
The International Law of Armed Conflict in Light of Contemporary Deterrence Strategies: Empty Promise or Meaningful Restraint?

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The legal status of nuclear warfare has been a topic of considerable concern for international lawyers in recent years. Distinguished scholars who have viewed nuclear war as violating existing obligations of international law must now address two powerful counter-arguments: (1) that the initiation of nuclear war involving attacks against military installations using highly selective nuclear weapons, or retaliatory nuclear attacks, would be lawful; and (2) that, regardless of the legal status of nuclear warfare, possession and threatened use of nuclear weapons for purposes of deterrence are unconditionally lawful. After identifying and reconsidering the relevance of the rules of law applicable to nuclear deterrence policies, the author applies them to the specific scenarios in which contemporary deterrence strategies contemplate the use of nuclear weapons, concluding that such a usage in each scenario would be unlawful. He pursues this line of reasoning to consider, and ultimately reject, the claim that the political objectives of deterrence justify threats to use nuclear weapons. Nonetheless, acknowledging the political problems that deterrence attempts to address, the author prescribes the adoption of a legal regime which would minimize and potentially eliminate reliance on threatened use of nuclear weapons as a means of conflict resolution.

L'aspect juridique de la guerre nucléaire constitue depuis plusieurs années un sujet d'intérêt particulier pour les juristes de droit international. Des érudits remarquables qui ont reconnu que la guerre nucléaire violait des obligations en droit international doivent désormais faire face à deux arguments importants: (1) l'amorce de la guerre nucléaire impliquant des attaques contre les installations militaires qui utilisent des armes nucléaires sélectionnées, ou des attaques nucléaires comme mesures de représailles seraient légales; et (2) sans se soucier de l'aspect juridique de la guerre nucléaire, la possession et la menace d'utilisation d'armes nucléaires dans le but de dissuader sont nécessairement légales. Après avoir identifié et examiné la pertinence des règles de droit applicables aux politiques de dissuasion, l'auteur les place dans différentes situations où les stratégies de dissuasion contemporaines envisagent l'utilisation d'armes nucléaires, et conclut que celle-ci serait illégale dans chaque cas. Poursuivant son analyse, il étudie et rejette l'argument que les objectifs politiques de dissuasion justifient les menaces d'utilisation d'armes nucléaires. Tout en reconnaissant les problèmes politiques auxquels la dissuasion fait face, l'auteur propose l'adoption d'un système juridique qui diminuerait et éliminerait la confiance mise dans l'utilisation menaçante d'armes nucléaires comme moyen de résolution de conflits.

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Introduction

Having caused the death of hundreds of thousands of civilians and a lifetime of suffering for countless others, the atomic bombings of Hiroshima and Nagasaki must be regarded as perhaps the most terrifying acts of war in modern history. Ironically, however, the nuclear bomb's debut was also regarded as an effective means of finally bringing an end to the consuming horrors of a long and devastating global conflict. Indeed, upon receiving the news of the dropping of "Little Boy" on Hiroshima, President Truman

himself exclaimed: "This is the greatest day in history!"¹ Unhappily, the initial perception of nuclear weapons as "lifesaving" constituted only the first in a series of psychological inhibitions which continue to obscure the fundamental challenge which nuclear weapons present to the global legal order.

