

THE LIKELIHOOD OF NUCLEAR TERRORISM

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## THE LIKELIHOOD OF NUCLEAR TERRORISM<sup>1</sup>

Brian M. Jenkins

Several cities, including the one where I live, have been destroyed by terrorists with nuclear weapons. Others have been held hostage to the whims of political and religious fanatics. Vigilant government agents, sometimes armed only with luck, have foiled schemes of mass destruction on dozens of occasions; there have been numerous close calls. We live on borrowed time. All on the pages of fiction. For novelists and screenwriters, the possibility of nuclear terrorism has provided a potent source of inspiration. It combines the two darkest fears of our era: fear of nuclear destruction and fear of increasing terrorism.

The speculation is not confined to fiction. Others besides novelists have warned of the dangers of nuclear terrorism. Some of these warnings are based upon sober analysis; much of the popular speculation falls within the realm of sensationalism.

The motives of the authors also vary. Some are concerned about the adequacy of security measures surrounding nuclear facilities; some worry that an adequate level of security cannot be attained without authoritarian methods of social control that are incompatible with a free society, if not for the public at large, at least for the employees of the nuclear industry, whose lives are increasingly subjected to close scrutiny and irritating security measures as attention focuses on the potential threat posed by "insiders." Others, who oppose nuclear programs to begin with, see the threat of nuclear terrorism as one way to increase public anxiety and resistance to nuclear programs.

As is often the case in our media-rich society, the line between fact and fiction blurs. In one case, the co-author of a best-selling novel about nuclear terrorism narrated a segment about the subject on a popular television news show. At the end, the viewer wasn't sure which part of the broadcast was fiction and which part was fact.

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<sup>1</sup> This paper was prepared for the Conference on International Terrorism: The Nuclear Dimension, sponsored by the Nuclear Control

Whether their opinions are molded by paperback potboilers or the dried fruit of research, many people believe that nuclear terrorism of some sort is likely, and may be inevitable. Reflecting the results of a poll conducted among 1,346 opinion leaders in the United States, George Gallup, Jr., in his recent book *Forecast 2000* wrote that "while a war between the superpowers, the United States and the Soviet Union, is a real cause for concern, [a disastrous nuclear incident involving terrorists in this country] seems to me to be the most imminent danger."

But will terrorists go nuclear? Ten years ago I was asked to tackle this question. The essay I wrote was unabashedly speculative.<sup>2</sup> Fortunately for society (although a problem for the researcher), there was little to go on. The historical record provided no evidence that any terrorist group had ever made any attempt to acquire nuclear material for use in an explosive or dispersal device. Apart from a few incidents of sabotage in France and the brief seizure of a nuclear reactor under construction in Argentina, political extremists had not attacked nuclear facilities. No criminal or terrorist group had demonstrated or claimed that it possessed nuclear material. If members of any such groups had ever seriously discussed the option of going nuclear, I knew of no such discussions.

There had been bomb threats against nuclear facilities, vandalism, token acts of violence, low-level sabotage, minor thefts of nonfissionable material. There had been nuclear threats, most of which could easily be dismissed as puerile hoaxes. In sum, the history of nuclear incidents up to 1975 provided no convincing evidence that more serious incidents were likely. As the nuclear industry expanded, we

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Institute, at the Sheraton-Carlton, Washington, D.C. on June 24-26, 1985.

<sup>2</sup> Brian Jenkins, *Will Terrorists Go Nuclear?* California Seminar on Arms Control and Foreign Policy, paper No. 64. Los Angeles: Crescent Publications, 1975. I returned to this topic in several subsequent essays and have drawn on these freely in the preparation of these remarks. Anyone interested in the evolution of my own thinking on various aspects of the issue may examine *The Potential for Nuclear Terrorism*, P-5876, Santa Monica: The Rand Corporation, May 1977 and *The Consequences of Nuclear Terrorism*, P-6373, Santa Monica: The Rand Corporation, August 1979 (also in John Kerry King (ed.), *International Political Effects of the Spread of Nuclear Weapons*, Washington, D.C.: Government Printing Office, 1979).

could anticipate that the number of low-level incidents would increase proportionately, but there was no basis for predicting escalation. From this tiny platform of actual history, one could only take a breathtaking inferential leap into a future based on the little we knew about the behavior of those we call terrorists.

