The Ultimate Nightmare: What If Terrorists Go Nuclear

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ROBERT A. FRIEDLANDER*

The sudden Israeli air attack upon the Baghdad Osirak nuclear reactor in June 1981 served to dramatize, more than any other event since the first thermonuclear bomb explosions, the dangers inherent in an international nuclear arms race and the possible global consequences of nuclear proliferation.1

Burgeoning European opposition to nuclear armament last summer swelled into a mass of demonstrations by October 1981.2 Four prominent American political and intellectual figures created a mild sensation in the spring of 1982, advocating a last resort approach to nuclear weapons while simultaneously arguing for their prevention and against their utilization.3 During the same time, a growing anti-nuclear movement in the United States reached immense proportions,4 and a national best-seller, brooding about the nuclear extinction of humankind, continues to engender intense and bitter debate over the use of nuclear weaponry.5

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*Robert A. Friedlander is a professor at the Pettit College of Law at Ohio Northern University and a member of the Board of Advisors of the Denver Journal of International Law and Policy.


A "doomsday" simulation exercise carried out by high U.S. Government officials was declared a success in March 1982, despite its ominous results. The lead article in the first issue of the 1982 Naval War College Review examines the possibility of naval nuclear warfare and concludes that "our putative enemy leaves us no choice but to think about, plan for, and develop a capability to fight a tactical nuclear war at sea." As the British-Argentinian conflict grew in intensity, the president of Argentina's Atomic Energy Commission expressed fear that Great Britain would resort to tactical nuclear weapons to resolve the Falkland Islands crisis, notwithstanding the fact that Argentina is generally suspected of trying to achieve a similar nuclear capability.

None of these developments gives any indication of the increasing concern among scientists, political analysts, and Western security agencies as to the means most likely to unleash what President Ronald Reagan has termed "the ultimate nightmare." A number of popular novels written by well-informed authors in both Great Britain and the United States have dramatically demonstrated the possibility, if not the probability, of nuclear terrorism initiated by terrorist governments, terror organizations, and crazed or corrupt physicists. Pope John Paul II's prophetic warning to the world community about "the dark fascination of violence and warfare," delivered shortly before his departure for Portugal and the second attempt on his life, applies equally to nation-states and non-state actors. The recent statement by Richard Perle, Assistant Secretary of Defense for International Security Policy, is much more specific and much more ominous: "I can imagine a situation where a nuclear weapon was in the hands of a terrorist, in which case you might want to evacuate a city . . . ."

The Bologna railway station bombing, the Munich Oktoberfest

Kennan, On Nuclear War, id., at 8-12; Krauthammer, In Defense of Deterrence: How To Prevent Nuclear War, The New Republic, Apr. 28, 1982, at 15-20; Lerner, Visions of the Apocalypse, id., at 26-29. The same arguments in capsule form were made decades earlier by Bazelon, A New Kind of War, 29 Partisan Rev. 543, 544-46 (1962). See also the extravagant claim of French novelist J. Brune, CETTE HAINE QUI RESSEMBLE Á L'AMOUR 451 (1961), that "there is no difference between Hiroshima and the Nazi extermination camps."

7. Parker, Theatre Nuclear Warfare and the U.S. Navy, 35 Naval War C. Rev. 3 (Jan-Feb. 1982).
8. The Intelligencer (Wheeling, W.Va.), Apr. 30, 1982, at 4, col. 4. See also the statement of the Library of Congress Congressional Research Service, which predicts that Argentina will test a nuclear device by the mid-1980's and may possess a nuclear arsenal by 1990. The Plain Dealer (Cleveland, Ohio), May 14, 1982, at 12-A, col. 1.
12. The Blade (Toledo, Ohio), May 13, 1981, at 1, col. 1.
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bombing, and the Rue Copernic bombing in Paris have demonstrated clearly and convincingly that terrorists of both the left and the right are now willing to escalate the threshold of violence to levels previously believed to be unattainable because of alleged terrorist concern over possible public outrage. Two events which occurred during the first several months of 1982, although serious but not catastrophic, nevertheless may be harbingers of a more lethal future for the international social order. On January 18, 1982, five rockets were fired from across the Rhone River into the concrete walls surrounding the French Creys-Malville nuclear facility. Fortunately only minor damage resulted. An organization calling itself the Pacifist and Ecological Committee took credit for the attack.

