Confronting Nuclear Terrorism

Louis Rene Beres
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By Louis René Beres*

“Defenceless under the night
Our world in stupor lies . . .”¹

In an age that joins political violence with the unlocked secrets of the atom, there can be no more frightful example of W.H. Auden’s vision than nuclear terrorism. For the United States, naturally, the issue assumes particular urgency.

What would happen if future instances of anti-U.S. terrorism were to involve the threat or use of nuclear weapons (e.g., nuclear explosives or radioactivity)? Are we prepared to deal with such fearful contingencies? Or does the record of recent American impotence in the face of conventional terrorism suggest even greater levels of vulnerability?

The questions are compelling. In the hazardous flux of world affairs, the spectre of nuclear terrorism is ominous. Understandably, fresh visions of desolation now kindle our imaginations, reinforcing already troubled feelings of powerlessness and frustration.

The threat of nuclear terrorism is fraught with disquieting possibilities. Yet, it is too soon to despair. There are steps that can be taken to reduce the danger. With these moves, the United States could begin to take the first critical steps back from the brink and show an “affirming flame.”²

I. IDENTIFYING THE TERRORISTS

Before the United States can cope with the risk of nuclear terrorism, our leaders must understand the difference between lawful and unlawful insurgencies. This understanding must be based upon more than the selective intuitions of geopolitics. Specifically, it must rest upon well-established jurisprudential standards which reflect international law.

* Ph.D., Princeton, 1971. The author is a professor of political science and international law at Purdue University, and lectures and publishes widely on matters relating to nuclear war, nuclear strategy, and human rights.

². Id.
What, exactly, are these standards? International law has consistently proscribed particular acts of international terrorism. At the same time, however, it permits certain uses of force that derive from

the inalienable right to self-determination and independence of all peoples under colonial and racist regimes and other forms of alien domination and upholds the legitimacy of their struggle, in particular, the struggle of national liberation movements, in accordance with the purposes and principles of the Charter and the relevant resolutions of the organs of the United Nations.

This exemption is corroborated by article 7 of the UN General Assembly's 1974 Definition of Aggression:

Nothing in this Definition, and in particular Article 3 [inventory of acts that qualify as aggression] could in any way prejudice the right to self-determination, freedom and independence, as derived from the Charter, of peoples forcibly deprived of that right and referred to in the Declaration of Principles of International Law concerning Friendly Relations and Co-operation among States in Accordance with the Charter of the United Nations, particularly peoples under colonial and racist regimes or other forms of alien domination; nor the right of these peoples to struggle to that end and to seek and receive support, in accordance with the principles of the Charter and in conformity with


On December 9, 1985, the UN General Assembly unanimously adopted a resolution condemning all acts of terrorism as "criminal." United Nations Resolution on Terrorism, G.A. Res. 40/61, 40 U.N. GAOR Supp. (No. 53) at 301, U.N. Doc. A/50/53 (1985). Never before had the General Assembly adopted such a comprehensive resolution on this question. Yet, the issue of particular acts that actually constitute terrorism was left largely unaddressed, except for acts such as hijacking, hostage-taking, and attacks on internationally protected persons that were already criminalized by previous custom and conventions. Id. at 302.

the above-mentioned Declaration. 5

International law has also approved certain forms of insurgency that are directed toward improved human rights where repression is neither colonial nor racist. Together with a number of important covenants, treaties, and declarations, the UN Charter codifies many binding norms regarding the protection of human rights. Comprising a well-defined régime, 6 these rules of international law are effectively enforceable only by the actions of individual states or by lawful insurgencies or by both. 7


7. The reader may recall that the sources of international law, according to article 38 of the Statute of the International Court of Justice, are found also in international custom, the general principles of law recognized by civilized nations, judicial decisions, and the writings of highly qualified publicists. STATUTE OF THE INTERNATIONAL COURT OF JUSTICE art. 38, 59 Stat. 1055, 1060, T.S. No. 993, 3 Bevans 1179, 1187. Additional support for the lawfulness of certain forms of insurgency can be identified in nontreaty sources. For example, the U.S. Declaration of Independence, as an expression of natural law, is an authoritative instance of the general principles of law recognized by civilized nations, and therefore sets limits on the authority of every government. Since justice, according to the Founding Fathers, must bind all human society, the rights articulated by the Declaration cannot be reserved only to U.S. citizens. To deny these rights to others would be illogical and self-contradictory, since it would undermine the permanent and universal law of nature from which the Declaration is derived. This understanding was represented by Thomas Paine, who affirmed:

The Independence of America, considered merely as a separation from England, would have been a matter but of little importance, had it not been accompanied by a Revolution in the principles and practices of Governments. She made a stand, not for herself only, but for the world, and looked beyond the advantages herself could receive.

T. PAINE, THE RIGHTS OF MAN 151 (Everyman ed. 1951). Indeed, in view of the long-standing support for various forms of insurgency in multiple sources of positive and natural law, it is reasonable to argue that a peremptory norm of general international law (a jus cogens norm) has emerged on this matter. According to article 53 of the Vienna Convention on the Law of Treaties, "a peremptory norm of general international law is a norm accepted and recognized by the international community of States as a whole as a norm from which no derogation is
Support for such insurgency is not the creation of modern international law. Where insurgency is viewed as resistance to despotism, it is rooted as a permissible practice in the Bible and in the writings of ancient and medieval classics. It can be found, for example, in Aristotle's *Politics*, Plutarch's *Lives*, and Cicero's *De Officis*.8

This brings us to the first jurisprudential standard for differentiating between lawful insurgency and terrorism, one commonly known as "just cause."9 Where individual states prevent the exercise of human rights, insurgency may express law-enforcing reactions under international law. For this to be the case, the *means* used in that insurgency must be consistent with the second jurisprudential standard, commonly known as "just means."10


9. The principle of "just cause" derives from multiple sources of pertinent international law, including international custom; the general principles of law recognized by nations; UN General Assembly resolutions; various judicial decisions; specific compacts and documents (e.g., The Magna Carta (England, 1215); the Petition of Right (England, 1628); The Bill of Rights (England, 1689); The Declaration of Independence (U.S., 1776); The Declaration of the Rights of Man and of the Citizen (France, 1789)); and the writings of highly-qualified publicists (e.g., Cicero, Francisco de Victoris, Hugo Grotius, Emmerich de Vattel). The principle of "just cause" also derives, by extrapolation, from the convergence of human rights law with the absence of effective, authoritative central institutions in world politics.


