The Prospect of Domestic Bioterrorism

Jessica Stern
Council on Foreign Relations, Washington, D.C., USA

Would domestic terrorists use biological weapons?[1] The conventional wisdom among experts has been that terrorists "want a lot of people watching, not a lot of people dead" and are unlikely to turn to weapons of mass destruction.[2] A new school of thought proposes that improved technology has made biological attacks resulting in hundreds of thousands or millions of deaths all but inevitable. While terrorists are increasingly interested in weapons of mass destruction, proponents of the latter view exaggerate the threat. Using biological weapons to create mass casualties would require more than having biological agents in hand. The terrorists would need to disseminate the agent, which presents technical and organizational obstacles that few domestic groups could surmount. In addition, relatively few terrorists would want to kill millions of people, even if they could.

For most terrorists, the costs of escalation to biological weapons would seem to outweigh the benefits. Most modern terrorists have had substantively rational goals, such as attaining national autonomy or establishing a government purportedly more representative of the people's will. Escalating to such frightening weapons would result in a massive government crackdown and could alienate the group's supporters. Biological weapons are also dangerous to produce. A number of Aum Shinrikyo members reportedly damaged their own health while working on biological agents. Additionally, some terrorists may perceive moral constraints.[3]

Address for correspondence: Jessica Stern, Council on Foreign Relations, 1779 Massachusetts Ave. NW, Washington, D.C. 20007, USA; fax: 202-986- 2984; e-mail: jessicas@alum.mit.edu.

Candidates for successful use of biological weapons represent the intersection of three sets: groups that want to use these weapons despite formidable political risks; groups that can acquire the agent and a dissemination device (however crude); and groups whose organizational structure enables them to deliver or disseminate the agent covertly. The intersection of these sets is small but growing, especially for low-technology attacks such as contaminating food or disseminating biological agents in an enclosed space. Major attacks are also becoming more likely. In the sections that follow, we consider eroding motivational, technical, and organizational constraints.

Motivational Factors

Getting Attention

Some terrorists may turn to biological weapons because they believe it would attract more attention to their cause than conventional attacks. Studies of perceived risk show an inexact correlation between scientists' assessment of risk and the level of fear invoked by risky technologies and activities.[4] Biological weapons are mysterious, unfamiliar, indiscriminate, uncontrollable, inequitable, and invisible, all characteristics associated with heightened fear.

Economic Terrorism

Unlike conventional weapons, radiologic, chemical, and biological agents could be used to destroy crops, poison foods, or contaminate pharmaceutical products. They could also be used to kill livestock. (Conventional weapons could be used for the same purposes, albeit less efficiently.) Terrorists might use these agents to

[1] This essay summarizes Jessica Stern, "Terrorist Motivations and WMD," in Peter Lavoy, Scott Sagan, and Jim Wirtz, ed., Planning the Unthinkable, in press, 2000.
[2] Brian Jenkins has made this statement about terrorists on numerous occasions. For example, see Brian Michael Jenkins, "International Terrorism: A New Mode of Conflict," in David Carlton and Carolo Schaerf, eds., International Terrorism and World Security (London: Croom Helm, 1975), 15. On terrorists' purported aim to harass, see Kenneth Waltz, "Waltz Responds to Sagan," in Scott D. Sagan and Kenneth Waltz, The Spread of Nuclear Weapons: A Debate (New York: Norton, 1995), 94-96.
[3] For examples, see Jessica Stern in Lavoy.
[4] See for example Paul Slovic, Baruch Fischoff and Sarah Lichtenstein, "Facts and Fears: Understanding Perceived Risk," in Richard Schwing and Walter Albers, eds., Societal Risk Assessment: How Safe is Safe Enough? (New York: Plenum Press, 1980), 181-216.

attack corporations perceived to be icons of the target country, for example, by contaminating batches of Coca-Cola, Stolichnaya vodka, or Guinness stout. Terrorists could attempt to disseminate anthrax with the explicit goal of imposing expensive clean-up costs on a target government.