On May 5, 1982, Spanish ETA terrorists machine-gunned the director of a Basque nuclear plant located at Lemoniz, in an attempt to prevent the $2 billion dollar, 930 megawatt reactor, from becoming operational.

In the eleven years from 1966 to 1977, there were ten serious incidents of theft and violence directed against European nuclear installations. During April 1979, a French nuclear reactor at La Seyne-sur-Mer suffered $20 million damage and was sixty percent destroyed by a terrorist attack by an organization which identified itself as the Group of French Nature Protectors. Between 1969 and 1975, the U.S. Atomic Energy Commission and the Energy Research and Development Administration reported 288 threats of violence or actual incidents relating to nuclear facilities or offices. This included 240 bomb threats and fourteen bombings and attempted bombings.

Robert Kupperman, former chief scientist of the U.S. Arms Control and Disarmament Agency, warns that terrorists are raising their technological competence to highly sophisticated levels. Moreover, “physicists, chemists, engineers and biologists are joining their ranks . . . .” With respect to nuclear terrorism in any conceivable form, the real issue is not one of possibility, but merely one of credibility. “That terrorists may not behave differently from states” is one expert’s motivational explanation

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19. Le Nouvel Observateur, Apr. 14, 1979, at 44.
20. The Blade (Toledo, Ohio), Mar. 15, 1980, at 4, col. 4. The German magazine, Stern, later claimed that this attack was the work of the Israeli Mossad, seeking to prevent a nuclear technology transfer to Iraq. Id. The English version of the Mar. 13 & 20, 1980 Stern articles are reprinted in Follath, Israel's Elite Intelligence Corps, World Press Rev. May 1980, at 29-31. See also The Miami Herald, Apr. 15, 1979, at 4-A, col. 1.
for the threat of a quantitative leap in terrorist technology. According to Rand Corporation analyst Brian Jenkins:

[T]errorists emulate states. If a nuclear device becomes a widely perceived symbol of state power, terrorists may be more inclined to go nuclear, or at least to carry out actions in a nuclear domain—for example, attacking or seizing nuclear reactors.24

More than 15 years ago an ad hoc Panel on Safeguarding Nuclear Material reported to the U.S. Atomic Energy Commission that safeguards were needed for the protection and security of nuclear materials, and that the present programs were largely inadequate to meet these ends.25 Particular concern was manifested over potential criminal diversion of matériel, misuse of explosives, the aiding and abetting of foreign governments through shipment of illicit supplies, arranging the transfer of nuclear substances into the hands of unauthorized parties, and the potential construction of a nuclear weapon.26 Several years later, two distinguished scholars, one a physicist and the other a law professor, published a detailed study of how and why an incident of nuclear terrorism could occur, warning that "[s]cenarios of nuclear hijackings or bomb threats might become self-fulfilling prophecies."27 The few voices originally raised over fear of a nuclear terrorist incident in the late 1960's and early 1970's have been slowly swelling into a chorus of despair.28

British security agencies now frankly admit that a potential terrorist nuclear incident is undeniably credible, and that the basic question relating to the nuclear threat is no longer if, but when an episode of mass destruction will occur.29 The truth of the matter is that catastrophe theory cannot permit a single miscalculation when governments are required to think the unthinkable. "The world is pregnant with apocalyptic possibilities."30

The nature of these possibilities is the concern of a recent doomsday analysis by political scientist Louis René Beres.31 He envisions three roads to Armageddon: (1) nuclear war between superpowers; (2) nuclear