The post-war Nazi war crimes tribunals at Nuremberg provided a promising reaffirmation of the basic norms of armed conflict. And indeed, in recognizing crimes against humanity, and even in assigning individual liability to those responsible for their perpetration, the Nuremberg judgments might have inspired concerned jurists and government leaders to condemn the use of nuclear weapons, and perhaps to ban them altogether. Almost before the ink on the Nuremberg judgments had dried, however, and certainly before the jurists of international law could effectively publicize their potential relevance to nuclear weapons, a series of important events helped to perpetuate the legal silence.² The almost immediate break-up of wartime alliances, the resulting polarization of the world's dominant post-war powers, and the Soviet Union's acquisition of the atom's "magic" in 1949, placed nuclear weapons at the center of the emerging world order. Before long, the victors of World War II found themselves locked into a deadly "balance of terror", each relying on the threat of nuclear annihilation to deter the other from interfering with its security and well-being. If the tone of political rhetoric vacillated during the following decades, one assumption seemed beyond question throughout: no matter how disastrous their use might be, nuclear weapons would forever be integral to the security of both powers, since the nature of deterrence was such that the country which so much as wavered in its nuclear resolve would immediately make itself vulnerable to nuclear blackmail by the other. In these circumstances, it is not surprising that consideration of the legality of nuclear weapons policies was not a priority on the post-war agenda.

Nevertheless, in the 1980's, the combination of increasing public awareness about the likely consequences of nuclear war and sometimes ill-considered pronouncements by government leaders about plans to "fight and

¹Cited in P. Wyden, *Day One: Before and After Hiroshima* (1984) at 289. For a legal and historical analysis of the World War II decision to use the atomic bomb, see J. Paust, "The Nuclear Decision in World War II — Truman's Ending and Avoidance of War" (1974) 8 *Int'l Law*. 160.

²Among the earliest exceptions to the legal silence are J.M. Spaight, *The Atomic Problem* (1948); A.N. Sack, "ABC — Atomic, Biological, Chemical Warfare in International Law" (1950) 10 *Law. Guild Rev.* 161. See, however, E.C. Stowell, "The Laws of War and the Atomic Bomb" (1945) *Am. J. Int'l L.* 784. Stowell encourages the development of nuclear weapons to prevent aggression, to secure cooperation and for use as a defense "when necessary". Later exceptions include: N. Singh, *Nuclear Weapons and International Law* (1959); G. Schwarzenberger, *The Legality of Nuclear Weapons* (1958); and I. Brownlie, "Some Legal Aspects of the Use of Nuclear Weapons" (1965) 14 *Int'l & Comp. L.Q.* 437.

win" has produced unprecedented questioning of the political viability,³ the morality,⁴ and the legality of modern nuclear strategies. The contribution of distinguished scholars of international law to the ensuing debates has been far-reaching. These scholars have argued that by drawing into question the centuries-long struggle to bring measures of restraint and accountability to the conduct of war,⁵ governments which rely on nuclear weapons are undermining both the fragile authority of international law and, by extension, any semblance of reliable world order.

Their view is, however, frequently and vociferously opposed by two groups: those who deny entirely the relevance of the law of armed conflict to nuclear weapons; and those who argue that, in the absence of express treaty provisions, a weapon is not prohibited by international law and the effect of its use must therefore be considered in specific wartime contexts. In both cases, apologists for nuclear weapons are quick to point out that reliance on peacetime threats is intended to deter or dissuade aggression for the ultimate purpose of averting nuclear war. Thus, while some concede that the use of nuclear weapons might be unlawful in some or perhaps most circumstances, peacetime possession and threatened use are regarded as being unconditionally legal.

Conspicuously absent from the legal debate has been a more precise consideration of the nature of modern nuclear deterrence — an articulation of the political and military purposes for which nuclear weapons are relied upon. Are these weapons designed solely for deterrence and therefore retaliation in the event of nuclear attack? If not, would their use in other specific contexts be consistent with international law? Further, and most importantly, if the use of nuclear weapons would be unlawful, how does the law address the so-called "paradox of deterrence" — the political reality that the threatened use of nuclear weapons is regarded as necessary to dissuade comparable use by the adversary? Must peacetime nuclear threats be

³See, e.g., M. Bundy *et al.*, "Nuclear Weapons and the Atlantic Alliance" (1982) 60 Foreign Affairs 754. More recently, see J. Sanders, "Security and Choice" (1984) 1 World Policy J. 677.

⁴See National Conference of Catholic Bishops, "The Challenge of Peace: God's Promise and Our Response" (1983) 12 Origins 1 [hereinafter *The Pastoral Letter*].