The "more complete code" referred to in the Hague Regulations became available with the adoption of the four 1949 Geneva Conventions. These agreements contain a common article 3 under which the convention provisions become applicable in noninternational armed conflicts. Still, the 1949 Geneva Diplomatic Conference rejected the idea that all of the laws of
In deciding whether a particular insurgency is an instance of terrorism or law enforcement, states must base their evaluations, in part, on judgments concerning discrimination, proportionality, and military necessity. Once force is applied broadly to any segment of a human population, blurring the distinction between combatants and noncombatants, terrorism occurs.11 Similarly, once force is applied to the fullest possible extent, restrained only by the limits of available weaponry, terrorism is underway.12

The legitimacy of a certain cause does not legitimize the use of certain forms of violence. The ends do not justify the means. As in the case of war between states, every use of force by insurgents must be judged twice: once with regard to the justness of the objective, and once with regard to the justness of the means used in pursuit of that objective.13

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13. The means criterion has important implications for extradition. For an inventory of extradition agreements in force between the United States and other countries, see CONGRESSIONAL RESEARCH SERVICE, LIBRARY OF CONGRESS, HOUSE COMM. ON FOREIGN AFFAIRS, 100TH CONGRESS, 1ST SESS., REPORT ON INTERNATIONAL TERRORISM: A COMPILATION OF MAJOR LAWS, TREATIES, AGREEMENTS AND EXECUTIVE DOCUMENTS 239-326 (Comm. Print 1987) [hereinafter INTERNATIONAL TERRORISM]. One problem in such agreements has been the “political offense exception” to extradition, a provision that extradition need not or shall not be granted when the acts with which the accused is charged constitute a political offense or an act connected with a political offense. The Reagan administration addressed the problem of the “political offense exception” in the context of the Supplementary Extradition Treaty, United States-United Kingdom, June 25, 1985, S. TREATY DOC. No. 99-8, 99th Cong., 1st Sess. (1985), reprinted in INTERNATIONAL TERRORISM, supra, at 304. Recognizing that there exist egregious examples of overbroad applications of the exception and that claims of immunity from extradition based on “relative” political offenses have always been problematic, the supplementary treaty explicitly identifies particular crimes that may no longer be regarded as political offenses excepted from the extradition process. These crimes are those typically committed by terrorists: aircraft hijacking and sabotage; crimes against internationally protected persons; hostage taking; murder; manslaughter; malicious assault; kidnapping; and specified offenses involving firearms, explosives, and serious property damage. Id. art. 1, reprinted
Significantly, from the viewpoint of international law, any use of nuclear weapons by an insurgent group would represent a serious violation of the laws of war.\textsuperscript{14} Protocol I of the Geneva Conventions makes the law concerning international conflicts applicable to conflicts fought for self-determination against alien occupation and colonialist and racist regimes.\textsuperscript{15} A product of the Diplomatic Conference on the Reaffirmation and Development of International Humanitarian Law Applicable in Armed Conflicts (that ended on June 10, 1977), the protocol (which was justified by the decolonization provisions of the UN Charter and by resolutions of the General Assembly) brings irregular forces within the full scope of the law of armed conflict. Protocol 2 of the Geneva Conventions concerns protection of victims of noninternational armed conflicts.\textsuperscript{16} Hence, this protocol applies to all armed conflicts which are not covered by Protocol I occurring within the territory of a state between its legitimate armed forces and dissident armed forces.\textsuperscript{17}

In support of the principle that foreign intervention is unlawful unless it is understood as an indispensable corrective to gross violations of human rights, most major texts and treatises on international law\textsuperscript{18} have long expressed the opinion that a state is forbidden to engage in military or paramilitary operations against another state with which it is not at war.\textsuperscript{19} Today, the long-standing customary prohibition against foreign
support for lawless insurgencies is codified in the UN Charter and in the authoritative interpretation of that multilateral treaty at article 1 and article 3(g) of the General Assembly's Definition of Aggression.20

All states must normally defend their legal systems, embodied in their own constitutions, against aggression.21 According to Mr. Hersch Lauterpacht, the following rule concerns the scope of state responsibility for preventing acts of insurgency or terrorism against other states:

International law imposes upon the State the duty of restraining persons within its territory from engaging in such revolutionary activities against friendly States as amount to organized acts of force in the form of hostile expeditions against the territory of those States. It also obliges the States to repress and discourage activities in which attempts against the life of political opponents are regarded as a proper means of revolutionary action.22

Lauterpacht's rule reaffirms the Resolution on the Rights and Duties of Foreign Powers as Regards the Established and Recognized Governments in Case of Insurrection adopted by the Institute of International Law in 1900.23 His rule, however, stops short of the prescription offered by Mr. Emmerich de Vattel. According to de Vattel, states that support terrorism directed at other states become the lawful prey of the world community:

If, then there should be found a restless and unprincipled Nation, ever ready to do harm to others, to thwart their purposes, and to stir up intervention in Nicaragua represents another pertinent example of appropriate prohibitions. See Military and Paramilitary Activities in and Against Nicaragua (Nicar. v. U.S.), 1986 I.C.J. 14 (commonly known as the Military Activities Case or the Nicaraguan Mining Case).

20. Definition of Aggression, supra note 5, arts. 1, 3(g), at 143, reprinted in 13 I.L.M. 710, 713-14 (1974). In the United States, these codifications are supported by various elements of federal law. Under the terms of the Foreign Assistance Act of 1961, Pub. L. No. 87-195, 75 Stat. 424 (codified as amended in scattered sections of 22 U.S.C. and 42 U.S.C.), the United States shall not provide any assistance to any country "which the President determines (1) grants sanctuary from prosecution to any individual or group which has committed an act of international terrorism, or (2) otherwise supports international terrorism." 22 U.S.C. § 2371(a) (1988). Significantly, according to section 2371(b), "[t]he President may waive the application of subsection (a) . . . to a country if the President determines that national security or humanitarian reasons justify such waiver." 22 U.S.C. § 2371(b) (1988). In other words, U.S. support for international law concerning state assistance to terrorists can be reversed where the President determines that "national security or humanitarian reasons" dictate overriding support for either the terrorists or their state patrons or both. See also Export-Import Bank Act of 1945, ch. 341, 59 Stat. 526 (current version at 12 U.S.C. § 635 (1988)); Arms Export Control Act, Pub. L. No. 90-629, 85 Stat. 2053 (1971) (codified as amended in scattered sections of 22 U.S.C.).