Millenarianism

The millenarian idea is that the present age is corrupt and that a new age will dawn after a cleansing apocalypse. Only a lucky few (usually selected on the basis of adherence to doctrine or ritual) will survive the end of time and experience paradise.[5] Some millenarians believe that the saved will have to endure the 7 years of violence and struggle of the apocalypse, and they want to be prepared.[6] Shoko Asahara, leader of the doomsday cult that released sarin gas in the Tokyo subway in 1995, killing 12, told his followers that in the coming conflict between good and evil they would have to fight with every available weapon.[7] A similar belief system explains the attraction to survivalism by Identity Christians, white supremacists who believe in an imminent Armageddon.

Premillennial Tension

Slight tension connected with the millennium presumably affects most people. Many are concerned about the Y2K problem, the prospect that computer systems will malfunction or fail at the end of 1999. Some fear the breakdown of air-traffic control systems and are planning to avoid traveling around January 1, 2000. Others fear an accidental launch of Russian nuclear missiles due to malfunctioning computers. Many are stockpiling food and medicine or will have extra cash on hand in case automated banking systems fail. Some feel vague religious fears. Members of antigovernment groups and religious cults are often vulnerable psychologically and appear to be especially affected by premillennial tension. Larry Wayne Harris, a white supremacist and born-again Christian, predicts that the Y2K bug will cause a civil war in the United States and that after January 1, 2000, the government will be unable to deliver welfare checks and food stamps for at least 3 years.[8] He predicts that biological attacks could be carried out by domestic groups fighting for their heritage, traditions, and communities, causing devastating plagues like those described in the Bible's Book of Revelation.[9] He urges all U.S. citizens to prepare. For some domestic groups, preparation involves stockpiling weapons and training to use them.

Exacting Revenge or Creating Chaos

Politically motivated terrorists who desire to change societies rather than destroy them might avoid killing very large numbers of people because the political costs would exceed the benefits.[10] Some terrorists, however, want to annihilate their enemies or demolish the societal order. William Pierce, leader of the neo-Nazi organization National Alliance, aims to initiate a worldwide race war and establish an Aryan state. "We are in a war for the survival of our race," he explains, "that ultimately we cannot win... except by killing our enemies... It's a case of either we destroy them or they will destroy us, with no chance for compromise or armistice."[11] Creating social chaos is thus a worthwhile objective in Pierce's view. Ramzi Yousef, organizer of the World Trade Center bombing, claimed he was exacting revenge against the United States.[12] Osama bin Laden seems to have similar motives.

Mimicking God

Terrorists hoping to create an aura of divine retribution might be attracted to biological agents. The fifth plague used by God to punish the Pharaoh in the Bible's Book of Exodus was murrain, a group of cattle diseases that includes

[5]While millenarian doctrines are generally religiously based, some are not. See Jean E. Rosenfeld, "Pai Marire: Peace and Violence in a New Zealand Millenarian Tradition," Terrorism and Political Violence, 7, no. 3 (autumn 1995), 83.
[6]"End Times Jitters," interview with Michael Barkun, Klanwatch Intelligence Report (summer 1997), 17.
[7]FBIS-SOV-97-09, 6 May 1997. Source Moscow Trud, 6 May 1997, 1-2.
[8]Author Interview with Larry Wayne Harris, 9 February 1999.
[9]Testimony of Larry Wayne Harris, State of Ohio v. Stephen Michael Wharf.
[10]The nature of the constituency is a key variable here. If the terrorists' constituents see the targeted group as subhuman, or if terrorists have no clear constituency, political constraints against macro-terrorism are less likely to bind.
[11]Quotes from Klanwatch Intelligence Report (May 1996), 6-8.
[12]Gail Appleson, "Bomb Mastermind Gets Life in US Prison," Reuters, 9 January 1997.

anthrax. In the fifth chapter of Samuel I, God turned against the Philistines and "smote them with emerods." Medical historians consider these emerods a symptom of bubonic plague.[13] Some terrorists may believe they are emulating God by employing these agents.