In the intervening years, we have witnessed additional incidents of crime and violence in the nuclear domain, and a slight escalating trend in the late 1970s. However, the number of nuclear-related incidents has declined sharply in the last two years. Nuclear hoaxes, which occurred with increasing frequency during the last decade, also have virtually ceased. We have no explanation for this.

At the same time, however, terrorism has increased in volume and has become bloodier. And we have learned more about how terrorists decide to do what they do. Keeping these developments in mind, I have been asked to reexamine the question of whether terrorists will go nuclear.

We must keep in mind that nuclear terrorism can take many forms. Terrorists may attack or try to seize nuclear facilities. They may attempt to steal a nuclear weapon or nuclear material and offer to return it for ransom. They may contaminate some target with radioactive material. They may fabricate a hoax nuclear threat. If they have somehow obtained an actual nuclear explosive device, they may detonate it or threaten to detonate it.

The consequences of the potential actions also vary. A nuclear hoax poses no direct danger to human life, but if the threat is publicized and believed, panic could cause casualties. Sabotage of a nuclear reactor may result in a mere shutdown or it could spread radioactive fallout the equivalent of many atomic weapons. The detonation of even a crude nuclear device could cause thousands of deaths.

While we are likely to label anybody who does any of these things a "terrorist," in fact, potential nuclear adversaries encompass a broad range: common criminals, individual lunatics, anti-nuclear extremists, as well as authentic political terrorists. We can speak of political terrorists only as we know them today, that is, as the groups that have carried out the campaigns of terrorist violence since the late 1960s,

although we realize that nuclear terrorists of the future may not arise from those sources currently identified. New kinds of groups may appear that might be more likely to use nuclear means to achieve their objectives.

My remarks today will focus on the motives of political terrorists who might detonate or threaten to detonate a nuclear device.<sup>3</sup> In order to do so, they must first acquire a nuclear weapon. Can they do it?

There are several ways a terrorist group might acquire a nuclear weapon for its own use: Terrorists could steal a nuclear weapon from some military arsenal, attempt to by-pass the elaborate devices that are designed to prevent tampering, and rearm it or use its components to construct a new weapon. Another way would be to steal weapons-grade nuclear material and use it to fabricate an improvised nuclear device. Either way would require attacking defended targets, something terrorists generally have not done. To avoid encountering defenses, terrorists could attempt to obtain the material surreptitiously by other means. These might include enlisting confederates within nuclear facilities who can supply the material or purchasing it on the black market, if such a market develops for nuclear material.

Assuming they had the necessary nuclear material, could terrorists make a nuclear bomb? This question remains a topic of debate within the nuclear community. I am not qualified to offer a judgment, so let me instead try to offer a consensus view. Although the ease with which a bomb could be made has probably been greatly exaggerated in the popular press, the notion that some group outside of government programs, can design and build a crude nuclear bomb is certainly more plausible now than it was 30 or 40 years ago. At that time, the secrets of nuclear fission were closely guarded. However, much of the requisite technical knowledge has since gradually come into the public domain. There are a growing number of technically trained people who understand these basic principles and who, without detailed knowledge of nuclear weapons design, theoretically could design such a weapon.

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<sup>3</sup> A number of my colleagues and friends provided comments and advice in the preparation of my previous essays on the topic as well as this one. I would like to especially thank Konrad Kellen, Victor Gilinsky, Ariel Merari, and Paul Leventhal.

Actually building even a crude nuclear bomb, however, poses a greater obstacle. Experts argue about the number of persons needed, the mix of specialized skills, and the probability of success. They agree that it would involve considerable risks for its builders. Its detonation and performance would be uncertain. Its yield would be low, probably in tenths of a kiloton.