24. Id.
26. Id. at 436, 444, 452-54.
30. TERRORISM, supra note 28, at 45.
31. APOCALYPSE, note 21 supra.
war resulting from proliferation; and (3) a nuclear holocaust initiated by terror-violence.\textsuperscript{33}

As a corollary, Beres adds a further category—"the use of nuclear technology in a civil war."\textsuperscript{33} Although seriously concerned over the first two classifications, his ultimate fear is that nuclear terrorism is both credible and practicable, either by means of nuclear explosives, radiological weapons, or sabotage of nuclear reactors.\textsuperscript{34}

Some experts who previously had been skeptical of terrorist nuclear threats, such as Brian Jenkins of the Rand Corporation,\textsuperscript{35} have shifted their position toward acceptance of those potential dangers. By the beginning of the current decade, Jenkins was conceding that terrorism "has a built-in requirement for escalation, if not bloodshed, at least in audacity, drama, or magnitude of the threat."\textsuperscript{36} Social scientist Thomas Schelling warns: "[s]ome time in the 1980's an organization that is not a national government may acquire a few nuclear weapons."\textsuperscript{37} If this is so, then the question of who and how become quintessential issues.

In developing his chamber-of-horror hypotheticals, Beres has listed some factors giving credence to these grim prophecies:

1. Ease of access "to nuclear weapons, nuclear power plants and nuclear waste storage facilities."
2. Ready "availability of weapons resources."
3. Terrorist willingness for self-sacrifice "renders them insensitive to ordinary threats of retaliation."
4. Cooperation and collaboration among terrorist groups has been amply documented.
5. A tolerant attitude within the world community toward terrorism and terrorists has substantially vitiated "the enactment of effective counter-measures."

Terrorism is the theater of the unexpected. Although there have been many unhappy surprises played out on the global stage during the "Terror Decade" of the 1970's and the "Dangerous Decade" of the 1980's, nothing will be more cataclysmic in terms of shock value than an actual terrorist nuclear incident.

There are some critics who argue that since we still lack adequate "knowledge of terrorist motivations," conclusions about possible terrorist intentions "would be counter-productive."\textsuperscript{38} Although Beres is likewise

\begin{footnotesize}
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\item Id. at 17-116.
\item Id. at 14.
\item Id. at 175.
\item See Brown, Nuclear Facilities and Materials in LEGAL ASPECTS OF INTERNATIONAL TERRORISM 156 (A. Evans & J. Murphy eds. 1978).
\item Quoted in Glasser, note 22 supra. See also Jenkins, supra note 23, at 89-91.
\item Schelling, Thinking About Nuclear Terrorism, 6 INT'L SECURITY 61 (1982).
\item APOCALYPSE, supra note 21, at 14-15.
\item Crenshaw, The Prospect of Catastrophic Terrorism, 8 ARMED FORCES AND SOCIETY 156-57 (1981). This claim is, however, misleading at best. See, for example, R. FRIEDLANDER,
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reticent to suggest the existence of a "terrorist mind," and instead postulates "a potpourri of ideas, visions, methods, and objectives" on the part of terrorist actors, he does roughly identify specific types of terrorist groups: guerilla, criminal, secessionist, and ideological. But he avoids the kind of typology and taxonomy that are delineated in his previous study.

Warning is one thing; prevention is something else. Beres correctly points out that possible remedies provided by the international legal system have not kept pace with the political convolutions of the world community. "In certain instances, the split sympathies of states on the question of terrorism have impaired extant norms." On the one hand, he urges sanctions applied to those states "which sponsor or support terrorist groups and activities." But although he advocates state compliance with the basic instruments governing the international protection of human rights, he does not advocate the last resort, a counterforce response. Yet at times, force must be met with force, and terrorist groups or their state protectors must be subject to retribution which will prevent further killing. There are occasions when those who live by the sword must be made to realize that they will also die by the sword.