⁵R. Falk, L. Meyrowitz & J. Sanderson, "Nuclear Weapons and International Law" (1980) 20 Indian J. Int'l L. 541; C.H. Builder & M.H. Graubard, *The International Law of Armed Conflict: Implications for the Concept of Assured Destruction* (1982); J.H.E. Fried, "International Law Prohibits the First Use of Nuclear Weapons" (1981-82) 16 Rev. belge dr. int. 33; K. Fujita, "First Use of Nuclear Weapons: Nuclear Strategy vs. International Law" [1982] Kansai U. Rev. L. & Pol. 57; B. Weston, "Nuclear Weapons Versus International Law: A Contextual Reassessment" (1983) 28 McGill L.J. 542; W.G. Lee, "The United States' Nuclear First Strike Position: A Legal Appraisal of its Ramifications" (1977) 7 Calif. W. Int'l L.J. 508. See also D. Margolick, "Law Panel Sees Atom Arms as Illegal", *The New York Times* (7 June 1982) B 2; Lawyers' Committee on Nuclear Policy, *Statement on the Illegality of Nuclear Warfare* (1981).

unconditionally accepted, or is there a more effective manner of reconciling legal norms regulating the use and threatened use of force with the realities of a world of sovereign states where nuclear weapons cannot be disinvented?

This article will attempt to address each of these important questions. In Part I, the continuing relevance of the humanitarian law of armed conflict in the nuclear age will be reconsidered. The legality of nuclear warfare will, in Part II, be assessed in the context of the specific targeting and combat strategies in which current nuclear forces are designed to operate. Particular attention will be given to recent trends which feature the development of increasingly precise, less destructive "mini" nuclear weapons designed to enhance the credibility of threats to escalate conventional war across the nuclear threshold. The question to be addressed here is whether such developments make nuclear policies more responsive to the concerns of international law. Part III will consider the status of threats to use nuclear weapons in light of the claimed justification of "deterrence" and the principles of law regulating the threatened use of force. Finally, Part IV will distill the conclusions of the preceding analysis and will suggest some initial steps which must be taken to bring current nuclear policies and capabilities more into line with the requirements of international law.

I. The Humanitarian Law of Armed Conflict

A. *The Law*

The substantive laws of armed conflict are ancient in origin. They flow from the basic principle that the ravages of war ought to be mitigated as much as possible in order to recognize and protect the value of human life. As such, the laws of war represent fundamental standards of civilized conduct which must be observed as a means of limiting the scope of hostilities between states.⁶

The laws of war have evolved through the customary practice of states in conflict and through formal agreements which include the *Hague Conventions* of 1899 and 1907, the *Geneva Conventions* of 1929 and 1949, and the 1977 Protocol to the *Geneva Conventions*. These sources express general

⁶See W.T. Mallison, Jr., "The Laws of War and the Juridical Control of Weapons of Mass Deterioration in General and Limited Wars" (1967) 36 Geo. Wash. L. Rev. 308 at 322; A. Roberts & R. Guelff, eds, *Documents on the Laws of War* (1982); M.S. McDougal & F.P. Feliciano, *Law and Minimum World Public Order: The Legal Regulation of International Coercion* (1961); A. Cassese, ed., *The New Humanitarian Law of Armed Conflict* (1979); L. Oppenheim, *International Law: A Treatise*, 8th ed. by H. Lauterpacht (1967). The historical development of the law of war is chronicled in M. Howard, ed., *Restraints on War* (1979) and G. Best, *Humanity in Warfare: The Modern History of the International Law of Armed Conflict* (1980).

norms of conduct but do not indicate specific enforcement mechanisms or sanctions in case of violation. They have, however, been incorporated into the domestic law of the major powers by constitutional mandate,⁷ as well as by numerous official documents and ordinances, including military manuals⁸ and judicial decisions.⁹