21. See 3 H. LAUTERPACHT, supra note 19.

22. Id. at 274.

civil strife among their citizens, there is no doubt that all others would have the right to unite together to subdue such a Nation, to discipline it, and even to disable it from doing further harm.\textsuperscript{24}

States also have an obligation to treat captured insurgents in conformity with the basic dictates of international law.\textsuperscript{25} Although this obligation does not normally interfere with a state’s right to regard those persons not engaged in armed conflict (\textit{i.e.,} persons involved merely in internal disturbances, riots, isolated and specific acts of violence, or other acts of a similar nature) as common or ordinary criminals,\textsuperscript{26} it does mean that all other captives “remain under the protection and authority of the principles . . . of humanity and [of] the dictates of public conscience.”\textsuperscript{27}

In cases where captive persons \textit{are} engaged in armed conflict, an additional obligation must be imposed on states to extend the privileged status of prisoner of war (POW) to such persons.\textsuperscript{26} This additional obligation is unaffected by an insurgent’s respect for the international laws of war. “While all combatants are obliged to comply with the rules of international law applicable in armed conflict,” violations of these rules do not automatically deprive an insurgent combatant of his or her right to protection equivalent in all respects to that accorded POWs.\textsuperscript{29}

How has U.S. foreign policy responded to jurisprudential expectations concerning insurgency? The Reagan administration embraced only one standard of judgment: anti-Sovietism. Human rights had nothing to do with this standard. It follows that efforts to overthrow allegedly pro-Soviet regimes were always conducted by “freedom fighters” (even where these efforts involved rape, pillage, and mass murder), while efforts to oppose anti-Soviet regimes (even where these efforts were undertaken by the most oppressed and downtrodden victims of genocidal regimes) were always conducted by “terrorists.”

Yet, U.S. foreign policy is not the only facilitator of potential nuclear terrorism against this country. Even if there were a dramatic transformation of current policy orientations under the Bush administration, a significant hazard would remain. To reduce this hazard, major improve-

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ments are needed to prevent terrorist access to assembled nuclear weapons, nuclear power plants, and nuclear waste storage facilities. Included in these improvements are measures to contain the spread of nuclear weapons to additional countries.

II. IDENTIFYING THE THREAT

To undertake acts of nuclear terrorism, insurgent or revolutionary groups would require access to nuclear weapons, nuclear power plants, or nuclear waste storage facilities. Should they seek to acquire an assembled weapon, terrorists could aim at any of the tens of thousands of nuclear weapons now deployed in the national or alliance arsenals of the United States, the Soviet Union, France, England, India, Israel, and China. Moreover, because the number of states possessing nuclear weapons is certain to grow, such terrorists are destined to have an enlarged arena of opportunity.

Should they seek to manufacture their own nuclear weapons, terrorists would require both special strategic nuclear materials and the expertise to convert them into bombs or radiological weapons. Both requirements are now well within the range of terrorist capabilities. Some 260 commercial nuclear power plants are operating in the West today, each with the capacity to produce bomb-capable plutonium.30 Approximately twenty plants in seventeen countries can now process plutonium from spent reactor fuel.31

Significantly, the amounts of nuclear materials present in other countries will probably increase. Pilot reprocessing plants used to extract weapon-usable plutonium from spent reactor fuel rods signal dangerous conditions. Unless immediate and effective steps are taken to inhibit the spread of plutonium reprocessing and uranium enrichment facilities to other countries, terrorist opportunities to acquire fissile materials for nuclear weapon purposes could reach very high levels.

To manufacture its own nuclear weapons, a terrorist group would also require expertise. It is now well known that such expertise is widely available.32 There are two basic methods of assembling fissile material in a nuclear explosive: the assembly of two or more subcritical masses using gun propellants and the achievement of supercriticality of fissile ma-

31. Id.
terial via high explosives.²³ "[M]ilitarily useful weapons with reliable nuclear yields in the kiloton range can be constructed with reactor-grade plutonium, using low technology."²⁴ Indeed, with the weapons material and a fraction of a million dollars, "a small group of people, none of whom had ever had access to the classified literature, could possibly design and build a crude nuclear explosive device."²⁵

Another path to nuclear capability by terrorists could involve the sabotage of nuclear reactor facilities. It is now apparent that such acts could pose monumental problems for responsible government authorities. These problems are especially apparent in the aftermath of the Soviet nuclear accident at Chernobyl in the spring of 1986.

What can be done to protect against sabotage of nuclear reactors by terrorists? According to the Nuclear Control Institute in Washington, D.C., the following steps should be taken:

1. Denial of access to nuclear facilities should be the basic consideration in protecting against sabotage . . . .
2. Thorough vigilance against the insider threat is needed . . . .
3. Guard forces should be thoroughly trained and authorized to use deadly force . . . .
4. The basis used for designing physical protection of nuclear plants should be reviewed to ensure that it accurately reflects the current threat . . . .
5. Power reactors should be protected against vehicular threats . . . .
6. Research reactors should have adequate security provisions against terrorists . . . .
7. Reactor safety designs should be reexamined to protect against an accident caused by terrorists . . . .
8. IAEA [International Atomic Energy Agency] physical protection guidelines should be reviewed and updated . . . .
9. Protection standards should be spelled out unambiguously.²⁶

In the end, however, efforts at "hardening the target"²⁷ will not be enough. Although physical security measures are indispensable and need to be implemented internationally,²⁸ an all-consuming preoccupation

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²³. Id. at 250-51.
²⁴. Id.
²⁵. Id. at 140.
²⁶. PREVENTING NUCLEAR TERRORISM: THE REPORT OF THE INTERNATIONAL TASK FORCE ON PREVENTION OF NUCLEAR TERRORISM 21-23 (P. Leventhal & Y. Alexander eds. 1987) [hereinafter PREVENTING NUCLEAR TERRORISM].
²⁷. This expression, adapted from the lexicon of military tactics by the author, refers to physical measures of counter-nuclear terrorism.
²⁸. With reference to the protection of assembled nuclear weapons, principal responsibility in the United States rests with the Department of Defense (DOD). From the standpoint of
with guards, firearms, fences, and space-age protection devices would be counterproductive. A behavioral strategy of counter-nuclear terrorism, one that is directed toward producing certain changes in the decisional calculi of terrorist groups and their sponsor states, is a prerequisite.