Few terrorists as we know them today possess the requisite technical skills identified by experts. There are a few engineers and a handful of scientists within the ranks of contemporary terrorist groups, but most terrorists come from the departments of social sciences or the humanities, which may help to explain why terrorists thus far have not carried out more technically demanding operations. One recent development, however, is changing this picture, and that is the increasing direct involvement of governments in the business of terrorism, not merely as political or financial supporters, but as participants in the direction, planning, and execution of terrorist attacks. State sponsorship puts at the disposal of the terrorists more resources: intelligence, money, sophisticated munitions, technical expertise. It also reduces the constraints on the terrorists, permitting them to operate at a higher level of violence.

It seems to me that the real arguments arise not so much in the area of theoretical capabilities as in the area of intentions. The public utterances of terrorists include very few references to nuclear activity. Terrorist groups in Western Europe have demonstrated their opposition to the deployment of new nuclear missiles, but they have done so with the traditional terrorist tactics of bombings and assassinations. Basque separatists have carried on a very effective terrorist campaign against the construction of a nuclear power facility in northern Spain, again with traditional tactics.

In the late 1970s, the Red Brigades, in one of their strategic directives, reportedly urged action against nuclear power facilities in Italy, but the press account of this particular document could not be verified by Italian authorities. Puerto Rican separatists have also reportedly threatened action against nuclear facilities in the United States. Recognition that nuclear facilities may be attention-getting

targets, however, does not readily translate into nuclear bomb threats.

Our insights into terrorists' contemplation of the use of nuclear weapons are limited to a few casual remarks, such as that of a former German terrorist who said that with a nuclear weapon, terrorists could make the chancellor of Germany dance on top of his desk in front of television cameras. This statement provides evidence that terrorists recognize the enormous coercive power a nuclear capability would give them. More recently, an "Armenian Scientific Group" warned Turkey's largest cities would be destroyed by three small nuclear devices the group claimed to have at its disposal.<sup>4</sup> This raises an important point regarding motivation: Convinced that more than a million Armenians were the victims of Turkish genocide 70 years ago, some Armenians might now feel justified in using weapons of mass destruction in revenge, which is always a potent motive.

The obvious attraction to terrorists in going nuclear, however, is not that possession of a nuclear weapons capability would enable them to kill a lot of people. Simply killing a lot of people has seldom been one terrorist objective. As I have said on numerous occasions, terrorists want a lot of people *watching*, not a lot of people *dead*. Terrorists operate on the principle of the minimum force necessary. They find it unnecessary to kill many, as long as killing a few suffices for their purposes.

Statistics bear this out. Only 15 to 20 percent of all terrorist incidents involve fatalities, and of those, two-thirds involve only one death. Less than 1 percent of the thousands of terrorist incidents that have occurred in the last two decades involve ten or more fatalities, and incidents of mass murder are truly rare.

We have to pause for a moment to define terms. By mass murder, I mean attempts to kill large numbers of persons in a single action outside of war. Let me set aside cases where governments have deliberately pursued genocidal policies, the cumulative body counts of terrorist campaigns, or the scores of serial murderers, not because I consider any of these things less reprehensible, but because they are not what we are talking about here.

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<sup>4</sup> *Marmara*, Istanbul, 14 January 1985.



Arbitrarily taking 100 deaths as the criterion, it appears that only a handful of incidents of this scale have occurred since the beginning of the century: a 1921 bombing in Bessarabia; a 1925 bombing of a cathedral in Sofia; a little-known attempt to poison German SS POWs just after World War II; the crash of a hijacked Malaysian jet airliner in 1977; the 1978 bombing of an apartment building in Beirut; a deliberately set fire that killed more than 400 in Teheran; the 1983 bombing of the U.S. Marine barracks in Beirut which killed 241. Lowering the criterion to 50 deaths produces a dozen or more additional incidents. To get even a meaningful sample, the criterion has to be lowered to 25. This in itself suggests that it is either very hard to kill large numbers of persons or very rarely tried.

Unfortunately, things are changing. Terrorist activity over the last 20 years has escalated, both in volume and in bloodshed. At the beginning of the 1970s, terrorists concentrated their attacks on property. In the 1980s, according to U.S. government statistics, half of all terrorist attacks have been directed against people. The number of incidents with fatalities and multiple fatalities has increased. A more alarming trend in the 1980s has been the growing number of incidents of large-scale indiscriminate violence: huge car bombs detonated on city streets, bombs planted in airline terminals, railroad stations, and hotel lobbies.

These incidents make it clear that terrorists have the means to kill greater numbers of people than they do now, if they wanted to. Since the constraints are not technological, we must search for other reasons. For years, I have been convinced that the actions of even those we call terrorists are limited by self-imposed constraints that derive from moral considerations or political calculations. The growing volume of testimony from terrorists interviewed while still at large, interrogated in prison, or testifying at trials has, I believe, borne out that notion.

Many terrorists consider indiscriminate violence to be immoral. They regard a government as their opponent, not the people. They may also wish to behave like a government themselves. They use the language of government to justify their actions: robberies are "expropriations,"

kidnap victims are subjected to a "people's trial;" enemies of the people are "condemned" and "executed." Wanton violence, in their view, would imperil this image.

There are also political considerations. The capability to kill on a grand scale must be balanced against the fear of alienating perceived constituents (a population that terrorists invariably overestimate), provoking widespread revulsion, and unleashing government crackdowns that have public approval. The practical consideration of maintaining group cohesion also tends to impose limits on terrorist violence.

Attitudes toward the use of violence not only vary from group to group but also may vary within the same group. We know now that within any terrorist group there are latent defectors who have lost faith in the cause or in the efficacy of terrorist tactics, or who find themselves repelled by escalating violence and would drop out or defect if the group goes too far. A proposal to indiscriminately kill on a grand scale might provoke sharp divisions among the terrorists, exposing the operation and the group itself to betrayal.

Obviously, not all groups share the same operational code. Subscribing, or at least paying lip service to the philosophy that power comes from the people, left-wing terrorists generally target their violence against the symbols and representatives of the state, taking care to avoid civilian casualties. However, not all left-wing terrorists share this caution--Marxist ideology, for example, did not prevent the Japanese Red Army from carrying out the Lod Airport massacre in 1972.

Right-wing terrorists generally regard the people as a disorganized, despicable mass that requires strong authoritarian leadership. These terrorist groups have shown themselves capable of "pure terrorism"--indiscriminate violence calculated to create panic and a popular clamor for a political strongman who will be able to impose order.

Certain conditions or circumstances also may erode the constraints. Like soldiers in war, terrorists who have been in the field for many years may be brutalized by the long struggle; killing becomes easier. A group may seek to avenge members who have been killed or a population that has been wiped out. Terrorists may feel compelled to escalate their violence in order to keep the attention of a public that has

become desensitized by the growing volume of terrorism or to recover coercive power lost as governments have become more resistant to their demands. The composition of a terrorist group may change as the faint-hearted drop out or are shoved aside by more ruthless elements. The lack of success or the imminence of defeat may call for desperate measures.

The threshold against mass murder may be lowered if the terrorists' perceived enemies and victims are members of a different ethnic group. As we have seen throughout history, the presumed approval of God for the killing of pagans, heathens, or infidels can permit acts of great destruction and self-destruction. In addition, state sponsors might covertly use terrorists to carry out a nuclear threat (although it is hard to imagine the scenario in which a state would relinquish a nuclear capability to terrorists without retaining direct control over its use). Some suggest that terrorists might overcome taboos against weapons of mass destruction by targeting a large industrial target, for example, an oil refinery where the loss of life would be minimal but the destruction of property and consequent disruption could be enormous. The annals of modern terrorism provide ample precedents for such targeting.

Several changes in the environment might increase the possibility of terrorists going nuclear. As nuclear programs expand, nuclear material suitable for use in weapons could become more widely available than it is now. Expanding commercial traffic in explosive nuclear fuel will increase the opportunities for diversion, which in turn could lead to a nuclear gray or black market where terrorists could acquire nuclear material as they now acquire conventional weapons. As knowledge of nuclear weapons design increases, so do the chances of terrorists gaining access to it.

Some developments could also alter incentives. A sudden rush by governments to acquire or to announce that they already possess nuclear weapons might persuade terrorists to attempt to do likewise. In one generation, China advanced from a guerrilla army to a nuclear power. Terrorists could try to take a short cut. The use of a nuclear weapon in war would somehow seem to lower constraints against terrorists moving toward nuclear weapons, although I am not quite sure why. Certainly, it would depend very much on the circumstances and the results. Finally,

an incident of nuclear terrorism, perhaps even an alarming hoax, would almost certainly increase the probability of other terrorists going nuclear.

The question often arises, Why would terrorists choose nuclear weapons over chemical or biological weapons, which evoke great fear and are technically less demanding? In several ways, these weapons also are less attractive. Terrorists imitate governments, and nuclear weapons are in the arsenals of the world's major powers. That makes them "legitimate." Chemical and biological weapons also may be found in the arsenals of many nations, but their use has been widely condemned by public opinion and proscribed by treaty, although in recent years the constraints against their use seem to be eroding.

But neither chemical nor biological warfare seems to fit the pattern of terrorist behavior. Terrorist attacks are generally intended to produce immediate, dramatic effects. Terrorist incidents have a finite quality--an assassination, a bombing, a handful of deaths, and that is the end of the episode. And the terrorists retain control. This is quite different from initiating an event that offers no bang but instead produces indiscriminate deaths and lingering illness, over which the terrorists would have little control.

If terrorists had a nuclear capability, they would be more likely to brandish it as a threat than detonate it, although one can conceive of a more emotional use of a nuclear weapon by a desperate group as the ultimate instrument of revenge or as a "Doomsday Machine."

Translating the enormous coercive power that a nuclear weapon would give a terrorist group into concrete political gains, however, poses some difficulties. First, the terrorists would have to establish the credibility of the threat. The scenarists solve this problem by having them get away with a military weapon, thus removing the uncertainty of their possession, or by providing the terrorists with two weapons, one to be used as a demonstration.

Second, the terrorists would have to persuade the government that it has an incentive to negotiate. That may sound odd, given that they could threaten to cause thousands of casualties, but the "rules" of bargaining that have evolved from dealing with ordinary hostage incidents may not apply to nuclear blackmail. For one thing, we may

assume that the terrorists' demands would be commensurate with the magnitude of the threat. Governments facing the threat of nuclear terrorism would paradoxically find it more difficult to refuse, yet more difficult to yield. Impossible demands--for example, that a government liquidate itself--could not be met even under a nuclear threat. Nor could terrorists enforce permanent policy changes unless they maintained the threat indefinitely. And if a government could not be assured that the threat would not be dismantled once the demands were met, it would have little incentive to negotiate. It thus becomes a matter not of concessions, but rather of governance. I am not suggesting that armchair extortionists cannot come up with solutions to these dilemmas--finite, irrevocable demands that governments could meet with adequate assurances that the threat would end once the demands are met. I *am* suggesting that it is not easy for terrorists, even if they are armed with nuclear weapons, to achieve lasting political results. They might find nuclear weapons to be as useless as they are powerful.

In my 1975 essay, I concluded that "Terrorists may not be interested in or capable of building a nuclear bomb. The point is, they do not have to. Within their range of resources and technical proficiency, they may carry out nuclear actions that will give them almost as much publicity and leverage, with less risk to themselves and less risk of alienation or retaliation. As the industry expands during the next few years, we will probably witness a growing number of low-level nuclear incidents... There will be moments of alarm, but the inconvenience and political repercussions that these incidents produce will probably exceed the actual danger to public safety." We did, in fact, witness more low-level incidents.

With regard to the possibility of serious nuclear incidents, I concluded that it would increase "at a far more gradual rate" if only because the opportunities for diversion and technical know-how would increase. "At some point in the future, the opportunity and capacity for serious nuclear terrorism could reach those willing to take advantage of it." But I did not see this as an inevitable development. Before then, the development of more effective safeguards could push that "point indefinitely into the future."

What do I conclude now? Despite the theoretical increase in opportunities as nuclear programs have grown, and the demonstrable escalation in terrorism, going nuclear still represents a quantum jump for terrorists, and one that is not impossible but by no means imminent or inevitable.