Two fundamental legal principles lie at the base of the modern law of war: the principles of humanity and military necessity. The principle of military necessity provides that, subject to the principle of humanity, a belligerent is justified in applying the degree of force required to achieve complete submission of the enemy "with the least possible expenditure of time, life and physical resources".¹⁰ The principle of humanity complements the principle of necessity by prohibiting "the employment of any kind of force not necessary for the purpose of war, that is, for the partial or complete submission of the enemy with the least possible expenditure of time, life and physical resources".¹¹ Thus, the principle of necessity dictates when the use of force is acceptable, while the principle of humanity limits how much force may justifiably be employed to pursue a legitimate military objective.

Given the relatively recent introduction of nuclear weapons, it is not surprising that there are few treaties or conventions which specifically address the threatened or actual use of nuclear weapons.¹² There are, however, a

⁷See, e.g., article 6 of the U.S. *Constitution* which provides, *inter alia*, that "[a]ll treaties made, or which shall be made, under the Authority of the United States shall be the supreme law of the land". *The Constitution of the United States of America*, reprinted in G. Gunther, *Cases and Materials on Constitutional Law*, 10th ed. (1980) Appendix B.

⁸See, e.g., United States Department of the Air Force, *International Law — The Conduct of Armed Conflict and Air Operations* (1976) at 6-17 n. 18 (A.F.P. 110-31); United States Department of the Navy, *Law of Naval Warfare* (1955) art. 613 n. 1, reprinted in R. Tucker, *The Laws of War and Neutrality* (1955).

⁹In *The Shimoda Case* (1963), reprinted in [1964] Jap. Ann. Int'l L. 212 (English translation), the Tokyo District Court held the nuclear bombings of Hiroshima and Nagasaki to be in violation of international law on the grounds, *inter alia*, that: (1) the bombings were indiscriminate and against undefended cities; (2) the bombings were not justifiable as military necessity; (3) the cities were not military targets; and (4) the bombs caused more suffering than weapons conventionally outlawed for producing unnecessarily cruel and poisonous forms of suffering.

¹⁰McDougal & Feliciano, *supra*, note 6 at 523.

¹¹*Ibid.* at 529-30.

¹²Exceptions include *Treaty Banning Nuclear Weapons Tests in the Atmosphere, in Outer Space and Under Water*, 14 U.S.T. 1313, T.I.A.S. 5433, 480 U.N.T.S. 43 (signed 5 August 1963; entered into force 10 October 1963; ratified by 110 states as of 31 December 1982); *Antarctic Treaty*, 12 U.S.T. 794, T.I.A.S. 4780, 402 U.N.T.S. 71, arts I and V (signed 1 December 1959; entered into force 23 June 1961; ratified by 26 states as of 31 December 1982); *Treaty for the Prohibition of Nuclear Weapons in Latin America*, 634 U.N.T.S. 281 (signed 14 February 1967; entered into force for 24 states on 31 December 1982); *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies* 18 U.S.T. 2410, T.I.A.S. 6347, 610 U.N.T.S. 205, art. IV (signed 27

number of conventions which, for the most part, were formulated prior to the advent of nuclear weapons but which still might be relevant. Professor Burns Weston has summarized the principles embodied in these conventions into six "core rules", each involving a balancing of the customary principles of humanity and military necessity.¹³

Rule 1: It is prohibited to use weapons or tactics that cause unnecessary or aggravated devastation and suffering.

The *Declaration of St Petersburg*¹⁴ of 1868 first embodied this rule, stating in the Preamble that "the only legitimate object which states should endeavor to accomplish during war is to weaken the military forces of the enemy" and that "this object would be exceeded by the employment of arms which uselessly aggravate the sufferings of disabled men, or render their death inevitable". The principle was affirmed in the Regulations annexed to the *Hague Convention [No. IV] Respecting the Laws and Customs of War on Land*.¹⁵ Specifically, article 23 provides that "it is especially forbidden: ... (b) To kill or wound treacherously individuals belonging to the hostile nation or army; ... (e) To employ arms, projectiles, or material calculated to cause unnecessary suffering; ... [and] (g) To destroy or seize the enemy's property, unless such destruction or seizure be imperatively demanded by the necessities of war".¹⁶

Rule 2: It is prohibited to use weapons or tactics that cause indiscriminate harm as between combatants and noncombatant military and civilian personnel.