III. IDENTIFYING THE ADVERSARY: BEHAVIORAL STRATEGIES

A behavioral strategy must be based upon a sound understanding of the risk calculations of terrorists. Until the special terrorist stance on the balance of risks that can be taken in world politics is understood, we will not be able to identify an appropriate system of sanctions. Although terrorists are typically apt to tolerate higher levels of death and injury than states, there is a threshold beyond which certain costs become intolerable.

To understand this threshold, we must first note that there is no such thing as "the terrorist mind." Rather, there are a great many terrorist minds, a broad potpourri of ideas, methods, visions, and objectives. To seek a uniformly applicable strategy of counter-nuclear terrorism would thus be foolhardy.

Yet, in spite of the obvious heterogeneity that characterizes modern terrorism, it would be immensely impractical to formulate myriad strategies which are tailored to particular groups. A limited and manageable number of basic strategies that are formed according to the principal effective worldwide standards for nuclear weapons, it appears that the most promising course would involve widespread imitation and replication of the best of those measures and procedures developed by the DOD. See An Act to Combat International Terrorism: Hearings on S. 2236 Before the Senate Comm. on Governmental Affairs, 95th Cong., 2d Sess. 302 (1978) (statement of Thomas J. O'Brien, Director, Security Plans Programs, Office of the Deputy Assistant Secretary of Defense)[hereinafter Hearings]. "These measures and procedures, which are continually being upgraded and scrutinized, include: a Permissive Action Link (PAL) program, which consists of 'a code system and a family of devices integral or attached to nuclear weapons that have been developed to reduce the probability of an unauthorized nuclear detonation,' L.R. Beres, APOCALYPSE: NUCLEAR CATASTROPHE IN WORLD POLITICS—(1980); a Personnel Reliability Program (PRP), which consists of a continual screening and evaluation of nuclear duty personnel to assure reliability; a series of storage area classifications that delineate viable zones of protection; an Intrusion Detection Alarm (IDA) system; security forces capable of withstanding and repelling seizure efforts by terrorists; two-person concept control during any operation that may afford access to nuclear weapons, whereby 'a minimum of two (2) authorized personnel, each capable of detecting incorrect or unauthorized procedures with respect to the task to be performed and familiar with applicable safety and security requirements, shall be present'; counterintelligence and investigative services to actively seek information concerning threats to nuclear weapons; and carefully worked out logistic movement procedures, to ensure nuclear weapons security in transit." See L.R. Beres, TERRORISM AND GLOBAL SECURITY: THE NUCLEAR THREAT 67 (1979).
types of terrorist group behavior must be established. By adopting this means of “blueprinting” effective counter-nuclear terrorist action, policymakers can choose a decision-making strategy in which options are differentiated according to the particular category of risk-calculation involved.

This is not to suggest that each terrorist group is comprised of individuals who exhibit the same pattern of behavior, i.e., the same stance on the balance of risks that can be taken in pursuit of particular preferences. Rather, each terrorist group is made up, in varying degrees, of persons with disparate motives. Since it is essential, from the viewpoint of creating the necessary decisional strategy, that each terrorist group be categorized according to a particular type of risk-calculation, the task is to identify and evaluate the leadership strata of each terrorist group in order to determine the predominant ordering of preferences.

In terms of actually mounting an effective counter-nuclear terrorist strategy, governments must organize their activities according to the following sequence of responsibilities:

1. Appraise the terrorist group under scrutiny to identify who the leaders are.
2. Appraise the leadership elements to identify predominant patterns of risk-calculation.
3. Examine the decision-making strategy in order to identify the appropriate type of counter-nuclear terrorist strategy, i.e., the strategy that corresponds with the identified pattern of risk-calculation.

In so organizing their counter-nuclear terrorist activities, governments can begin to develop a rationally conceived “behavioral technology” which distinguishes contingencies of reinforcement according to the particular type of terrorists involved. To deal effectively with the prospective problem of nuclear terrorism, it is essential to correlate deterrent and remedial measures with the preference orderings and modus operandi of the particular terrorist group(s) in question.

For example, if a terrorist group displaying the self-sacrificing value system of certain Shiite factions in the Middle East were to threaten nuclear violence, it would be inappropriate to base deterrence on threats of physically punishing acts of retaliation. Here, negative physical sanctions, unless they are devastating enough to ensure destruction of the group itself, are bound to be ineffective. Indeed, such sanctions might even have the effect of a stimulus. Instead of orthodox threats of pun-

39. A case in point concerns Israeli responses to Hizballah terrorism in South Lebanon, which have sometimes nurtured a cycle of violence rather than curtailed insurgent assaults
ishment, deterrence in this case should be based upon threats which promise to obstruct those goals which the terrorist group values even more highly than physical safety.

Such threats, therefore, should be directed at convincing terrorists that resorting to nuclear violence would militate against their political objectives. To support such threats, steps would probably have to be taken to convince the terrorists that higher order acts of violence are apt to generate broad-based repulsion rather than support. As long as the threatened act of nuclear violence stems from propagandistic motives, terrorists who associate such violence with unfavorable publicity may be inclined to employ less violent strategies.

Deterrence in this case might also be based upon the promise of rewards. Such a strategy of "positive sanctions" has been left out of current studies of counter-terrorism; yet, this strategy may prove to be one of the few potentially worthwhile ways of affecting the decisional calculi of terrorist groups with self-sacrificing value systems. In considering whether this sort of strategy is appropriate in particular situations, governments will have to decide whether the expected benefits that accrue from avoiding nuclear terrorism are sufficient to outweigh the prospective costs associated with the promised concessions.

The reasonableness of such a strategy is also enhanced by its probable long-term systemic effects. Just as violence tends to beget more violence, rewards tend to generate more rewards. By the incremental replacement of negative sanctions with positive ones, a growing number of actors in world politics, terrorists as well as states, are apt to become habituated to the ideology of a reward system, and are likely to disengage from the dynamics of a threat or punishment system. The cumulative effect of such habituation is likely to be a more peaceful and harmonious world and national system.

For a second example, we may consider the case of a terrorist group which exhibits a preference ordering very much like that of an ordinary criminal band, \textit{i.e.}, its actions are dictated largely by incentives of material gain, however much these incentives are rationalized in terms of political objectives. If such a terrorist group threatens nuclear violence, it would be as inappropriate to base deterrence on threats of political failure or negative public reception as it would be to threaten self-sacrificing ideologues with personal harm. Rather, deterrence in this case against Israel, and have encouraged suicide bombings and attacks. Sederberg, \textit{Responses to Dissident Terrorism: From Myth to Maturity}, in \textit{INTERNATIONAL TERRORISM: CHARACTERISTICS, CAUSES, CONTROLS} 263 (C. Kegley ed. 1990).
should be based largely upon the kinds of threats that are used to counter orthodox criminality.

