

1982

Terrorists and Chemical/Biological Weapons

Elliot Hurwitz

Follow this and additional works at: <https://digital-commons.usnwc.edu/nwc-review>

Recommended Citation

Hurwitz, Elliot (1982) "Terrorists and Chemical/Biological Weapons," *Naval War College Review*: Vol. 35 : No. 3 , Article 5.
Available at: <https://digital-commons.usnwc.edu/nwc-review/vol35/iss3/5>

This Article is brought to you for free and open access by the Journals at U.S. Naval War College Digital Commons. It has been accepted for inclusion in Naval War College Review by an authorized editor of U.S. Naval War College Digital Commons. For more information, please contact repository.inquiries@usnwc.edu.

Terrorists and Chemical/Biological Weapons

by
Elliott Hurwitz

With all of the interest that has been shown in terrorism in recent months, relatively little attention has been paid to the possibility that terrorists

could dramatically escalate the type of weapons they use, and so pose a much greater threat to organized societies and governments than they do at present. What we have in mind is a terrorist group's use, or credible threat to use, mass casualty weapons—those that can cause several hundred to tens of thousands of casualties in a single attack.

Some attention has been paid, in both fictional and nonfiction accounts to the possibility that terrorist groups might acquire nuclear weapons.¹ To be sure, the acquisition of a nuclear device by a terrorist group would indeed be a spectacular event of high political moment and grave public concern. It would mark a new era in terrorist operations and might have an important effect on the political balance in a particular region. However, the seriousness with which we view such a threat is reduced by the extreme difficulty that any terrorist group would face in fabricating or stealing a nuclear device. In effect, the very difficult technical and political problems that a group would have to overcome in order to acquire a weapon have reduced our anxiety that such an event could occur.

However, there exists a second category of mass casualty weapons whose use terrorists could plausibly consider: chemical/biological (C/B) weapons. While these weapons do not quite have the unique destructive power or political force of nuclear weapons, their acquisition and credible deployment by a terrorist group would undoubtedly be considered as a very significant—and ghastly—escalation of the terrorist threat. The use of C/B weapons in a terrorist incident—for example, an attack with a nerve agent on a large auditorium that caused several thousand casualties—would traumatize the government at which the attack was aimed. If the terrorists were well organized and the initial attack were followed up with threats to use C/B weapons again, the possibility exists that widespread social disruption or even panic might result. *Most significantly, and most disturbing, it appears from the available evidence that it is entirely feasible for a terrorist group of even modest resources to acquire and effectively use C/B weapons.* For, as will be shown later, the chemical and laboratory supplies needed to prepare lethal agents are freely available, and the required procedures are discussed in literally dozens of articles in the open literature.

It is the purpose of this article to explore the question of C/B weapons and their possible use by terrorists. We will describe the nature of terrorism, how terrorists

could acquire and plausibly use C/B weapons, and give our view of the outlook for terrorist use of C/B weapons. We should emphasize that by illuminating the possibility that C/B weapons might be used by terrorists, this article is intended to stimulate more effective preparation by governments and security agencies for that possibility. It is not intended to alert any terrorist group to the existence of a terrible new weapon that they have thus far overlooked. In fact, for any terrorist group interested in escalating the weapons in its arsenal, numerous books and articles in the general literature and the publicity surrounding the repeated uses of C/B weapons by the Soviets and their surrogates in Laos, Cambodia, and Afghanistan will already have served as ample notice.²

Looking at the goals of terrorists and the ways in which they operate, it would seem at first glance that terrorism is the type of instrument for which C/B weapons would be ideally suited. Consider the following attributes of terrorism:

- Terrorism is not just what terrorists do, but is the general sense of alarm and fear that they cause by their actions.
- Public perceptions of terrorism in the world appear to be governed not by the actual level of violence, but by the quality of the incidents, the locations, and the media coverage. For example, more people tend to recall the hijacking in the United States of a TWA airliner in September 1976 by Croatian extremists—resulting in one death—than remember the bomb explosion three weeks later that destroyed a Cubana airline with the loss of 93 lives.
- Terrorism, at bottom, is theater. Terrorists will adapt to maintain their “Broadway presence,” endeavor to stay ahead of counter-terrorist preparations, maintain their facade of strength, and increase the audacity, drama, and magnitude of their threat.