January 1967; entered into force 10 October 1967; ratified by 81 states as of 31 December 1982); *Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and the Ocean Floor and in the Subsoil Thereof* 23 U.S.T. 701, T.I.A.S. 7337 (signed 11 February 1971; entered into force for 70 states on 31 December 1982).

¹³These six rules are set out and discussed in detail in Weston, *supra*, note 5 at 553-60.

¹⁴*Declaration Renouncing the Use of Certain Explosive Projectiles*, 11 December 1868, reprinted in L. Friedman, ed., *The Law of War: A Documentary History*, vol. 1 (1972) at 192-3 [hereinafter *Declaration of St Petersburg*].

¹⁵1907 Hague Regulations Respecting the Laws and Customs of War on Land [hereinafter 1907 Hague Regulations], Annex to the 1907 *Hague Convention [No. IV] Respecting the Laws and Customs of War on Land*, 18 October 1907, 36 Stat. 2277, reprinted in Friedman, *supra*, note 14 at 308-23. These regulations are referred to in the most recent official publication of the U.S. Air Force relating to the law of war as the "foundation stones of the modern law of armed conflict". United States Department of the Air Force, *supra*, note 8.

¹⁶Similar language is used in the *Declaration of Brussels*, 27 August 1874, arts 12-3, reprinted in Friedman, *supra*, note 14 at 194-203. See also *Resolution on Basic Principles for the Protection of Civilian Populations in Armed Conflict*, United Nations G.A. Res. 2675, 25 U.N. GAOR, Supp. (No. 28) 76, U.N. Doc. A/8028 (1970); International Committee of the Red Cross, *Fundamental Rules of International Humanitarian Law Applicable in Armed Conflicts* (1978) 206 Int'l Rev. Red Cross 248 at 249 (Rule 6).

This rule has often been referred to as "the principle most fundamental in character" in the development of the modern law of war.¹⁷ Like *Rule 1*, it was first codified in the stipulation found in the Preamble to the *Declaration of St Petersburg* referred to above.¹⁸ By shielding civilians from the horror of combat, this provision first recognized the principle that weapons must be employed selectively. Later, the combatant/noncombatant distinction became an essential part of the Hague Draft Rules of Aerial Warfare,¹⁹ the 1949 *Geneva Conventions*²⁰ and, most recently, the 1977 Protocol to the *Geneva Conventions*,²¹ section 48 of which states:

In order to ensure respect for and protection of the civilian population and civilian objects, the Parties to the conflict shall at all times distinguish between the civilian population and combatants and between civilian objects and military objectives and accordingly shall direct their operations against military objectives.²²

Some commentators have questioned the validity of this rule, arguing that the nature of modern "total war" is such that it is now impossible to maintain the distinction between combatants and noncombatants.²³ This argument was rejected, however, by the International Military Tribunal at Nuremberg which declared, in article 6(c) of the *Nuremberg Charter*, that the elimination of all or part of a civilian population is a "crime against humanity".²⁴ Moreover, while the balance of doubt might often be resolved in favour of military necessity rather than the principle of humanity, to legitimize deliberate "terror bombardment" carried out for the purpose of destroying enemy morale would effectively undermine any attempts to place legal limits on the exercise of violence in war.²⁵

¹⁷See, e.g., Trustees of the John Bassett Moore Fund, eds, *The Collected Papers of John Bassett Moore*, vol. 6 (1944) at 153.

¹⁸*Supra*, note 14.

¹⁹Hague Draft Rules of Aerial Warfare, reprinted in (1923) 17 Am. J. Int'l L. 245 (Supp.).

²⁰*Geneva Conventions*, 12 August 1949, 6 U.S.T. 3114, T.I.A.S. 3362, 75 U.N.T.S. 31, reprinted in Friedman, *supra*, note 14 at 525-691.

²¹Geneva Protocol I Additional Relating to the Protection of Victims of International Armed Conflicts, U.N. Doc. A/32/144, Annex I, reprinted in (1977) 16 I.L.M. 1391 (adopted 12 December 1977; entered into force on 7 December 1978) [hereinafter 1977 Geneva Protocol I Additional].

²²Similarly, see 1907 Hague Regulations, *supra*, note 15, arts 25 and 27; *Resolution on Basic Principles for the Protection of Civilian Populations in Armed Conflicts*, *supra*, note 16; *Geneva Convention [No. IV] Relative to the Protection of Civilian Persons in Time of War*, 12 August 1949, reprinted in Friedman, *supra*, note 14 at 641-91.

²³L. Nurick, "The Distinction Between Combatant and Noncombatant in the Law of War" (1945) 39 Am. J. Int'l L. 680.

²⁴*Charter of the International Military Tribunal*, 6 October 1945, 59 Stat. 1555, E.A.S. No. 272, art. 6(c).

²⁵See McDougal & Feliciano, *supra*, note 6 at 658; H. Lauterpacht, "The Problem of the Revision of the Law of War" (1952) 29 Brit Y.B. Int'l L. 360 at 369.

Rule 3: It is prohibited to use weapons or tactics that cause widespread, long-term and severe damage to the natural environment.

This rule was added to the laws of war by the 1977 Geneva Protocol I Additional.²⁶ While the Protocol's status remains questionable due to the failure of certain major powers to ratify it, our increasing awareness of the ecological impact of nuclear exchange²⁷, and multi-national expressions of "common concern" for the environment²⁸ form the basis of what must be regarded as a quickening principle of binding customary law.

Rule 4: It is prohibited to effect reprisals that are disproportionate to their antecedent provocations or to legitimate military objectives, or disrespectful of persons, institutions, or resources otherwise protected by the laws of war.

International law does recognize the right of reprisal against an adversary who has violated the law of war. However, that right is not unlimited. Reprisals may not be undertaken for punitive or vengeful purposes; rather, their only legitimate purpose is to secure observance of the laws of war by an enemy who has violated them. Such reprisals must be in response to grave and manifestly unlawful acts, and must be proportionate to the original violation. Furthermore, reprisals must in all other respects be carried out in observance of international law. Reprisals which are extreme in relation to their provocation or which lack a reasonable connection with the securing of legitimate military objectives are contrary to the *United Nations Charter* (articles 20, 51, 53, and 55) as well as to international law in general. Finally, reprisals must be directed at the cobelligerent state with no adverse impact on the neutral jurisdiction of nonparticipating nations and must otherwise comply with the rules of discrimination: reprisals directed against civilian populations, against wounded and sick military or civilian personnel, medical personnel, cultural property, places of worship and installations

²⁶Article 35(3) of the 1977 Geneva Protocol I Additional, *supra*, note 21, states: "It is prohibited to employ methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment."

²⁷See, e.g., C. Sagan, "Nuclear War and Climatic Catastrophe" (1984) 62 *Foreign Affairs* 257.