This is not to suggest, however, that threats of physical punishment will always be productive in dealing with this type of terrorist group. Even though this particular type, unlike the self-sacrificing variety considered in the first example, is apt to value personal safety in its ordering of preferences, threats to impair this safety may be misconceived. Indeed, a great deal of sophisticated conceptual analysis and experimental evidence now seems to indicate that, in certain cases, the threat of physical punishment may actually prove counter-productive.40

Contrary to the widely held conventional wisdom on the matter, taking a "hard-line" against terrorists may only reinforce antagonism and intransigence. Recent experience indicates that physical retaliation against terrorists often causes only a shift in the selection of targets and a more protracted pattern of violence and aggression.41 The threat of physical punishment against terrorists is apt to generate high levels of anger that effectively raise the threshold of acceptable suffering. This is the case because anger can modify usual cost-benefit calculations, overriding the inhibitions ordinarily associated with anticipated punishment.

The discussion of negative sanctions has thus far been limited to physical punishment. However, there is considerable evidence that all kinds of negative sanctions, economic as well as physical, increase rather than diminish terrorist resistance.42 Whatever the nature of negative sanctions, they appear to generate anger which causes terrorists to value retaliation (or counter-retaliation, whichever the case may be) more highly than the objectives that have given rise to the terrorist activity in the first place.

For a third example, we may consider the case of a terrorist group which exhibits a primary concern for achieving one form or another of political objective, but which lacks a self-sacrificing value system. If this sort of terrorist group threatens nuclear violence, it would be appropriate to base deterrence on a suitable combination of all of the negative and positive sanctions discussed thus far. This means that steps should be taken to convince the group that: 1) nuclear violence would militate against its political objectives; 2) certain concessions would be granted in exchange for restraint from nuclear violence; and 3) certain physically

40. Id. at 270.
41. See supra note 39.
42. For an interesting original discussion of positive or "conciliatory" responses to terrorism, see P. SEDERBERG, TERRORIST MYTHS: ILLUSION, RHETORIC AND REALITY (1989).
punishing or otherwise negative acts of retaliation would be meted out if a group undertakes nuclear violence.

In determining what constitutes suitable sanctions, governments will have to be especially discriminating in threatening physical punishment. It is worth noting that threats of mild punishment may have a greater deterrent effect than threats of severe punishment. From the vantage point of the terrorist group's particular baseline of expectations, mild threats—when threats of severe punishment are expected—may even appear to have positive qualities. Catching the terrorist group by surprise, such threats are also less likely to elicit the high levels of anger and intractability that tend to override the inhibiting factor of expected punishment. Moreover, the threat of mild punishment is less likely to support the contention of official repression, a contention that is often a vital part of terrorist group strategies for success.

In reference to the actual promise of rewards as an instrument of deterrence, governments may find it worthwhile to consider whether a selected number of particular concessions would produce a gainful net effect. In other words, recognizing that threats of severe punishment produce rationality-impairing stress, which in turn produces greater resistance rather than compliance, governments may discover that the promise of rewards communicates feelings of sympathy and concern, which in turn diminish terrorist resistance. With such an understanding, governments may begin to delimit the particular concessions which they are prepared to make.

A fourth and final example that illustrates the need to correlate deterrent and situational measures with particular preference orderings centers on the case of terrorist groups spurred on by the need for spectacular self-assertion. From the standpoint of preventing nuclear violence, this type of terrorist group presents the greatest problems. Faced with terrorist groups who long to act out desperate urgings, governments may be confronted with genuine psychopaths and sociopaths. Clearly, since the preference that would need to be obstructed in this case is neither political success nor personal profit, but the violent act itself, and since personal safety is unlikely to figure importantly in the terrorist risk-calculus, deterrence of nuclear terrorism must be abandoned altogether as a viable strategy. Instead, all preventive measures must concentrate upon limiting the influence of such terrorists within their particular groups, and maintaining a safe distance between such terrorists and the instruments of higher order weapons technologies.

What are the roots of this need for spectacular self-assertion? To some extent they may lie in a more general satisfaction of our species that
flows from exercising the powers of destruction, in what Mr. Kenneth Boulding calls "destruction as relief from powerlessness."\textsuperscript{43} Recognizing that all human beings have, at some time, sought the pleasure of personal destructive power, Boulding reminds us that "[t]here is something dramatic and sudden about the exercise of destructive power."\textsuperscript{44} The satisfactions that result from such an exercise have been known by a great variety of groups, including the very states in world politics that are quick to denounce terrorism.

But there is also something very specific about the need for spectacular self-assertion which now occupies our interest—something that goes beyond the more general (albeit, unacknowledged) social inclination toward destructive power. At one level, this need may reflect little more than a totally rational method of achieving one's political goals. In this case, of course, the "need" is merely contrived, but the outcome is altogether indifferent to authenticity.

Again, the comparison with state behavior is instructive. In a world in which states now routinely prepare for omnicidal nuclear warfare, there is little analytic point in condemning subnational groups for seeking their particular objectives via threats or acts of more-or-less spectacular violence. For members of a generation that have been nurtured in a world characterized by the most massive intrusion of criminal violence into politics, individual terrorists who turn to violent means of spectacular self-assertion may appear strangely "normal."

Although it has remained for the twentieth century to descend fully into the "age of atrocity,"\textsuperscript{45} the thoroughly criminal violence of governments was already recognized in the fifth century by St. Augustine. Writing in the \textit{City of God}, an account of the contest between the intrinsically debased City of Man and the eternally peaceful City of God, St. Augustine identifies the state as the product of humankind's most despicable tendencies.\textsuperscript{46} Devoid of justice and destructive of salvation, this mirror image of human wickedness, we are told, is little more than a "large gang of robbers."\textsuperscript{47} Indeed, in an oft-quoted passage, St. Augustine recalls the answer offered by a pirate captured by Alexander the Great. When Alexander asked the pirate what right he had to infest the seas, the pirate replied: "The same right that you have to infest the

\textsuperscript{43} K. BOULDING, THREE FACES OF POWER 82 (1989).
\textsuperscript{44} \textit{Id.}
\textsuperscript{45} This is a term coined by the author to describe our own century.
\textsuperscript{47} \textit{Id.} Bk. IV, ch. 4, at 190.
world. But because I do it in a small boat I am called a robber, while because you do it with a large fleet you are called an emperor."48

The need for spectacular self-assertion can also be the product of an essentially psychological, as distinguished from political, source. With nuclear terrorism, we are dealing with the infantile declarations of a Jerry Rubin, ("When in doubt, burn!"),49 or with the genuinely psychopathic feelings of a Kozo Okamoto, the surviving terrorist of the Lydda Airport massacre, who claimed "a strange ecstasy" in bringing death to innocents.50 In both cases, the dominant rationale seems to be to shock, to outrage, and to reveal potency without any real underlying ideology. However, the second or "psychopathic" case is also animated by a variety of complex "internal" satisfactions.