Considering these attributes of terrorism, wouldn't terrorists find C/B weapons to be an ideal instrument by which to escalate their threat and maintain their “Broadway presence”? Before attempting to answer this question, it is useful to examine the types of scenarios in which terrorists might use C/B weapons and the objectives that they would probably want to achieve by this dramatic escalation:

- A large or a sophisticated terrorist group might, after considerable debate, decide “rationally” that the use of C/B weapons was to its advantage. A credible threat of a mass casualty C/B attack, perhaps preceded by a “demonstration” with casualties numbering in the hundreds, would be viewed as a highly leveraged instrument of coercion that could crack the resolve even of intransigent governments that had not yielded to less severe threats. The goals of such a threat might include the release of imprisoned comrades, a very large ransom, a demonstration of the government's impotence, and perhaps televised speeches of concession by government leaders.
- In the hands of a group such as the IRA that perceived straightforward military value from the use of C/B weapons, these weapons might be used in an attack on an enemy military or political target of extremely high symbolic or actual importance.
- In a less “rational” mode, C/B weapons might be used by an extremist group that had little concern about alienating an outside constituency, but perceived that it might, through a last desperate act or series of acts, achieve a measure of influence. If it failed to influence events, a group could try to destroy what it could not control,

38 Naval War College Review

avenge its killed or tortured comrades, or simply attack the members of a group that they despised or considered as subhuman. Finally, one could consider the use of C/B weapons as an instrument of punishment by a desperate terrorist group facing imminent defeat and the loss of all that they had fought for. Historically, the model for this would be the final desperate acts of terrorism carried out or planned by the Secret Army Organization in Algeria in 1962. In the future, one could imagine an extremist Palestinian group using C/B weapons in a desperate last-ditch effort to block an Arab-Israeli peace treaty.

If terrorists were to use C/B weapons in a mass casualty attack, there is no doubt that it would be an event of singular visibility and importance. The particular group would receive enormous publicity, and the event would be perceived as not just *another* assassination, kidnapping, bombing, or hijacking. The effect would be even greater if the attack took place in a western city such as London, Paris, or New York. The context of the attack and the terrorists' ability to threaten more such incidents would also influence perceptions.

If it is so plausible and potentially so effective for terrorists to use C/B weapons, then why haven't more groups made use of these weapons? It isn't because C/B agents are too difficult to make or acquire. In fact, as scary as it may seem, making or otherwise acquiring C/B agents is well within the capabilities of a terrorist or other group of even modest resources.

It's relatively easy to make violently toxic nerve agents because the techniques by which they are made are similar to those used for insecticides, and in some cases may simply involve taking as intermediate products insecticides or other chemicals that can be purchased commercially and putting them through one additional chemical reaction. The equipment needed and the chemicals are readily available from chemical supply houses. And the chemical procedures used are described in dozens of articles available in the open literature.

The nerve agent sarin, for instance, discovered by German scientists in the late 1930s, is an order of magnitude more potent than the agents that caused so many casualties during World War I. Yet, although preparing it might be a risky business, sarin can be synthesized in 100 gram quantities by an organic chemist with modest graduate training for an investment of only a few thousand dollars.³ (It should be remembered, however, that a larger quantity would probably be needed for a successful attack.)

It may be even easier for terrorists to acquire biological weapons than it would be for them to acquire chemical weapons. Quantities of clostridium botulinum, the bacillus that produces botulinum toxin, is available from the American Type Culture Collection, in Rockville, Maryland, for a fee of \$34. All that the collection requires is that the request be made on a business letterhead or requisition form from a suitable research facility or laboratory, a procedure that would seem to be well within terrorist capabilities. There is even an 800 number provided for easier service!⁴

Once the bacillus has been acquired, a terrorist need only grow the culture under anaerobic conditions in a pure culture in order to produce the deadly botulinum toxin. (The botulinum toxin is one of the most deadly substances known to man. It has been estimated that seven ounces of botulinum toxin, if efficiently dispersed, would be sufficient to kill *the entire human population of the world*. It should be kept in

mind, however, that the purification process is complex and that a small quantity might not be adequate for an effective attack.)⁵