The Aura of Science

Terrorists may want to impress their target audience with high technology or with weapons that appear more sophisticated than conventional ones. Terrorists may find technology appealing for various reasons. William Pierce, who studied physics at California Institute of Technology, is interested in high-technology weapons. In his novel The Turner Diaries, right-wing extremists use nuclear, chemical, biological, and radiologic weapons to take over the world. Pierce believes he can attract more intelligent recruits to his organization over the Internet than through radio or leaflets.[14]

The Copycat Phenomenon

Domestic extremists have shown greater interest in chemical and biological weapons in the last 5 years. For example, in 1998, members of the Republic of Texas were convicted of threatening to assassinate with biological agents President Clinton, Attorney General Janet Reno, and other officials.[15] In May 1995, 6 weeks after the Aum Shinrikyo incident on the Tokyo subway, Larry Wayne Harris bought three vials of *Yersinia pestis*, the bacterium that causes bubonic plague. No law prohibited Harris or any other U.S. citizen from acquiring the agent. The law has been tightened up since, although many fear it is still not restrictive enough. The Federal Bureau of Investigation (FBI) Director Louis Freeh reports that "a growing number—while still small—of 'lone offender' and extremist splinter elements of right wing groups have been identified as possessing or attempting to develop or use" weapons of mass destruction.[16]

In February 1998, Harris boasted to an informant that he had enough military-grade anthrax to wipe out all of Las Vegas. Eight bags marked "biological" had been found in the back of a car he and his accomplice were driving.[17] Several days later, federal authorities learned that the anthrax Harris had brought to Las Vegas was a vaccine strain not harmful to human health. Nevertheless, the incident frightened many people and sparked a proliferation of anthrax hoaxes and threats in the second half of 1998 continuing into 1999 by groups including Identity Christians and other antigovernment groups, extortionists, anti-abortion activists, and presumed prochoice groups. In many cases, the perpetrator's motives were unknown, but some incidents appear to have been student pranks, demonstrating the extent to which the threat of anthrax has entered U.S. consciousness (Table).

Technical Factors

With the end of the cold war and the breakup of the Soviet Union, weapons of mass destruction and their components have become easier to acquire. Underpaid former Soviet weapons experts may be providing biological weapons and expertise to Iran.[18] South African biological weapons scientists have offered their expertise to Libya.[19] State-sponsored groups are most capable of overcoming technical barriers to mass-casualty attacks, but the sponsor would presumably weigh the risk for retaliation before supporting this type of terrorist attack.

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[13]Hans Zinsser, Rats, Lice and History (Boston: Little Brown and Company, 1963), 110.
[14]Author interview with William Pierce, 22 April 1997.
[15] Madeline Baro, "FBI: Men Knew of Cactus Weapons, Threats," Associated Press/Corpus Christi Online, 27 October 1998; found at: http://www.callertimes.com/autoconv/newstexmex98/newstexmex57.html.
[16] Statement for the Record of Louis J. Freeh, Director, Federal Bureau of Investigation, before the United States Senate Committee on Appropriations; Subcommittee for the Departments of Commerce, Justice, and State, the Judiciary, and Related Agencies; February 4, 1999.
[17]One informant said that Harris said he had "military-grade anthrax." Another said Harris referred to a vaccine or a placebo. Proceedings before the Regular Federal Grand Jury, Testimony of Robert James, February 25, 1998, United States District Court, District of Nevada, p. 17. United States of America v. Larry Wayne Harris, Complete Transcript of Proceedings, CR-2-95-093, March 6, 1998, United States District Court, Southern District of Ohio.
[18]Judith Miller and William J. Broad, "Bio-Weapons in Mind, Iranians Lure Needy Ex-Soviet Scientists," New York Times, 8 November 1998, A1 and Miller and Broad, "Germ Weapons: In Soviet Past or in the New Russia's Future?" New York Times, 28 December 1998, A1.
[19]James Adams, "Gadaffi Lures South Africa's Top Germ Warfare Scientists," Sunday Times, 26 February 1995; Paul Taylor, "Toxic S. African Arms Raise Concern; US Wants Assurance '80s Program is Dead," Washington Post, 28 February 1995.

Table. Anthrax incidents in the United States, 1992–1999[a]

	Year		
	1992	1997	1998
No. incidents	1	1	37
No. persons affected[b]	20	100	5,529
Persons decontaminated, treated, or quarantined[b]	20	30	1,202
Targets	Residence	Religious organization	Government buildings and officials, individuals, clinics, religious instiutions, antiabortion activists, financial institutions, schools, retail establishments, office buildings, media, nightclub
Purported motivators	Malicious	Anti-Semitism	Antigovernment, alleged research, antiabortion, prochoice retaliation, student pranks, delay court appearance
Dissemination technique(s)	Splattering	Mail	Dispersal on premises, modified cigarette lighter, moist towelettes, mail (envelope), explosive device, ventilation systems
Responses	Perimeter sealed, medical treatment	Perimeter sealed, decontamination, medical treatment	On-site inspection, evaluation perimeter sealed, pamphlets provided, quarantine, decontamination, medical treatment

[a]These data are presumed incomplete and may contain errors. Numbers are based on press reports and are not available for all years. Data not independently confirmed.
[b]Figures do not include incidents in which numbers are not available; actual totals, therefore, may be understated.
Chart prepared by Darcy Bender.

College-trained chemists and biologists could presumably produce biological agents, although they might have trouble disseminating them as aerosols. Microorganisms can be disseminated by air in two forms: as liquid slurries or as dry powders. While producing liquid slurries is relatively easy, disseminating them as respirable infectious aerosols over large open areas is not. Although dry powders can be disseminated far more easily, high-quality powders require substantial development, involving skilled personnel and sophisticated equipment. Milling biological agents would require a level of sophistication unlikely to be found among many domestic terrorist groups. Far more likely are low-technology incidents such as contaminating foods, poisoning livestock, or disseminating industrial poisons in an enclosed space. Such attacks could still be lethal. Major attacks cannot be ruled out; however, governments need to prepare.

Organizational Factors

In the mid-1980s, a little-known survivalist group called The Covenant, the Sword, and the Arm of the Lord (CSA) acquired a large drum of cyanide with the intention of poisoning water supplies in major U.S. cities. At the time, CSA was unusual among terrorist groups in that its sole objective was large-scale murder rather than influencing government policies. CSA overcame two of three large obstacles to successful employment of a chemical agent. It had the motivation to use a chemical agent to kill large numbers and no political or moral constraints. The group had acquired a chemical agent, although not in sufficient quantity to contaminate city water supplies. The group's leaders had not recruited technically trained personnel and chose an unworkable dissemination technique. Moreover, the group lacked discipline and was easily penetrated by FBI. It is unlikely that CSA would make such mistakes if it were operating today, when antigovernment groups are so much more aware of the potential of poison weapons for inflicting mass casualties.[20]

CSA was run as a relatively open compound. Some members wrote articles in local papers espousing antigovernment beliefs, and some worked in neighboring towns. Several former CSA members became informants, often because they hoped to get their sentences reduced for other, unrelated, crimes. In recent years, however, antigovernment groups have become more aware of the danger of penetration by law-enforcement authorities and have devised a new way of organizing themselves called "leaderless resistance."[21] Members are encouraged to act on their own, minimizing their communication with the leadership of the movement. Timothy McVeigh operated according to this model. His bombing of the Oklahoma City Federal Building was originally conceived of by CSA, although it is not clear that McVeigh knew of CSA's earlier plot. If future terrorists with chemical or biological agents act on their own or in small, secretive groups, FBI may have difficulty apprehending them.

One of CSA's objectives was to establish a computerized, nationwide system linking right-wing groups. This goal has been achieved, although CSA is not exclusively—or even principally—responsible for this achievement. The nationwide linking of right-wing groups has implications that have not been adequately appreciated by the law enforcement community. The Internet makes terrorist acts easier to carry out. It facilitates leaderless resistance by allowing leaders of the movement to communicate with sympathizers worldwide without having to meet face-to-face with their followers.

The Likeliest Perpetrators

A small but growing number of domestic terrorists could attempt to use biological weapons in the belief that doing so would advance their goals. The most likely are religious and extreme right-wing groups and groups seeking revenge who view secular rulers and the law they uphold as illegitimate. They are unconstrained by fear of government or public backlash, since their actions are carried out to please God and themselves, not to impress a secular constituency. Frequently, they do not claim credit for their attacks since their ultimate objective is to create so much fear and chaos that the government's legitimacy is destroyed. Their victims are often viewed as subhuman since they are outside the group's religion or race.