²⁸See, e.g., Principle 16 of the *Stockholm Declaration of the United Nations Conference on the Human Environment* in *Report of the United Nations Conference on the Human Environment*, U.N. Doc. A/CONF. 48/14, and Corr. 1, reprinted in (1972) 11 *I.L.M.* 1415, which states: "Man and his environment must be spared the effects of nuclear weapons and all other means of mass destruction. States must strive to reach prompt agreement . . . on the elimination and complete destruction of such weapons."

containing dangerous forces (such as dykes, dams and nuclear power generators), are prohibited.²⁹

*Rule 5: It is prohibited to use weapons or tactics that violate the neutral jurisdiction of nonparticipating states.*³⁰

Two elements of this rule are especially important: "the claim that belligerents have no warrant to carry out their hostilities into the territory of a nonparticipating State, and the accompanying claim that nonparticipating States have the right to exclude the entry of belligerent forces into their territory".³¹ This rule is critical in an assessment of the legality of nuclear warfare to the extent that the effects of nuclear weapons — particularly the effects of nuclear fallout transmitted by wind — cannot be confined to any precise territorial boundaries.³²

Rule 6: It is prohibited to use asphyxiating, poisonous or other gases, and all analogous liquids, materials or devices, including bacteriological methods of warfare.

This rule derives principally from the *Geneva Gas Protocol*³³ which states the following:

Whereas the use in war of asphyxiating, poisonous or other gases, and of all analogous liquids, materials or devices, has been justly condemned by the general opinion of the civilised world; and

²⁹See *Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict*, 14 May 1954, 249 U.N.T.S. 240, art. 4(4), reprinted in Roberts & Guelff, *supra*, note 6 at 39; *Geneva Convention [No. IV] Relative to the Protection of Civilian Persons in Time of War*, 12 August 1949, 6 U.S.T. 3516, T.I.A.S. 3365, 75 U.N.T.S. 287, art. 33, reprinted in Friedman, *supra*, note 14 at 641-91; *Geneva Convention [No. III] Relative to the Treatment of Prisoners of War*, 12 August 1949, 6 U.S.T. 3316, T.I.A.S. 3364, 75 U.N.T.S. 135, art. 13, reprinted in Friedman, *ibid.* at 598-640; *Geneva Convention [No. II] for the Amelioration of the Condition of Wounded, Sick and Shipwrecked Members of the Armed Forces at Sea*, 12 August 1949, 6 U.S.T. 3217, T.I.A.S. 3363, 75 U.N.T.S. 85, art. 47, reprinted in Friedman, *ibid.* at 570-88; *Geneva Convention [No. I] for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field*, 12 August 1949, 6 U.S.T. 3114, T.I.A.S. 3362, 75 U.N.T.S. 31, reprinted in Friedman, *ibid.* at 525-69.

³⁰See *Hague Convention [No. VI] Respecting the Rights and Duties of Neutral Powers in Case of War on Land*, 18 October 1907, 36 Stat. 2310, T.S. No. 540, 1 Bevans 654, arts 1, 2, 3, 4 and 10, reprinted in Friedman, *supra*, note 14 at 324-31; *Hague Convention [No. XIII] Concerning the Rights and Duties of Neutral Powers in Naval Wars*, 18 October 1907, arts 1 and 2, reprinted Friedman, *ibid.* at 385-94.

³¹Weston, *supra*, note 5 at 559.

³²See Singh, *supra*, note 2 at 106.

³³*Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare*, 17 June 1925, 26 U.S.T. 575, T.I.A.S. 8061, 94 L.N.T.S. 65, reprinted in Friedman, *supra*, note 14 at 454-6 [hereinafter *Geneva Gas Protocol*].

Whereas the prohibition of such use has been declared in Treaties to which the majority of Powers of the world are Parties; and

To the end that this prohibition shall be universally accepted as part of International Law, binding alike the conscience and the practice of nations:

Declare;

That the High Contracting Parties . . . accept this prohibition, agree to extend this prohibition to the use of bacteriological methods of warfare and agree to be bound as between themselves according to the terms of this declaration.

This *Protocol* is framed in such comprehensive terms that, standing alone, it would likely prohibit the use of virtually every weapon whose effects are similar to those of poison gas, including nuclear weapons, given that the radiation released would tend to produce similar internal effects.³⁴ Of course, the precise applicability of this rule to a nuclear detonation would necessarily depend on the size and nature of the weapon and the yield of radiation. It is clear, however, that a “normal” nuclear blast would emit sufficient radiation to create injurious effects analogous to those caused by the deliberate emission of poison into the environment.