It would be somewhat more difficult for a terrorist group to disperse C/B agents in an actual attack than it would be to acquire the agents themselves. Efficient dispersal presumes a thorough knowledge of the spaces that are to be attacked and the air flow within them, as well as a precise knowledge of the physical properties of the C/B agent used. However, even if the terrorists only managed to reach 10 percent of the intended victims with a lethal dose of the dispersed agent, the casualties from a single terrorist attack—depending on the scenario and the agent used—might easily amount to several thousand deaths.⁶

How might an actual attack take place? It is frighteningly simple. Terrorists using biological agents could disperse them among bulk food supplies, e.g., at a central market, a large-scale catering operation, or even a single supermarket. Chemical agents could be effective if introduced into the air handling system in a small office building or dispersed, say, from an ice cream cart standing amidst thousands of people in a large auditorium. (Introducing an agent into a municipal water supply would not be a credible threat because of the huge volume of water that would need to be contaminated and the numerous steps in the filtration and purification process.)

So why haven't terrorists made more use of C/B? It is the belief of the author that terrorist groups have not so far (with minor exceptions) used C/B weapons because of a straightforward assessment that the potential gain may not exceed the potential loss. Looked at in this coldly rational way, the "benefits" that a group could expect to achieve from a successful mass casualty C/B attack and the credible threat to repeat the episode would be spectacular visibility and excellent short-term bargaining power against a resistant government. Even such stalwarts as Margaret Thatcher, Menachem Begin, or Ronald Reagan would find it difficult to resist terrorist demands after 1,000 to 2,000 of their citizens had died in an initial incident.

On the other hand, the terrorist organization that used C/B agents in a mass casualty attack would take a tremendous risk of alienating key friendly and neutral constituencies. Years of patiently cultivating the support of certain groups might be sacrificed in a few moments. World opinion might be quite hostile in the aftermath of this "heinous crime." Even the adversary government might harden its policies after the initial threat had faded. It is this risk that a C/B attack might backfire and cause perverse results that has so far limited the use of these weapons by terrorists.

However, the fact that terrorists have not paid much attention to C/B weapons in the past does not assure that they will not do so in the future. The ready availability of C/B agents that can be used in an attack means that, for a major incident to occur, only one terrorist group at any single point in time needs to find that such a weapon meets its requirements. As mentioned earlier, groups that might find C/B weapons to their liking include radical groups opposed to any accommodation with the enemy or mainstream groups that want to kill thousands at a prestigious enemy military or political facility. While the question of whether terrorists will use C/B weapons in a mass casualty attack is unknown—and perhaps unknowable—this author believes that the odds are perhaps even or slightly higher that an attack will eventually occur. Established governments and security agencies would do well to recognize this threat and make plans to deal with it before it actually materializes.

NOTES

1. Dominic Lapierre and Larry Collins, *The Fifth Horseman* (New York: Simon & Shuster, 1980); Brian Michael Jenkins, "Nuclear Terrorism and Its Consequences," *Social Science and Modern Society*, July/ August 1980, p. 5. Some of the points made below on potential terrorist goals and actions have also been taken from this article.

2. Sources that discuss the potential for C/B terrorism include: Robert K. Mullen, "The Clandestine Use of Chemical or Biological Weapons," International Association of Chiefs of Police, 1978; Mullen covers much of the same ground in his article, "Mass Destruction and Terrorism," *Journal of International Affairs*, Spring/Summer 1978, pp. 63-89; Robert H. Kupperman and Darrell M. Trent, *Terrorism: Threat, Reality, Response* (Stanford, Calif.: Hoover Institution Press, 1979). Pages 62-68 deal with potential use of C/B weapons.

3. Mullen, "The Clandestine Use of Chemical or Biological Weapons," p. 10.

4. American Type Culture Collection, Rockville, Md.: "Ordering Information."

5. Kupperman and Trent, p. 361.

6. Mullen, "The Clandestine Use of Chemical or Biological Weapons," p. 16; Kupperman and Trent, p. 361.

Elliott Hurwitz is a Senior Analyst at Ketrion, Inc., an Arlington, Va., consulting firm.