What can we do about these differentially-based inclinations toward spectacular self-assertion, inclinations that might yield individual acts of nuclear terrorism? Sadly, very little, to be sure. Confronted with little less than the persistent drives of human nature, it would appear far more pragmatic to try to control the behavior of terrorist groups than to remove the causes of even their most dangerous predilections. Should we inquire systematically into the factors likely to transform "engages"51 into "enrages,"52 we would come face to face with conditions and events that effectively lie far beyond our control.

IV. BEHAVIORAL STRATEGIES AT THE INTERNATIONAL LEVEL

Developing counter-terrorist strategies within states requires differentiating sanctions according to the particular type of terrorist group involved. However, since nuclear terrorism might take place across national boundaries, the basic principles of these strategies must also be applied internationally.

Of course, there are special difficulties involved in implementing behavioral measures of counter-nuclear terrorism internationally. These difficulties center on the fact that certain states sponsor and host terrorist groups, and that such states extend the privileges of sovereignty to insurgents on their land.53 While it is true that international law forbids a state to use its territory as a base for aggressive operations against a

48. Id.
49. L.R. BERES, supra note 38, at 6.
50. Id.
51. Those who are "engaged" or partisan.
52. Those who are "enraged" or radicalized.
53. Such states include Iraq, Syria, Lebanon and Libya.
peaceful state, a state which seeks to deal with terrorists hosted in another nation is still in a very difficult position.

To cope with these difficulties, like-minded governments must create special patterns of international cooperation. These patterns must be based upon the idea that even sovereignty must yield to gross inversions of the norms expressed in extant documents such as the UN Charter; the Universal Declaration of Human Rights; the International Covenant on Economic, Social and Cultural Rights; the International Covenant on Civil and Political Rights; the Convention on the Prevention and Punishment of the Crime of Genocide; the European Convention for the Protection of Human Rights and Fundamental Freedoms; the American Convention on Human Rights; the Nuremberg principles; and the 1949 Geneva Conventions. Cooperative patterns must, therefore, take the form of collective defense arrangements between particular states which promise protection and support for responsible and law-enforcing acts to counter nuclear terrorism.

Such arrangements must entail plans for cooperative intelligence gathering on the subject of terrorism, and for exchange of the information produced; an expanded and refined tapestry of agreements on extradition of terrorists; multilateral forces to infiltrate terrorist organizations and, if necessary, to take action against them; concerted use of the media to publicize terrorist activities and intentions; and even counter-terrorism emergency medical networks.

International arrangements for counter-nuclear terrorist cooperation must also include sanctions for states which sponsor or support terrorist groups and activities. Sanctions applied to terrorists may include carrots as well as sticks. Until every state in the world system calculates

that support of counter-nuclear terrorist measures is in its own interests, individual terrorist groups will have reason and opportunity to escalate their violent excursions.

The contemporary international legal order has tried to cope with transnational terrorism since 1937 when the League of Nations produced two conventions to deal with the problem.\textsuperscript{63} These conventions proscribed acts of terror-violence against public officials,\textsuperscript{64} criminalized the impairment of property and the infliction of general injuries by citizens of one state against those of another,\textsuperscript{65} and sought to create an International Criminal Court with jurisdiction over terrorist crimes.\textsuperscript{66} The advent of the second World War, however, prevented the ratification of either document.

An International Criminal Court is unlikely to come into being.\textsuperscript{67} But there are other measures under international law that could and should be used in the arsenal of international counter-nuclear terrorism measures:

1) The principle of \textit{aut dedere aut punire} (extradite or prosecute) needs to be applied appropriately to terrorists. The customary excepting of political offenses as reason for extradition must be abolished for genuine acts of terrorism. Although such abolition would appear to impair the prospects of even those legitimate rights to self-determination and human rights, persons proclaiming such rights cannot be exempted from the prevailing norms of humanitarian international law. At the moment, the ideological motives of the accused are often still given too much weight by states acting upon extradition requests. While ideological motive should be considered as a mitigating factor in the imposition of punishment, it should not be regarded as the basis for automatic immunity.

2) States must creatively interpret the Definition of Aggression approved by the General Assembly in 1974. As we have seen, this definition condemns the use of "armed bands, groups, irregulars or


\textsuperscript{64} Convention for the Prevention and Punishment of Terrorism, \textit{supra} note 65, art. 2, para. 1, \textit{reprinted in 7 INTERNATIONAL LEGISLATION}, \textit{supra} note 62, at 865.

\textsuperscript{65} Id. art. 2, paras. 2-3, \textit{reprinted in 7 INTERNATIONAL LEGISLATION}, \textit{supra} note 62, at 865-66.

\textsuperscript{66} See Convention for the Creation of an International Criminal Court, \textit{supra} note 63.

mercenary, which carry out acts of armed force against another State," but supports wars of national liberation against "colonial and racist regimes or other forms of alien domination." Where it is interpreted too broadly, such a distinction leaves international law with too little leverage in counter-nuclear terrorist strategies. But where it is interpreted too narrowly, the distinction places international law in the position of defending the status quo at all costs.

The problem, of course, is allowing international law to serve the interests of national and international order without impairing the legitimate objectives of international justice. But who is to determine the proper balance? Like all things human, force wears the Janus face of good and evil at the same time. It is an age-old problem, and one not adequately answered by identifying the institutional responsibility of the UN Security Council. The deliberate vagueness of the language of the Definition of Aggression is less of an obstacle than an opportunity if states can see their way clear to sensible ad hoc judgments.