Religiously motivated groups are increasing. Of 11 international terrorist groups identified by the Rand Corporation in 1968, none were classified as religiously motivated. By 1994, a third of the 49 international groups recorded in the Rand-St. Andrews Chronology were classified as religious.[22] Religious groups are not only becoming more common; they are also more violent than secular groups. In 1995, religious groups committed only 25% of the international incidents but caused 58% of the deaths.[23]

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[20] For example, Kerry Noble claimed that if CSA leader James Ellison met someone who knew something about biological agents, he might consider using them. Author interview with Kerry Noble, March 2, 1998.

[21] See Louis Beam, "Leaderless Resistance," The Seditionist, Issue 12, February 1992. Found at: http://www.louisbeam.com/leaderless.htm.

[22] Bruce Hoffman, "Viewpoint: Terrorism and WMD: Some Preliminary Hypotheses," Nonproliferation Review (spring-summer 1997): 45-52. Hoffman provides slightly different numbers in "Holy Terror": The Implications of Terrorism Motivated by a Religious Imperative (Santa Monica: Rand Corporation, P-7834, 1993).

[23] Hoffman, "Viewpoint," 48.

Identity Christians believe that the Book of Revelation is to be taken literally as a description of future events. Many evangelical Protestants believe in a doctrine of rapture: that the saved will be lifted off the earth to escape the apocalypse that will precede the Second Coming of Christ. Followers of Christian Identity (and some other millenarian sects), however, expect to be present during the apocalypse.[24] Because of this belief, some followers of Christian Identity believe they need to be prepared with every available weapon to ensure their survival.

Organizational pressures could induce some groups to commit extreme acts of violence. Followers tend to be more interested in violence for its own sake than in the group's purported goals, making them less inhibited by moral or political constraints than the leaders. Leaders may have difficulty designing command and control procedures that work. Offshoots of established groups may be particularly dangerous. Groups may also become most violent when the state is closing in on them, potentially posing difficulties for those fighting terrorism. Another factor is the nature of the leader. Charismatic leaders who isolate their followers from the rest of society often instill extreme paranoia among their followers. Such groups can be susceptible to extreme acts of violence.

Asked who he thought the most likely domestic perpetrators of biological terrorism were, John Trochman, a leader of the Montana Militia, said that extremist offshoots of Identity Christian groups are possible candidates, as are disaffected military officers.[25] Some antigovernment groups are attempting to recruit inside the U.S. military.[26] William Pierce also foresees the use of biological weapons by antigovernment groups. "People disaffected by the government include not only the kind of people capable of making pipe bombs. Bioweapons are more accessible than are nuclear weapons."[27]

Conclusions

Terrorism with biological weapons is likely to remain rare. This is especially the case for attacks intended to create mass casualties, which require a level of technologic sophistication likely to be possessed by few domestic groups. While state-sponsored groups are most likely to be capable of massive biological weapons attacks, the state sponsor would presumably have to weigh the risk for retaliation. As in the case of other low-probability high-cost risks, however, governments cannot ignore this danger; the potential damage is unacceptably high. Because the magnitude of the threat is so difficult to calculate, however, it makes sense to focus on dual-use remedies: pursuing medical countermeasures that will improve public health in general, regardless of whether major biological attacks ever occur. This would include strengthening the international system of monitoring disease outbreaks in humans, animals, and plants and developing better pharmaceutical drugs.

The risk for overreaction must be considered. If authorities are not prepared in advance, they will be more susceptible to taking actions they will later regret, such as revoking civil liberties. Attacks employing biological agents are also more likely and will be far more destructive if governments are caught unprepared.

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Dr. Stern is a Fellow at the Council on Foreign Relations. She is the author of The Ultimate Terrorists (Harvard University Press, 1999). She is currently writing a book on religious extremism worldwide.

[24]Author interview with Pastor Millar, 21 April 1998.
[25]Author interview with Trochman, 9 February 1999.
[26]Author interview with William Pierce, 22 April 1997.
[27]Author interview with William Pierce.