

Putting WMD Terrorism into Perspective

What would you do? The FBI's National Infrastructure Protection Center (NIPC) warned that "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.¹ As a policymaker, doubts about the quality, interpretation, and inherent uncertainty of intelligence continue to gnaw at you with each day that passes, for example, with unanswered questions about the extent, history, and even location of Iraq's forbidden weapons of mass destruction (WMD) arsenal, much less more furtive transnational threats.

Rewarded for decisiveness as policymakers are, the instinctive route is to play it safe and extrapolate worst-case conclusions from imperfect information, even if serious consequences for government resource allocation result. Although constantly making pessimistic interpretations of imperfect data clearly has its disadvantages, such an approach seems prudent when assessing the threat of CBRN terrorism. The September 11 attacks and a series of other Al Qaeda or Al Qaeda-inspired attacks—from Bali to Mombassa, and Riyadh to Casablanca—all combine to elevate the perceived potency of the Al Qaeda threat. Even though Al Qaeda consistently has used conventional explosives in these attacks, movement adherents may also be willing to use CBRN weapons on a grand scale. The degree to which they have actually acquired the capability to do so, however, remains unknown. How should we assess this risk?

Limited as it is, the historical record cautions against axiomatically suggesting that the Al Qaeda movement or any other terrorist group will inevi-

John Parachini is a policy analyst at RAND in Virginia. The views expressed here are those of the author and do not represent the views of RAND or its research sponsors.

Copyright © 2003 by The Center for Strategic and International Studies and the Massachusetts Institute of Technology
The Washington Quarterly • 26:4 pp. 37–50.

tably successfully use CBRN weapons in a catastrophic attack against the United States. Moreover, although hedging against terrorists exploiting the catastrophic potential of CBRN weapons is an essential task of government, resources and the public's patience are finite. Focusing on a particular means of attack must not come at the expense of adequate attention to broader diplomatic, border control, intelligence, and law enforcement efforts to counter terrorism. Attention cannot simply result in obsessing over CBRN effects but also must produce improved understanding of the motives, vulnerabilities, capabilities, and context for actual attacks, not just expressions of interest. Moreover, as if all this were not complicated enough, counterterrorism efforts must not focus solely on Al Qaeda, as amorphous as it is, but must address broader terrorist trends and a variety of other groups including Hizballah; the Revolutionary Armed Forces of Colombia (FARC); and less well identified, armed rebel factions in Chechnya, Indonesia, and the Congo—to name a few that we know of today.

Fighting in the Dark

The few historical cases of terrorist interest in and acquisition of CBRN weapons make for a comparatively small data set to formulate general observations about the potential for terrorists to use unconventional weapons successfully. Furthermore, the details of many of these cases are sketchy and often ambiguous, which only further complicates the task of accurately portraying the scope and magnitude of the threat. With these uncertainties, many people will understandably hedge against the unknown and err on the side of finding the threat potential high.

A close reading of the February 2003 FBI alert mentioned earlier and a May 2003 unclassified CIA report entitled “Terrorist CBRN: Materials and Effects” reveals the nuanced language of intelligence analysts who weigh the meaning of ambiguous information.² The CIA’s Directorate of Intelligence asserts that Al Qaeda “has crude *procedures* for making mustard agent, sarin, and VX.” Elsewhere in the same CIA publication, however, the caption beneath a drawing copied from a document taken from an Al Qaeda safe house in Afghanistan describes “*interest* in the production of more effective chemical agents such as mustard, sarin, and VX.”³ In the FBI’s NIPC Information Bulletin, Al Qaeda is alleged to have “*experimented* with procedures for making blister (mustard) and nerve (sarin and VX) chemical agents.”⁴ The conclusion that experiments, standard procedures, and interest in preparing these chemical agents existed may be based on a very different set of facts.

The dual-use nature of chemical, biological, and radioactive materials opens up the possibility that innocent, naturally occurring events are mis-

taken for pernicious weapons-development activities. For example, reputable media organizations reported findings of Iraqi clandestine weapons programs throughout the recent hostilities, which only proved to be false alarms on further inspection, not the smoking gun that officials and private experts expected to find. Homeland security officials and experts face similar challenges, bedeviled by the anticipated clandestine CBRN terrorist activity they consistently expect to find.

Al Qaeda's interest in and willingness to use unconventional weapons are not in question, but evidence of Al Qaeda's capabilities is fragmentary and reveals the difficulty of finding conclusive proof of a threatening capability. Demonstrating interest in something is far different both from, first, experimenting with it and, second, mastering the procedures to execute an attack. Gaining access to materials is certainly a major barrier, but it is not the only one. Delivering toxic materials to targets in sufficient quantities to kill in the same fashion as explosives is not easy.

Journalists repeatedly asked Gen. Tommy Franks and Secretary of Defense Donald Rumsfeld whether U.S. forces had found evidence of Al Qaeda CBRN weapons capabilities in Afghanistan; they consistently responded that forces discovered evidence of considerable interest, even some equipment that could be used for biological weapons development, but no hard physical evidence of weapons production. The difficulty of finding evidence of Al Qaeda's unconventional weapons capabilities in Afghanistan foreshadowed the difficulty of finding clandestine weapons programs in Iraq. In both cases, the perceived intentions of Al Qaeda and Iraq led to the suspicion and strong presumption of their capabilities, but hard evidence of capabilities commensurate with perceived and indeed stated intent has proven elusive.

The use of unconventional weapons by terrorists has fortunately been rare. In the last 25 years, only four significant attacks by terrorists using poison, disease, or radioactive material as weapons and a few instances where groups or individuals showed interest in using such weapons have occurred. The first incident was in 1984 in Oregon when 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. An at-

Attention cannot simply obsess over unconventional terrorist effects.

tack on the Tokyo subway with liquid sarin in 1995 and the 2001 anthrax attacks in the United States are the other two incidents.⁵

The March 1995 attack by Aum Shinrikyo—a Japanese religious cult—on the Tokyo subway using sarin liquid catapulted concern about terrorist use of unconventional weapons to the front burner of U.S. security policymaking. The dramatic Tokyo attack occurred at a time marked by significant concerns about loose nuclear weapons and materials in the former Soviet Union,

Evidence of Al Qaeda's unconventional weapons capabilities is fragmentary.

as well as revelations of covert unconventional weapons programs in Iraq, the 1993 terrorist attack on the World Trade Center, and the April 1995 Oklahoma City bombing. The cumulative impact of a terrorist group using a chemical weapons agent in a society as orderly as Japan's, major conventional terrorist attacks on the U.S. homeland, and a series of revelations about hidden weapons programs both in Iraq and

the former Soviet Union led to a number of new presidential directives and new legislative initiatives. Federal officials worried about the danger of a similar subway incident in the United States and the challenge such an attack would pose for emergency responders. Would the United States be able to respond any better than Japan had, or would the loss of life be even worse?

These events in the early 1990s fundamentally changed how federal officials, particularly in the White House, perceived the safety of the U.S. homeland. Previously, terrorism was an evil that occurred far away from U.S. shores. The early and mid-1990s, however, demonstrated not only the willingness of foreign and U.S. terrorists to strike on U.S. soil but also that terrorists, even if they were not yet targeting U.S. soil, were willing to do what once had been taboo: kill indiscriminately with large quantities of explosives or even use poison or disease as a weapon. These events led the executive branch and Congress to increase counterterrorism funding significantly and initiate several new presidential directives, numerous governmental and private studies, expert commissions, and a plethora of new programs to increase the capabilities of local responders, particularly when faced with CBRN attacks.⁶

The nature of terrorism seemed to have changed fundamentally. Terrorists no longer seemed bound by previous limits, when they sought attention to their cause, not deaths. By the 1990s, terrorists sought mass and indiscriminate killing and justified it by invoking higher, religious authorities.

Bruce Hoffman, a well-known terrorist expert, noted in 1993 that, because “[r]eligious terrorist violence inevitably assumes a transcendent pur-

pose and therefore becomes a sacramental or divine duty, [it] arguably results in a significant loosening of the constraints on the commission of mass murder.”⁷ With moral restraints loosening, Richard Falkenrath, who has since joined the White House Office of Homeland Security, predicted in 1998 that “[i]t is certain that more and more non-state actors will become capable of NBC (nuclear, biological, and chemical weapons) acquisition and use.”⁸ More recently, the U.S. National Strategy for Homeland Security warned that the “expertise, technology, and material needed to build the most deadly weapons known to mankind—including chemical, biological, radiological, and nuclear weapons—are spreading inexorably.”⁹ Similarly, two former senior government counterterrorism officials argued that the confluence of religiously inspired terrorism and technological diffusion “will impel terrorists to overcome technical, organizational and logistical obstacles to WMD use.”¹⁰

If these policymakers and scholars are correct, why have terrorists not yet attacked the United States with unconventional weapons? Although evidence exists that some terrorists are willing to attack the United States, some are willing to kill indiscriminately, some are willing to use WMD, and some are even able to do so (with limited success), combining these trends into one coherent threat conflates a series of loosely related events in the 1990s. It is not unreasonable to draw such conclusions, but these insights are best gauged against a systematic examination of the historical—albeit surprisingly small—record of terrorist cases involving unconventional weapons.

The Sparse Historical Record

A series of 28 case studies, sponsored by the Monterey Institute’s Center for Nonproliferation Studies, spanning the last 50 years and compiled by more than a dozen researchers provides an empirical foundation to assess the motivations, behavior, and patterns related to terrorist interest, or alleged interest, in unconventional weapons. The same analytic questions were applied to each case, allowing for comparison across the entire set,¹¹ and strongly emphasized primary source material. When possible, the authors interviewed the perpetrators and arresting officials, reviewed court documents, and read the writings of the perpetrating groups.

Upon this rigorous inspection, several of the empirical cases frequently cited in the media and scholarly literature proved to be apocryphal.¹² The initial set of case studies raised doubts about the alleged claims of terrorist interest in, or use of, chemical and biological weapons. New evidence and a more thorough investigation of old evidence still underscored the difficulty of assessing incomplete and complicated data of sensitive security cases.

Considering the entire body of case study work, three other observations provide some conceptual framework for assessing the phenomena of terrorist acquisition and use of unconventional weapons.

First, groups that seek to acquire and use unconventional weapons share a few key factors, such as the mindset of the group leaders, the opportunities they seized, and the technical capabilities they possessed. Second, exogenous and internal restraints do prevent some groups that engage in indiscriminate and often mass violence from pursuing unconventional weapons. Several factors inhibit terrorist and insurgency movements from pursuing CBRN weapons as their means of violence. Accounting for and understanding the impact of these restraints and disincentives to terrorist acquisition and use of unconventional weapons is critical. Bolstering the appropriate disincentives may serve as a critical component to a counterterrorism campaign.

Finally, although religion in part orients some groups toward extreme violence, it does not necessarily lead groups to use poison, disease, or radioactive material as weapons. Group leaders that pursue unconventional weapons are just as likely to be obsessed with particular types of weapons, such as poison, for unconnected reasons, demonstrating behavior more akin to a serial poisoner than to a mass casualty terrorist. Alternatively, terrorist groups are just as likely to use unconventional weapons to capitalize on what they perceive as a practical opportunity to accomplish a desired end. For example, when the Tamil Tigers ran low on conventional weapons, they took chlorine containers from a nearby paper mill to use in the 1990 attack on an SLAF fort. Their immediate battlefield needs drove their use of toxic material as a weapon, not any unique fascination with chlorine as a weapon.¹³ More than anything else, the observations made during these case studies convey that the mindset of leadership, opportunity, and technical capacity are the factors that most significantly influence a group's propensity to seek to acquire and to use unconventional weapons.

THE MINDSET OF LEADERSHIP

Although it may include a religious orientation, the mindset of leadership may also include other facets. For example, Aum Shinrikyo leader Shoko Asahara prophesized the destruction of the Japanese government and the creation of a future world in which Asahara and his followers would rule—catalyzed by the use of nuclear, chemical, and biological weapons. Although Asahara's worldview entailed the use of unconventional weapons to spark an apocalyptic change, Aum's actual use of sarin—in Matsumoto against judicial officials (to thwart a judicial proceeding against them) and on Tokyo subway lines leading to many government ministries (to disrupt moves by law enforcement authorities to arrest them)—was more tactical.

The sarin attacks were also in large part a result of Asahara's obsession with poison as a weapon. In a poem Asahara wrote, he celebrated the beauty of the deadly power of sarin.¹⁴ The case studies involving Larry Wayne Harris, James Dalton Bell, and Masumi Hiyashi focus on individuals who sought to use poison or biological agents for their personal or political ends;¹⁵ like Asahara and his Aum followers, these individuals harbored a fascination with poison and disease. Unlike Harris, Bell, and Hiyashi, however, who largely acted alone, Asahara's Aum included scientists and considerable assets that enabled him to achieve a serious scale of operations that posed a major threat to public security.

Osama bin Laden and Al Qaeda have demonstrated a tremendous interest in unconventional weapons but have not necessarily been obsessed with them. There is a cult-like quality to how bin Laden inspires his followers with his pattern of speech, mimicking Koranic Arabic spoken in another era, and with his goal of reestablishing a golden era of Islam and expelling the United States, Israel, and all other infidels from the Middle East. Yet, bin Laden's worldview does not depend on the use of unconventional weapons, unlike Asahara's apocalyptic vision of the future. Attacks with explosives or crashing jetliners into buildings will suffice.

Both Asahara and bin Laden exhibit more than mere leadership power. They motivate group members to take actions that they would not necessarily do on their own and that are widely perceived as outside the norms of social behavior. Asahara's command over his followers extended to ritualistic practices of having them drink his bath water and bathe in scalding hot water. Although bin Laden motivated people to kill themselves in the process of killing thousands of others, the practice of suicide attacks has a history in the minds of its practitioners as legitimate violence; Aum's bizarre practices and its widespread use of poison to kill others, however, has no analog.

Several factors inhibit terrorist movements from pursuing CBRN weapons.

OPPORTUNITY

Rather than obsession, opportunity best explains the Tamil Tigers' use of chlorine against an SLAF fort in June 1990. The Tigers released the chlorine gas so that it drifted over the fort, where it injured more than 60 government soldiers. The gas enabled the Tigers to take the fort, but it also drifted back over them. For more than a decade after this incident, despite the continuing conflict, the Tigers never used chemicals in this fashion again. Interviews with former Tamil Tiger cadre and Sri Lankan intelligence officials revealed that

the Tamil Tigers feared the loss of support from Tamil constituents as well that of the Tamil diaspora communities that are critical for the organization's fundraising.¹⁶ They used chlorine in this one instance not out of some religious ideology but merely because it was available and met a battlefield need.

Aum Shinrikyo, Al Qaeda, and the Tamil Tigers all operated in permissive environments, where they could utilize the power of unconventional weapons without much interference from their host state. The Japanese government's National Police Agency, for example, proved ineffective at investigating Aum, and the group hid behind laws protecting religious organizations from government interference. Where law enforcement authorities of most countries would have investigated, intervened, and arrested, Japanese authorities waited to accumulate enough evidence for an overwhelming case. Tragically, they waited too long.

Al Qaeda was a strong terrorist group operating in Afghanistan on the territory of a weak state that was beholden to it. Al Qaeda operatives provided money to Taliban ministries to keep them operating, and its 055 Brigade was the most effective fighting force in the Taliban military. Al Qaeda was able to do as it pleased without any interference from the Taliban government and, as a nonstate actor, was able to act outside the norms of state behavior. 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.

The FARC also enjoyed freedom of operations in the sanctuary the Colombian government permitted it. Although the few allegations of FARC having used chemical agents remain obscure, the group's deep involvement in the drug trade brings it in contact with a variety of toxic chemicals that can add a nasty toxic component to their bombs.¹⁷ Although the group's government-designated sanctuary was revoked in 2002, the jungle of Colombia's interior allows the FARC to conduct much of its activities free from government control.

TECHNICAL HURDLES

The third explanation for the paucity of terrorist attacks using unconventional weapons is the technical hurdles involved. The technical capacity of groups to produce or acquire and effectively deliver unconventional weapons varies considerably. Achieving catastrophic outcomes with unconventional weapons requires a considerable scale of operations. Only in a very few cases have groups been able to amass the skills, knowledge, material, and equipment to perpetrate attacks with unconventional weapons on a scale that comes close to that of the danger posed by terrorist attacks with conventional explosives.

To date, only Aum Shinrikyo and Al Qaeda have been able to achieve the scale of operations required to mount serious unconventional weapons programs, but even these two groups have encountered difficulties. Aum Shinrikyo, which had considerable financial resources, front companies, and members with scientific talents, failed in all 10 of its biological weapons attacks.¹⁸ Similarly, the group's sarin attack on the Tokyo subway caused roughly the same number of fatalities as the average Palestinian suicide bomber attack.¹⁹ Aside from some minor efforts to develop the toxin ricin, Al Qaeda and its affiliated groups tend to use explosives delivered by suicide attackers as its weapon of choice. During the last 25 years, terrorist attacks with unconventional weapons have inflicted far fewer casualties and fatalities than indiscriminate terrorist bombings or suicide hijackings,²⁰ the tragic toll of the September 11 attacks being the most pronounced example.

Aum Shinrikyo failed in all 10 of its biological weapons attacks.

In cases where terrorists have used unconventional weapons in the past, they mostly have used crude toxic materials, not sophisticated, military-grade weapons. Aum is the one group that developed a chemical agent that is commonly found in military arsenals. Otherwise, most cases have involved limited efforts to use industrial materials or industrial by-products as weapons. Toxic warfare can pose considerable security challenges, but on balance, these types of threats pale in comparison to the catastrophic terrorist attacks for which government authorities prepare in tabletop exercises.²¹ In a survey of 60 tabletop exercises for federal departments and agencies, only a handful involve non-military-grade weapons agents.

An apparent lack of interest on the part of terrorist groups in acquiring unconventional weapons also helps explain why unconventional weapons attacks are so rare. In the case studies on the Irish Republican Army (IRA), the FARC, and Hamas, political vision, practical military utility, and moral codes all restrained them in part from seeking and using unconventional weapons. In some cases, group leaders indicated to members that the use of chemical or biological weapons would not be legitimate to their struggle. Hamas leader Abu Shannab, for one, stated that the use of poison was contrary to Islamic teachings.²² Although Hamas is a religiously based organization, its struggle to establish a Palestinian state on Israeli territory and to eliminate Israel as a state is decidedly political.

In another instance, FARC Southern Bloc commander Joaquin Gomez asked, "What is the point of using acid? We use the bombs to destroy the buildings, as we do not have artillery or tanks. Acid is of no use against con-

crete or bricks.”²³ In contrast to the occasion when the Tamil Tigers used chlorine gas because they were short on small arms, Gomez perceived no value in using chemical agents in his insurgency struggle; explosive fire-power is what he deemed important.

Finally, despite a few allegations of interest by the IRA in purchasing nuclear material and wanting to poison certain targets, neither the Provisional IRA, other IRA factions, nor the political wing Sinn Fein was willing to jeopardize the embryonic peace process leading to the goal of acquiring political power by wielding unconventional weapons.²⁴ The discovery of any attempt by an IRA group to acquire such nuclear material would only hurt the movement with financial supporters and likely elicit a ferocious crackdown from the British. Although many of the factions of the Irish Republican movement have considerable technical skills, abundant financial resources, and extensive contacts with organized criminal organizations and states seeking unconventional weapons, they have eschewed opportunities to obtain such capabilities because such efforts would only jeopardize their chances for success.²⁵

Thus, a complex of factors shape a group’s propensity to acquire and use unconventional weapons. Religion is an important one, but not the only one. Although religion can provide a dangerous motivating component, the greatest danger occurs when the group also has technical capabilities, easily exploitable opportunities, and a minimum of restraints. Groups need technical capacity, including knowledge, skill, critical weapons material, production equipment, and sometimes even sheer serendipity, to acquire and use unconventional weapons. Use of an unconventional weapon also risks the demise of a group’s leadership. Most of Aum’s leaders were imprisoned and have since been released. Others, including Shoko Asahara, still face the drawn-out Japanese legal process. The group has renamed itself Aleph and appears to be living a peaceful existence, although there have been some reports of suspicious information-collection activities. Al Qaeda, in contrast, continues to be interested in these weapons but is also willing and able to conduct significant, multiple, and near simultaneous attacks with conventional means.

Implications for U.S. Counterterrorism Policy

Combating terrorism in all its forms and protecting against attacks with the range of possible weaponry terrorists might assemble remains a high priority challenge for the U.S. government. Given the empirical importance of permissive environments in facilitating the technical capacity needed for terrorist groups to seek and utilize unconventional weapons, the role of states is critical. A central component of the Bush administration’s strategy to

combat terrorism has been to apply a variety of diplomatic and military tools to state sponsors of terrorist groups. A more nuanced understanding of the relationships between states and terrorist groups may provide the United States with additional policy tools. Strong states supporting terrorist groups present different policy problems than do weak states, from which strong terrorist groups operate. Weak, failing, or supportive states not only enable terrorist groups to thrive but also enable their ability to acquire unconventional capabilities with sufficient scale for truly catastrophic attacks. This finding holds important implications for U.S. counterterrorism policy.

Eliminating all possibility of terrorist groups or individuals using CBRN weapons is impossible. Trying to limit the scope and scale of a group's activities, however, may prevent it from achieving the freedom of action that proved critical in several cases in the past. One option is to restrict the physical sanctuary within a state where a terrorist group operates to impinge on its scale of operations. Collapsed or abruptly transitioning states present a more extreme danger. In such instances, whatever remains of a governing authority may not be able to exercise control over terrorist activities on its territory. The unstable state may also possess military or dual-use materials that terrorists or insurgency movements willing to use unconventional weapons could exploit or steal. Given these dangers, a range of diplomatic, economic, and military policies to shore up weak and failing states are crucial to reducing the terrorist threat.

Another policy option is publicly to declare that state sponsors who transfer unconventional weapons capabilities to nonsovereign, subnational groups will be in violation of a fundamental norm of the international system and will run the most severe risks to their security. U.S. military action against the Iraqi regime demonstrated only one unequivocal way to bolster the taboo against such transfers; there are other ways to bolster the norm and crush the offending regime. U.S. diplomacy should also encourage friends and allies to underscore the seriousness of such potential transfers with states such as Syria, Iran, Libya, and North Korea. Pressure from other nations such as China, Russia, and Japan may be as effective with these states as U.S. diplomatic pressure.

Recognizing that the so-called new terrorists may not always escalate to unconventional weapons is the first step to achieving a better balance on the nature of the terrorist threat and how to combat it. Focusing inordinately on the prospect of terrorist attacks with unconventional weapons unduly limits

Policies to shore up weak and failing states are crucial to reducing the terrorist threat.

authorities' focus and resource allocation. Contrary to one scholar's assertion that "the only way to prevent" terrorist use of CBRN weapons is "to implement far greater police control than the United States has ever known,"²⁶ policymakers need to refocus the core of governmental attention and resources on preventing and preempting terrorist attacks from occurring in the first place. In addition, policymakers need to seek opportunities for dual-use measures that benefit society on a daily basis and also help prevent terrorism.

A greater focus on preventing terrorist attacks from happening in the first place is needed.

Merely improving the ability to manage consequences by broadening training for first responders,²⁷ the police and firefighters likely to be on the scene in the event of an attack, prematurely gives up on the task of preventing attacks before they occur, regardless of their weaponry or mode of operation.

The United States may have difficulty sustaining a twin-track policy of preemptive military engagement and reactive homeland defense, focused on detecting and responding

to the consequences of a CBRN terrorist attack. Both approaches are important components of a strategy, but a range of other measures that focus on preempting terrorist operations themselves must complement them.

The United States must strike a balance between preparing to address attacks with unconventional or CBRN weapons materials and conventional attacks that may also have dramatic consequences. Tragically, precious little of the millions of dollars used for first-responder training in the last five years proved valuable following the September 11 attacks because so few survived the attack. This is not to suggest that the training was not valuable—it was, but not necessarily in these incidents. The new Department of Homeland Security and other federal agencies need to pay particular attention to finding the right balance in their budgets for new research and new capabilities. A greater focus on how to prevent terrorist attacks from happening in the first place—regardless of the means we fear they may use—is needed. Inordinate attention on the comparatively unique challenges of coping with unconventional weapons draws scarce resources away from the more basic but essential activities of law enforcement, intelligence, border and customs control, diplomacy, and military action.

Notes

1. 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, www.nipc.gov/

- publications/infobulletins/2003/ib03-003.htm (accessed May 13, 2003) (hereinafter NIPC Information Bulletin).
2. Central Intelligence Agency (CIA), "Terrorist CBRN: Materials and Effects (U)," CTC 2003-40058, May 2003.
 3. CIA, "Terrorist CBRN" (emphasis added).
 4. NIPC Information Bulletin (emphasis added).
 5. See W. Seth Carus, "The Rajneeshees (1984)," in *Toxic Terror: Assessing Terrorist Use of Chemical and Biological Weapons*, ed. Jonathan B. Tucker (Cambridge, Mass.: MIT Press, 2000), pp. 55–70; Bruce Hoffman, "Tamil Tigers," in *Motives, Means, and Mayhem: Terrorist Acquisition and Use of Unconventional Weapons*, ed. John Parachini (forthcoming); Bruce Hoffman, "Terrorism and Weapons of Mass Destruction: An Analysis of Trends and Motivations," RAND Document P-8039, 1999, pp. 44–50.
 6. "United States Policy on Counterterrorism," Presidential Decision Directive-39 (PDD-39), www.ojp.usdoj.gov/odp/docs/pdd39.htm (accessed July 12, 2003) (unclassified synopsis); "Protection Against Unconventional Threats to the Homeland and Americans Overseas," PDD-62, www.ojp.usdoj.gov/odp/docs/pdd62.htm (accessed July 12, 2003). For information on the increases in U.S. government spending to combat terrorism, as well as a useful basis for congressional and public review of the executive branch's policies and programs, see the report submitted by the director of the Office of Management and Budget (OMB) pursuant to section 1051 of the Fiscal Year 1998 National Defense Authorization Act (Public Law 105-85) entitled "Director of the Office of Management and Budget's Annual Report to Congress on Combating Terrorism" and the Bush administration's first annual report to Congress on combating terrorism, "Including Defense Against Weapons of Mass Destruction/Domestic Preparedness and Critical Infrastructure Protection," dated May 2001. For an analysis of the changes in funding to combat terrorism, see John Parachini, "Combating Terrorism: Assessing Threats, Risk Management, and Establishing Priorities," statement before the House Government Reform Subcommittee on National Security, Veterans Affairs, and International Relations, July 26, 2000, <http://cns.miis.edu/pubs/reports/paraterr.htm> (accessed July 12, 2003).
 7. Bruce Hoffman, "'Holy Terror': The Implications of Terrorism Motivated by a Religious Imperative," RAND Document P-7834, 1993.
 8. Richard A. Falkenrath, "Confronting Nuclear, Biological and Chemical Terrorism," *Survival* 40, no. 3 (autumn 1998): 53.
 9. Office of Homeland Security, "National Strategy for Homeland Security," July 2002, p. ix.
 10. Steven Simon and Daniel Benjamin, "America and the New Terrorism," *Survival* 42, no. 1 (spring 2000): 72.
 11. In addition to the 12 case studies contained each in *Toxic Terror* and in *Motives, Means, and Mayhem*, additional cases on the PKK, Chechen rebels, an anthrax hoaxer in California, and Kashmiri separatists were included.
 12. Jonathan B. Tucker, "Lessons Learned," in *Toxic Terror: Assessing Terrorist Use of Chemical and Biological Weapons*, ed. Jonathan B. Tucker (Cambridge, Mass.: MIT Press, 2000), pp. 249–252.
 13. Hoffman, "Tamil Tigers."
 14. To see the text of Asahara's "Song of Sarin," see D. W. Brackett, *Holy Terror: Armageddon in Tokyo* (Weatherhill: New York, 1996), p. 119.
 15. See Jessica Eve Stern, "Larry Wayne Harris (1998)," in *Toxic Terror: Assessing Ter-*

- rorist Use of Chemical and Biological Weapons, ed. Jonathan B. Tucker (Cambridge, Mass.: MIT Press, 2000). See also Jessica Stern and Darcy Bender, "James Dalton Bell," in *Motives, Means, and Mayhem: Terrorist Acquisition and Use of Unconventional Weapons*, ed. John Parachini (forthcoming); Masaaki Sugishima, "Poisonings in Japan," in *Motives, Means, and Mayhem: Terrorist Acquisition and Use of Unconventional Weapons*, ed. John Parachini (forthcoming).
16. Hoffman, "Tamil Tigers."
 17. Jeremy McDermott, "FARC," in *Motives, Means, and Mayhem: Terrorist Acquisition and Use of Unconventional Weapons*, ed. John Parachini (forthcoming).
 18. Milton Leitenberg, "The Widespread Distortion of Information on the Efforts to Produce Biological Warfare Agents by the Japanese Aum Shinrikyo Group: A Case Study in the Serial Propagation of Misinformation," *Terrorism and Political Violence* 11, no. 4 (winter 1999). For a list of Aum attacks with biological agents, see David E. Kaplan, "Aum Shinrikyo (1995)," in *Toxic Terror: Assessing Terrorist Use of Chemical and Biological Weapons*, ed. Jonathan B. Tucker (Cambridge, Mass.: MIT Press, 2000), p. 221.
 19. Bruce Hoffman, "The Logic of Suicide Terrorism: Lessons from Israel That America Must Learn," *Atlantic Monthly*, June 2003, p. 43.
 20. John V. Parachini, "Comparing Motives and Outcomes of Mass Casualty Terrorism Involving Conventional and Unconventional Weapons," *Studies in Conflict & Terrorism*, vol. 24, 2001, p. 401. See Falkenrath, "Confronting Nuclear, Biological and Chemical Terrorism," p. 52.
 21. For the types of challenges toxic warfare can pose, see Theodore Karasik, *Toxic Warfare* (Santa Monica, Calif.: RAND, 2002). For further information on government tabletop exercises, see U.S. General Accounting Office, "Combating Terrorism: Analysis of Federal Counterterrorist Exercises," *Briefing Report to Congressional Committees*, GAO/NSIAD-99-157BR (Washington, D.C.: GAO, June 1999), www.gao.gov/archive/1999/ns99157b.pdf (accessed July 30, 2003).
 22. Magnus Ranstorp, "Hamas," in *Motives, Means, and Mayhem: Terrorist Acquisition and Use of Unconventional Weapons*, ed. John Parachini (forthcoming).
 23. McDermott, "FARC."
 24. Roger Davies and Michael Dolamore, "PIRA," in *Motives, Means, and Mayhem: Terrorist Acquisition and Use of Unconventional Weapons*, ed. John Parachini (forthcoming).
 25. For reports on potential IRA-FARC chemical cooperation, see David Sharrock, "Rebel Weapons 'Have IRA Hallmark,'" *Times* (London), February 8, 2003, p. 20; Andrew Selsky, "U.S. Investigation of Deaths of Colombian Police Discovers Trace of Cyanide," Associated Press, August 21, 2002.
 26. Jessica Stern, "Terrorist Motivations and Unconventional Weapons," in *Planning the Unthinkable: How New Powers Will Use Nuclear, Biological and Chemical Weapons*, eds. Peter R. Lavoy, Scott D. Sagan, and James J. Wirtz (Ithaca and London: Cornell University Press, 2000), p. 229.
 27. *Ibid.*