In his earlier and at times eloquent assessment, entitled Terrorism and Global Security, Beres takes a pessimistic view of the terrorist actor's willingness to limit the upward spiral of terrorist harm. Since perpetrators of terror-violence have shown themselves to be insensitive to those constraints which are the traditional means of maintaining order among nation-states, "threats of deterrence might have little or no bearing on the terrorist decision concerning the use of nuclear force." If this is true, then the issues become: 1) what can the nuclear terrorist do; and 2) how easily can it be done?

The staff director of the U.S. National Advisory Committee Task


40. APOCALYPSE, supra note 21, at 250-51.
41. Id. at 251-56.
42. TERRORISM, supra note 28.
44. APOCALYPSE, supra note 21, at 260.
45. Id. at 262-63.
46. Id. at 117-18.
47. Prime Minister Margaret Thatcher has analogized the successful capture of a hijacked Tanzanian airplane at Stansted Airport near London in February 1982 to British actions in the Falkland Islands crisis. A forcible response, she declared, is the only way "to really stand up for international law against international anarchy." TIME, May 10, 1982, at 24. See also Green, Rescue at Entebbe: Legal Aspects, 6 ISRAEL Y.B. HUM. RTS. 312 (1976).
48. TERRORISM, supra note 28, at 33.
Force on Disorders and Terrorism has bluntly asserted that "[a]lmost certainly, some terrorists today have the formal capability to make, deliver, and detonate a nuclear device."49 Other analysts differ only in degree. Journalist Ovid Demaris concludes his well researched, highly detailed study of international terrorist organizations by boldly stating: "Nuclear terrorism is the wave of the future."50 Even physicist Edward Teller, the man most responsible for developing the hydrogen bomb, admits that although a terrorist group is unlikely to make its own atomic weapon, "I don't dare say that something of this kind is absolutely impossible."51

When a workable atom bomb can be designed by a C minus Princeton University undergraduate student from readily available scientific information, and when a Pakistani diplomat offers to buy the plans52 (Pakistan need no longer be interested—it is close to having its own atomic weapon),53 then danger lurks everywhere. Similar independent efforts were successfully carried out by students at the Massachusetts Institute of Technology (M.I.T.) and Harvard University, the former commissioned by National Educational Television.54 And one need not build a bomb in order to develop an explosive nuclear device.55 Two M.I.T. physicists have warned that "the destruction of a reactor with a nuclear weapon, even of relatively small yield, such as a crude terrorist device, would represent a national catastrophe of lasting consequences."56

Nearly all experts and commentators are agreed that nuclear reactors constitute the prime terrorist targets of the future.57 According to Beres,
"[t]here have already been at least 94 incidents involving threats of violence or acts of violence to licensed nuclear facilities in this country since 1969." If this is not sufficient attraction for various scenarios of terrorist sabotage, then what can one conjecture about the alleged 2300 operational errors, mechanical failures, and other mishaps which Critical Mass, an anti-nuclear group, claims occurred during the year 1979? In such circumstances, even if the actual number is reduced by two-thirds, the potential for theft, sabotage, and mechanistic destruction is not exactly miniscule.

Rand Corporation expert Brian Jenkins postulates a terrorist team of three to six individuals, dedicated, probably well-trained, armed with automatic weapons, grenades, and explosives, who would have the capability of mounting a successful attack upon a U.S. nuclear power plant. Recognition of this possibility has led to increased security measures being taken at U.S. nuclear power stations throughout the country, such as the Davis-Besse plant in northwest Ohio, which maintains approximately one hundred trained employees solely for security. Yet, the majority of plants are still far from secure. A U.S. Government mock combat exercise held at the end of 1980 at a Southern nuclear facility resulted in the assault team penetrating to the core of the secured installation in only nine minutes.

Even before the Three Mile Island accident, bomb threats against that Metropolitan Edison plant were made in September 1972, March 1973, and November 1973. Security analyst H.H.A. Cooper writes: "Most terrorist organizations operate on at least a rough and ready cost/benefit basis. The value of the operation is assessed in terms of the cost, tangible and intangible, of attaining the objectives sought."

In light of the Three Mile Island affair, all kinds of possibilities related to sabotage and nuclear theft have arisen, and the potential for

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58. TERRORISM, supra note 28, at 28.
60. Glasser, note 22 supra.
63. TERRORISM, supra note 28, at 28.
64. H.H.A. COOPER, supra note 49, at 13. But see Norton, Introduction, in STUDIES IN NUCLEAR TERRORISM 20 (A. Norton & M. Greenberg eds. 1979) [hereinafter cited as STUDIES], who observes: "[i]t is difficult to conceive of any attainable terrorist objective that could not be achieved with a more efficient and less costly use of organizational assets than the nuclear gambit would require."
damage must be considered enormous. Moreover, the discovery that unqualified, unskilled workers have assisted in the construction of nuclear power plants throughout the United States, including that of Three Mile Island, raises serious implications about a widespread breach of security and easy access, via misrepresentation, to these facilities. Diversion of enriched plutonium from commercial reprocessing centers represents a further and potentially more serious problem. "The U.S. position has been that commercial reprocessing plants are difficult to safeguard effectively and, therefore, constitute a serious proliferation risk." Beres, along with many other experts, advocates hardening the target, although he is not altogether persuaded by the knee-jerk "search for a mechanical/technological fix." Any international safeguards, Beres properly argues, must include coercive penalties aimed at those who aid and abet transnational wrongdoers. Thus, global "arrangements for counter-nuclear terrorist cooperation must include sanctions for states that sponsor or support terrorist groups and activities." The International Atomic Energy Agency (IAEA) Convention on the Physical Protection of Nuclear Material, signed in October 1979 but not yet entered into force, is a first step in that direction, but no more than a step. In addition, as Ovid Demaris has caustically noted, "[t]he IAEA inspection system is totally inadequate against a country determined to build atomic weapons." The IAEA also has no power over a national system of controls. Beres's suggestion of a world order approach as the best way to confront the terrorist threat is the weakest aspect of his otherwise excellent study. It may even be argued in the current state of renewed Cold War adversity between the United States and the Soviet Union that Thomas Schelling's proposal of elimination of nuclear weapons is laudable but not

66. The Plain Dealer (Cleveland, Ohio), May 12, 1982, at 1, col. 1. Illegal purchase of union cards would, of course, aid the creation of a false identity. On March 31, 1982, after one year of employment, a quality control inspector of the North Perry Village Nuclear Power Plant in northeast Ohio was fired because of false credentials. The Blade (Toledo, Ohio), May 24, 1982, at 6, col. 4.
67. Ausness, supra note 57, at 84.
69. Terrorism, supra note 28, at 65.
70. Id. at 95.
72. O. Demaris, supra note 50, at 411. Certainly, the Treaty on the Nonproliferation of Nuclear Weapons, signed in July 1970, has provided almost no significant arms control limitations. For an assessment of the treaty's potentialities and deficiencies, see Comment, Prospects for Nuclear Proliferation and its Control, 6 Den. J. Int'l L. & Pol'y 159 (1976).
73. Terrorism, supra note 28, at 105-34.
very practicable. Nuclear weaponry will continue to proliferate, and the number of states possessing a nuclear military capacity will continue to increase if current projections are at all accurate. Small wonder that legalist Benjamin Ferencz pessimistically comments that "[a]s long as sovereign states are not prepared to take the logical steps necessary to restrict the use of violence, anarchy will continue."

What are the chances that terrorists can somehow obtain a nuclear weapon? Former Deputy Secretary of Energy Donald Kerr has indicated that if a nuclear weapon happened to fall into the hands of a terrorist group, he could not guarantee that it would not be used. As for terrorists producing a workable nuclear device, an effective design by a M.I.T. chemistry major in 1975 produced an 800-pound weapon with a 15-pound plutonium core for about $10,000. Worse yet, according to the U.S. Office of Nuclear Material Safety and Safeguards, unaccounted weapons-grade uranium and plutonium have disappeared and "[t]ons have been lost."