But how can they make such judgments? What criteria can be applied to distinguish between lawful claims for human rights or self-determination, and unlawful acts of terror? Given the context of a decentralized system of international law, individual states must bear the ultimate responsibility for distinguishing between terrorists and "freedom fighters." At a minimum, the principles of "just cause" and "just means" should inform their judgments.

V. NUCLEAR TERRORISM: IDENTIFYING FORMS AND EFFECTS

A. Nuclear Explosives

The low technology nuclear explosives that might be manufactured by terrorists could range anywhere from a few hundred tons to several kilotons in yield. The destructive potential of such explosives would depend on such variables as type of construction, population density, prevailing wind direction, weather patterns, and the characteristic features of the target area. Such potential would be manifested in terms of three primary effects: blast (measured in pounds per square inch of over-pressure); heat (measured in calories/cm²); and radiation (measured in Radiation Effective Man (REM) a combined measure that includes the Radiation Absorbed Dose (RAD) and the Radiation Biological Effective-

68. Definition of Aggression, supra note 5, art. 3(g), at 143, reprinted in 13 I.L.M. 710, 714 (1974).
ness (RBE) or the varying biological effectiveness of different types of
radiation.\textsuperscript{70}

Relatively crude nuclear explosives with yields equivalent to about
1000 tons of high explosive would be far easier to fabricate than explo-
sives with yields equivalent to about ten kilotons of high explosive.\textsuperscript{71}
Nonetheless, explosives with a yield of only one-tenth of a kiloton would
pose potentially significant destructive effects. A nuclear explosive in this
limited range could annihilate the Capitol during the State of the Union
Address or knock down the World Trade Center towers in New York
City. An even smaller yield of ten tons of TNT could kill everyone at-
tending the Super Bowl.

In assessing the destructiveness of nuclear explosions, it is important
to remember that such explosions are typically more damaging than are
chemical explosions of equivalent yields.\textsuperscript{72} This is the case because nu-
clear explosions produce energy in the form of penetrating radiation
(gamma rays and neutrons), as well as in blast wave and heat.\textsuperscript{73}
Moreover, a nuclear explosion on the ground—the kind of nuclear explosion
most likely to be used by terrorists—would produce more local fallout
than a comparable explosion in the air.

B. Radiological Weapons

Radiological weapons are not as widely understood as nuclear ex-
plosives, but they are equally ominous in their effects. Placed in the
hands of terrorists, such weapons could pose a lethal hazard for human
beings anywhere in the world. Even a world “already numbed” could
not fail to recoil from such a prospect.

Radiological weapons are devices designed to disperse radioactive
materials that have been produced a substantial time before their in-
tended dispersal. The targets against which terrorists might choose to
use radiological weapons include concentrations of people inside build-
ings, concentrations of people on urban streets or at sports events, urban
areas with a high population density as a whole, and agricultural areas.
The form such weapons might take include plutonium dispersal devices
(only 3.5 ounces of plutonium could prove lethal to the population of a
large office building or factory) or devices designed to disperse other radi-

\textsuperscript{70} M. Willrich & T. Taylor, Nuclear Theft: Risks and Safeguards 22-23
(1974).

\textsuperscript{71} Hearings, supra note 38, at 266 (statement of Theodore B. Taylor).

\textsuperscript{72} M. Willrich & T. Taylor, supra note 70, at 22.

\textsuperscript{73} Id.
In principle, the dispersal of spent nuclear reactor fuel and the fission products separated from reactor fuels would create grave hazards in a populated area, but the handling of such materials would be very dangerous to terrorists themselves. It is more likely, therefore, that would-be users of radiological weapons would favor plutonium over radioactive fission products.

The threat of nuclear terrorism involving radiological weapons is potentially more serious than the threat involving nuclear explosives, since it would be easier for terrorists to achieve nuclear capability with radiological weapons. Such weapons, therefore, could also be the subject of a more plausible hoax than nuclear explosives.

C. Nuclear Reactor Sabotage

In the aftermath of the Chernobyl disaster, even the average layperson has become familiar with the meaning of "reactor core meltdown." Such an event, in which a reactor deprived of its temperature-controlling coolant melts in its own heat and produces lethal clouds of radioactive gases, could be the objective of future terrorism. Incidents involving violence or threats of violence at nuclear facilities at home and abroad are already a matter of record.

In comparison with a low-yield nuclear explosion, a reactor core meltdown and breach of containment would release a small amount of radiation. However, the consequences of such an event would still involve leakage of an immense amount of gaseous radioactive material that could expose neighboring populations to immediate death, cancer, or genetic defects. To better understand the nature of the threat, we must first try to understand the fundamentals of nuclear reactors.

Essentially, these reactors may be characterized as giant teakettles that turn water into steam. The steam is piped to large turbines that turn generators. When a typical teakettle is operating at full power, the radioactivity in its fuel core can reach seventeen billion curies—enough, in principle—to kill everyone on the planet. Within the uranium fuel rods in the core, the fission reaction can unleash energy to drive the tempera-

74. Id. at 25.
75. Id. at 27.
77. Faltermeyer, Exorcising the Nightmare of Reactor Meltdowns, Fortune, Mar. 12, 1979, at 82.
ture above 4000 degrees Fahrenheit—a temperature hot enough to melt through all protective barriers.78

From the standpoint of radiation discharged, the consequences of a successful conventional attack upon nuclear reactors could equal those of the worst accidental meltdown. This form of nuclear terrorism could result in moderate to major releases of radioactivity into the environment. Additional problems would arise through release of the inventories of spent fuel customarily located at reactor sites. Early fatalities are possible, although later cancers and genetic effects would dominate. In densely populated countries, deaths could number in the tens of thousands.

Whatever form nuclear terrorism might take—nuclear explosives, radiological weapons, or nuclear reactor sabotage—its effects would be social and political, as well as biological and physical. In the aftermath of a nuclear terrorist event, both governments and insurgents would be confronted with mounting pressures to escalate to higher order uses of force. With terrorists more inclined to think of nuclear weapons as manifestly "thinkable," both governments and terrorists would find themselves giving serious consideration to striking first.