B. Modern-Day Relevance of the Law

Several arguments have been advanced to deny the applicability of these principles to nuclear weapons. Similar in their approaches, these arguments tend to focus on the particular wording of the various treaties and conventions, and on the historic context in which they were negotiated.

A commonly cited argument postulates that, because nuclear weapons were unknown to military strategy prior to 1945, existing positive law could not contemplate them and is therefore inapplicable. This argument was specifically rejected by the Japanese District Court in *The Shimoda Case*, the one instance in which this question has been directly addressed in a court of law. In *The Shimoda Case*, the court decided that existing positive law could provide relevant standards for the assessment of the legality of the nuclear attacks on Hiroshima and Nagasaki:

It is right and proper that any weapon contrary to the custom of civilized countries and to the principles of international law should be prohibited even if there is no express provision in the laws and regulations. Only where there is no provision in the statutory law, and as long as a new weapon is not contrary to the principles of international law, can a new weapon be used as a legal means of hostility. . . . Therefore, we cannot regard a weapon as legal only

³⁴See Singh, *supra*, note 2 at 156-60. See also Schwarzenberger, *supra*, note 2; *The Shimoda Case*, *supra*, note 9.

because it is a new weapon, and it is still right that a new weapon must be exposed to the examinations of positive international law.³⁵

Another argument relates to the binding force of the law to the extent that it is found in the 1977 Geneva Protocol I Additional, since the Protocol remains unratified by the nuclear weapon states. Moreover, it is pointed out that all of the nuclear weapon states (with the exception of China), and other states and nongovernmental organizations, have established "understandings" that the rules relevant to the use of weapons established by the Protocol apply to conventional weapons and are not intended to regulate or prohibit the use of nuclear weapons.³⁶

The actual relevance of these "understandings" and failures to ratify is, however, by no means conclusive. While it is true that, with the exception of India, none of the sixty-four countries that have ratified the Protocol have objected to the understandings, few of those states have specifically expressed agreement. With respect to ratification, it has been argued that, in view of instruments such as the 1972 *Stockholm Declaration on the Human Environment* and the 1978 *Red Cross Fundamental Rules of International Humanitarian Law Applicable in Armed Conflicts*, the Protocol's environmental and civilian population protection provisions may be viewed as declaratory of emerging customary law and, accordingly, remain unaffected by non-ratification.³⁷ In addition, the *Vienna Convention on the Law of Treaties*³⁸ obliges countries which have signed but not yet ratified a treaty to refrain from carrying out acts which would undermine the treaty's object and purposes.

With respect to the *Hague* and *Geneva Conventions*, a "conservative" approach to treaty interpretation has been proposed.³⁹ It is argued that the principles embodied in these conventions should be limited to respond to the specific circumstances which the negotiations sought to address. For example, prohibitions such as those found in article 23(3) of the 1907 *Hague Convention* forbidding the use of weapons "calculated to cause superfluous injury" should be confined to the narrow circumstance in which a wounded victim of combat would be caused further suffering, without a military purpose being advanced in justification. These conventions, it is argued,

³⁵*The Shimoda Case*, *ibid.* at 327.

³⁶E.L. Meyrowitz, Remarks (1981) 75 Proc. Am. Soc. Int'l L. 214.

³⁷Weston, *supra*, note 5 at 567.

³⁸*Vienna Convention on the Law of Treaties*, U.N. Doc. A/CONF. 39/27 at 289, reprinted in (1969) 8 I.L.M. 679 (opened for signature 23 May 1969; entered into force 27 January 1980).

³⁹See, e.g., R.E. Lisle, Remarks (1983) 9 Brooklyn J. Int'l L. 275; E. Cummings, Remarks (1983) 9 Brooklyn J. