prioritize drugs vis-à-vis more pressing issues (i.e. nuclear proliferation).”⁶⁹ Indeed, “The direction of drug policy under President George W. Bush does not appear to be an immediate top foreign policy priority for the administration.”⁷⁰ Enforcement of anti-WMD trafficking, on the other hand, is a very high priority for the United States and other world powers, making it less likely that participation in the PSI, for instance, will be subsumed by other priorities.

Finally, the combination of ample drug supplies at low cost, with high global demand and lax enforcement, means that there are enormous profits to be had in drug trafficking. Estimates in 1997 put traffickers’ gross profits at roughly 300 percent.⁷¹ According to the UN, the illegal drug business is extremely lucrative, totaling more than \$400 billion in annual sales in 1997, or the equivalent of 8 percent of all annual worldwide trade that year.⁷² In 2001, South American coca production alone yielded roughly \$93 billion worth of cocaine.⁷³ As these huge annual figures demonstrate, there is a relatively proven market for the drug trade. The same cannot be said for trade in WMD materials. It is true that there may be substantial payoffs for the successful trafficking of WMD materials, but they do not come anywhere near the huge amounts of money available through the drug trade. Moreover, the WMD market is far less certain than is the drug market.

For all these reasons, the analogy between the drug trade and WMD trafficking is a flawed one. There are significant differences between WMD and drug trafficking, differences that make problematic a comparison of the two

⁶⁹ Raphael Perl, *Drug Trafficking and North Korea: Issues for U.S. Policy*, CRS Report RL32167 (Washington DC: Congressional Research Service, 4 March 2005), 2.

⁷⁰ Perl, *Drug Control*, 12.

⁷¹ Associated Press, “U.N. Estimates Drug Business Equal to Eight Percent of World Trade,” 26 June 1997, accessed at www.drugwarfacts.org/druguse.htm, 17 January 2005.

⁷² United Nations Office for Drug Control and Crime Prevention (UNODCCP), *Economic and Social Consequences of Drug Abuse and Illicit Trafficking* (New York: UNODCCP, 1998), 3, accessed at www.drugwarfacts.org/druguse.htm, 17 January 2005.

⁷³ Perl, *Drug Control*, 2.

behaviors (and by extension the low probability of deterrence success against drug traffickers as a surrogate measure for deterrence success against WMD traffickers). There is no denying that significant obstacles still remain in crafting and implementing a strategy to deter WMD trafficking, but such obstacles are not nearly as severe as those confronting anti-drug policy-makers.

Deterrence by Denial

Denying criminal goals. A deterrence-by-denial strategy rests on preventing criminal groups from profiting due to WMD smuggling. In theory, erasing profits could be achieved by increasing the supply of goods on the market (reducing prices), increasing the seller's transaction costs (reducing profit per unit sold), or reducing the demand for the goods (driving down prices). In reality, the first option is self-defeating. Flooding the WMD market runs counter to decades of nonproliferation policies, to say nothing of increasing the chances of a terrorist group acquiring WMD. The last option may be impossible in the short run. Religious extremists will continue waging war against modern secular nation-states for the foreseeable future. We are left with the middle option of reducing WMD traffickers' profits by increasing their potential or perceived costs of doing business. Interdiction holds some promise on that score, as does expanding the CTR initiative, which would increase state control of loose WMD materials. The aforementioned PSI and UNSC Resolution should facilitate efforts on both counts.

Another means of decreasing traffickers' profits is to raise doubts as to the loyalty of their members or the fidelity of other groups they do business with. As doubts increase on either score, so too should the perceived risks of trafficking in WMD, either deterring outright such potential traffickers or increasing their transaction costs to the point that they believe there is no profit in dealing in WMD. How one would go about sowing distrust would depend on the specific organization of a particular group or network of groups.

Organizationally, criminal groups can resemble multinational corporations, in that the groups often are transnational in scope, with different elements or branches of the umbrella organization working in different countries, focusing on different tasks, but all working toward the same profit goal. Different divisions of the larger corporation focus on specific tasks. Victor Bout seems to have developed such a corporate scheme based on personal loyalty.⁷⁴ Each element or division is connected to their superiors by ties of loyalty, whether based on familial or kinship ties, shared formative experiences, or shared ethnicity.⁷⁵ In such groups, trust and intragroup bonding are extremely

⁷⁴ Landesman, "Arms and the Man."

⁷⁵ The above reasoning is similar to social explanations of organized crime, as detailed in Williams and Godson, "Anticipating," 328–331.

important. Defections from such organizations, or even rumors of possible defections, have the potential to fundamentally challenge the functioning of such organizations, greatly decreasing profits.⁷⁶

Criminal groups also can operate like contractors and subcontractors. Think of individual criminal firms as relatively independent actors providing expertise in a particular area. Some launder money. Some provide weapons, weapons materials, or weapons design. Some ship goods. Cooperation between firms is on a tactical or contract basis, with the goal being to maximize individual profits regardless of whether the other firms turn a profit.⁷⁷ Cooperation between these groups is enhanced, although by no means assured, if the groups share “similar criteria of selectivity, etiquette, lexicon, and ritual practice.”⁷⁸ But even then, nothing prevents any single firm from profiting at the expense of former associates when an individual contract is complete.⁷⁹ Moreover, subcontractor networks have ties to legitimate business firms to hide their activities, which gives authorities another potentially vulnerable point of access to the criminal network.⁸⁰

Many of the entities associated with A.Q. Khan fit the contractor–subcontractor model. Khan’s proliferation network relied on the financial acumen of Bukhari Tahir, who ran legitimate businesses but also operated as Khan’s chief financial officer, money launderer, and salesman. Engineers from Switzerland and England provided expertise. British, Dutch, French, German, Malay, and Turkish firms supplied high-tech parts. Africa was a source for raw materials. Companies in Dubai acted as the hub for transshipments of goods and money.⁸¹ In the words of a senior American official, “First, [Khan] exploits a fragmented market and develops a quite advanced nuclear arsenal. Then he throws the switch, reverses the flow and figures out how to sell the whole kit, right down to the bomb designs, to some of the world’s worst governments.”⁸²

With either the transnational groups or the contractor–subcontractor networks, deterrence by denial seeks to exploit concerns about loyalty as well as the competitive nature of the criminal market. We face an easier task of sowing

⁷⁶ Williams and Godson, “Anticipating,” 334.

⁷⁷ *Ibid.*, 327.

⁷⁸ Schneider and Schneider, “The Mafia and Al-Qaeda,” 780.

⁷⁹ Williams and Godson, “Anticipating,” 334; Alison Jamieson, “Transnational Organized Crime: A European Perspective,” *Studies in Conflict and Terrorism* 24 (September–October 2001): 377–387.

⁸⁰ Williams and Godson, “Anticipating,” 343.

⁸¹ David Albright and Corey Hinderstein, “Unraveling the A.Q. Khan and Future Proliferation Networks,” *The Washington Quarterly* 28 (Spring 2005): 111–128; Braun and Chyba, “Proliferation Rings”; Slevin, Lancaster, and Khan, “Seven Nations”; Broad, Sanger, and Bonner, “A Tale of Proliferation”; Raymond Bonner, “Salesman on Nuclear Circuit Casts Blurry Corporate Shadow,” *The New York Times*, 18 February 2004.

⁸² Quoted in Broad, Sanger, and Bonner, “A Tale of Proliferation”; see also Slevin, Lancaster, and Khan, “Seven Nations”; David Sanger and William Broad, “From Rogue Nuclear Programs, Web of Trails Leads to Pakistan,” *The New York Times*, 4 January 2004.

distrust within a contractor–subcontractor relationship than we do with the transnational groups, but we can take advantage of the competitive criminal marketplace to change either group’s perceptions of WMD profitability. For instance, publicly threatening death, incarceration, or asset seizure against all groups we believed could *potentially* engage in WMD trafficking, should we have proof of trafficking by any one group, would give rival groups and contractor–subcontractors an incentive to monitor and police each other in the hopes of forestalling our action. This could be an especially effective incentive for established conventional arms traffickers—particularly in the former Soviet Union, where there is a history of infighting among criminal groups—to police their smaller, less-well-known, and perhaps more risk-accepting competitors who might be tempted to traffic in WMD.⁸³

CONCLUSION

A terrorist group armed with WMD is arguably the greatest threat to the United States and its allies in the current era. The idea of a terrorist movement such as al Qaeda possessing WMD is particularly terrifying, given the difficulties associated with deterring religiously oriented terrorists. Given those difficulties, this paper explored deterrence of arms traffickers and transnational organized crime as a potential means of preventing terrorist groups such as al Qaeda from acquiring WMD materials. The profit motive of criminal groups makes them susceptible to threats of punishment. In some cases, their notoriety makes their leaders relatively easy to locate. More generally, UNSC Resolution 1540 makes it a global crime to traffic in WMD materials or delivery systems, demands improvements in border controls and internal security over WMD materials, and sets the legal framework for future interdiction and punishment. Indeed, UNSC Resolution 1540 nicely complements the PSI’s procedures for interdicting potential WMD traffickers. Each of these measures, together with existing procedures allowing for the seizure of financial assets and with possible future efforts to sow distrust within and between criminal groups, increases the potential penalties associated with smuggling WMD. They also have a possible spillover effect to help deny criminal groups the profits they need to stay in business. In sum, transnational criminal groups and arms traffickers are susceptible to deterrence by punishment and denial.

The strategy advocated here cannot make the world safe from terrorist movements such as al Qaeda, yet we can partially defang the movement by deterring the transfer of WMD to al Qaeda and other terrorist groups. Implementing such a strategy will require placing a larger emphasis on the nonmilitary instruments of national power than does current U.S. policy. Intelligence

⁸³ Vsevolod Sokolov, “From Guns to Briefcases: The Evolution of Russian Organized Crime,” *World Policy Journal* 21 (Spring 2004): 68–75.

and law enforcement play crucial roles in finding, infiltrating, and disrupting organized crime groups that could supply WMD and WMD technology to terrorists. Covert operatives and psychological operations will be required to sow distrust among trafficking groups or even turn these groups against each other. Careful diplomacy will be required to see the implementation of UNSC 1540 to fruition, to say nothing of making the PSI a meaningful, long-term, collective effort. The continued use of economic pressure and targeted action will be crucial to undercutting the profits associated with WMD smuggling, as will the provision of foreign assistance to cooperative states. There is obviously still a role for military force, particularly when interdiction is warranted or when disrupting a specific smuggling operation is necessary, but the lion's share of effort should be done by nonmilitary agencies. And finally, more effort should be devoted to integrating and coordinating efforts across and between governments. As the Government Accountability Office noted in January of 2005, "Strategic plans for threat reduction and nonproliferation programs are not integrated and do not address U.S. programs worldwide."⁸⁴ Integration and coordination are prerequisites for success.

Implementing this strategy will also require that we broaden our security focus beyond the fight against al Qaeda or Iraqi insurgents. Make no mistake, both are crucial tasks. Yet the reason they are crucial is due to the threat they pose to U.S. regional interests, and more importantly, to U.S. territory.⁸⁵ Detering and disrupting the potential supply of WMD materials to either group should be a high priority for the current Bush administration and for future presidents. This article provides an initial strategy to accomplish that task.*

⁸⁴ Government Accountability Office, *Weapons of Mass Destruction: Non-proliferation Programs Need Better Integration*, GAO-05-157 (Washington DC: Government Printing Office, 2005), 7.

⁸⁵ James Fallows, "Success without Victory," *The Atlantic Monthly* 295 (January/February 2005): 80–90.

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