VI. IDENTIFYING THE PREEMPTION OPTION

In view of the enormously destructive consequences of nuclear terrorism, governments may have to resort to strategies of preemption in certain cases.79 Where a terrorist group functions within a target state, authorities must be concerned with the protection of civil liberties. Where a terrorist group operates from the territory of one or more sympathetic host states, the authorities in the prospective target state must be concerned with the normative constraints of international law, specifically the parameters of anticipatory self-defense.80

International law is not a suicide pact. The right of self-defense by forestalling an armed attack was already established by Hugo Grotius in Book II of The Law of War and Peace.81 Recognizing the need to ac-

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78. Id.
79. For an unusually frank discussion of "terrorism preemption" from a tactical point of view, see S. Sloan, Beating International Terrorism: An Action Strategy for Preemption and Punishment (1986).
knowledge "present danger" and threatening behavior that is "imminent in a point of time," Grotius indicates that self-defense is to be permitted not only after an attack has already been suffered but also in advance, where "the deed may be anticipated."\textsuperscript{82} "It [is] lawful to kill him who is preparing to kill . . . ."\textsuperscript{83}

A similar position is taken by de Vattel. He argues that:

The safest plan is to prevent evil, where that is possible. A Nation has the right to resist the injury another seeks to inflict upon it, and to use force and every other just means of resistance against the aggressor. It may even anticipate the other's design, being careful, however, not to act upon vague and doubtful suspicions, lest it should run the risk of becoming itself the aggressor."\textsuperscript{84}

The customary right of anticipatory self-defense has its modern origins in the \textit{Caroline} incident, which concerned the unsuccessful rebellion of 1837 in Upper Canada against British rule (a rebellion that aroused sympathy and support in the U.S. border states).\textsuperscript{85} Following this case, the serious threat of armed attack has generally been taken to justify militarily defensive action. In an exchange of diplomatic notes between the governments of the United States and Great Britain, then U.S. Secretary of State Daniel Webster outlined a framework for self-defense which did not require an actual attack. Here, military response to a threat was judged permissible so long as the danger posed was "instant, overwhelming, leaving no choice of means and no moment for deliberation."\textsuperscript{86}

Today, some scholars argue that the customary right of anticipatory self-defense articulated by the \textit{Caroline} case has been overridden by the specific language of article 51 of the UN Charter.\textsuperscript{87} Those scholars asserting this position argue that article 51 fashions a new and far more restrictive statement on self-defense, one that relies on the literal qualification contained at article 51—"if an armed attack occurs."\textsuperscript{88} But this interpretation ignores the fact that international law cannot reasonably compel a state to wait until it absorbs a devastating, or even lethal, first strike before acting to protect itself. Moreover, in the nuclear age—when

\begin{itemize}
\item \textsuperscript{82} \textit{Id.} at 202.
\item \textsuperscript{83} \textit{Id.}
\item \textsuperscript{84} E. \textsc{De Vattel}, \textit{supra} note 19, at 130.
\item \textsuperscript{85} \textit{See} Jennings, \textit{The Caroline and McLeod Cases}, 32 \textit{A.M. J. Int'l L.} 82 (1938).
\item \textsuperscript{86} H. \textsc{Briggs}, \textit{The Law of Nations: Cases, Documents, and Notes} 985 (2d ed. 1952) (quoting Daniel Webster).
\item \textsuperscript{88} U.N. \textit{Charter} art. 51.
\end{itemize}
waiting to be struck first may be equivalent to accepting annihilation—the right of anticipatory self-defense is especially apparent.

What about the territorial sovereignty of states that host terrorist groups? Would not a preemptive attack against terrorists contemplating use of nuclear weapons violate such sovereignty and represent, therefore, an act of aggression? Not at all! As we have already noted, states have the obligation under international law to prevent their territory from being used as a base for terrorist operations against another state. Where this obligation is not met, the normal prerogatives of sovereignty are forfeited and subverted to the preemption choices of certain victim states.

VII. REDEFINING NATIONAL INTERESTS: PLANETIZATION AND FREEDOM FROM NUCLEAR TERRORISM

In the final analysis, the effectiveness of international strategies of counter-nuclear terrorism will depend upon the tractability of proterrorist states. Actual effectiveness, therefore, requires commitment by all states to unity and relatedness. To realize this commitment, all states will have to work toward the replacement of our fragile system of realpolitik with new world politics of globalism.

Preventing nuclear terrorism must thus be seen as one part of an even larger strategy, one that is geared to the prevention of all forms of international violence. It would be futile to try to tinker with the prospect of nuclear terrorism without affecting the basic structure of modern world politics. This structure is integral to all possibilities of an atomic apocalypse, and its revisioning and reformation is central to all possibilities for survival.

The capacity to prevent nuclear terrorism is inseparable from a new consciousness by our national leaders. Amidst the precarious crosscurrents of global power relations, states must undertake prodigious efforts to resist the lure of primacy, focusing instead on the emergence of a new sense of global obligation. These efforts must be undertaken very soon.

What is required, then, is a nuclear regime which extends the principles of nuclear war avoidance to the problem of nuclear terrorism. The centerpiece of this universal regime must be the cosmopolitan understanding that all states, like all people, form one essential body and one true community. Such an understanding, that a latent oneness lies buried beneath the manifold divisions of our world, need not be based on the mythical attractions of universal brotherhood and mutual concern. Instead, the understanding must be based on the idea that individual states,
however much they may dislike each other, are tied together in the struggle for survival.

The task, then, is to make the separate states conscious of their emerging planetary identity. With such a revisioning of national goals and incentives, states can progress to an awareness of new archetypes for global society. Since all things contain their own contradiction, the world system based upon militaristic nationalism can be transformed into an organic world society.

To succeed in this task will be very difficult. But it need not be as fanciful as some would have us believe. Indeed, before we take the shroud measurements of the corpse of human society, we must understand that faith in new forms of international interaction is a critical step towards their implementation.

If all of this sounds grandly unpolitical, it is because politics as usual cannot prevent nuclear terrorism. And if it all sounds hopelessly idealistic, it must be realized that nothing can be more fanciful than continuing on the present course. To be sure, today’s idealists in foreign affairs—those who would seek to leave militaristically nationalistic states behind—have little cause for optimism. Their search to actualize new forms of international interaction is unlikely to succeed. But it is the only search with even a remote chance of success; the only search worth conducting. It is, therefore, the only approach worthy of the term “realism.”

Amid all that would madden and torment, nuclear terrorism occupies a place of special horror. Should we fail to prevent it, the world will never again be the same. Twisting and turning to rid themselves of human language, the immediate survivors will come to know an altogether unique form of anguish. As for the other inhabitants of a violated planet, they will demand a broad variety of remedies from peoples and governments all over the world. But it would be far better to impose these remedies before there are victims. Let us, therefore, confront nuclear terrorism in time.