Richard Clark rings the tocsin of impending doom in his fast-paced study of technological terrorism. His horrifying scenarios are constructed on a grand scale and serve to warn that if terrorists "can control a nuclear energy plant, or even a railroad train carrying nuclear wastes, they can hold whole cities and countries for ransom." If that is not enough to worry about, Clark quotes a Harvard University physicist as saying that high-powered lasers might also be adapted as a terrorist weapon, in addition to being utilized for a uranium separation into weapons-grade plutonium. Clark is particularly harsh on government bookkeeping controls, and he is especially critical of the "losses" at the Apollo, Pennsylvania nuclear facility. "Given the materials and about six months time, a skilled group of five or six people could develop an atomic bomb of crude design that might work . . . ." Radioactive materials alone would be

74. Schelling, supra note 37, at 76-77.
75. Ausness, supra note 57, at 69-72.
76. Ferencz, When One Person's Terrorism is Another Person's Heroism, 9 Hum. Rts. 38, 42 (1981).
77. A. Norton & M. Greenberg, supra note 54, at 11.
78. O. Demaris, supra note 50, at 389. Norton & Ben-Gal, Terror by Fission: An Analysis and Critique, 27 Chitty's L.J. 268, 271 (1979) scientifically rates the MIT students' efforts as "a qualified success" at best and indicates there would be serious difficulties in translating the design into an actual weapon.
79. O. Demaris, supra note 50, at 392. See Clark, supra note 28, at 66-77. The government security group responsible for determining the credibility of a nuclear terrorist threat is the Nuclear Emer-Search Team (NEST). For a description of its functions and activities, see Collins, Combatting Nuclear Terrorism, N.Y. Times, Dec. 14, 1980 (Magazine), at 38.
81. R. Clark, supra note 28, at 42.
82. Id.
enough to poison the water supply of a major city with disastrous consequences.

Yet, "[t]o many experts the prospect of biological terrorism is the most frightening of all." Toxic biological and chemical substances can be manufactured inexpensively, with comparative ease and ready asportation, and can be utilized with deadly effectiveness. The technology for biological and chemical terrorism already exists, and it is impossible to defend against them for any successful length of time, let alone to detect these substances before they are unleashed. For those critics, such as the CIA, the BDM Corporation, and security expert Robert Mullen, who do not believe that nuclear terrorism currently presents a credible threat, Clark's sometimes breathless treatment of technological terrorism posits an ominous alternative.

What becomes frighteningly clear, from these studies and others like them, is that the world community is on a collision course with scientific catastrophe if stronger means are not developed to contain and control terrorist actors. To say that all peoples are equally secure in their mutual insecurity is to avoid the issue. To say that there are some weapons which no sane or rational individual would ever let loose upon humankind is to shun reality.

When historian Theodore White writes of "a world of new states led significantly by madmen and resentful puppets of bizarre historical background," he also indicates the darkening shadows of barbarism drawing ever closer to the center of civilized nations. Perhaps philosopher John-Paul Sartre in his play, The Condemned of Altona, discerned the real monster at the gates: "The [twentieth] century would have been good if only man hadn't been watched over by his cruel, timeless enemy, the carnivorous species which had sworn to destroy him, the hairless evil animal, man . . . ."

We have already seen a vision of the demon which would destroy us—it comes from within ourselves.

84. R. Clark, supra note 28, at 137. See R. Kupperman & D. Trent, supra note 28, at 66, 68.
85. Norton, Nuclear Terrorism and the Middle East, in Studies, supra note 64, at 278, 287.
86. Brown, supra note 35, at 160.
87. Id. at 158.
89. Quoted in Sherrill, America in Search of Itself, N.Y. Times Book Review, May 9, 1982, at 27.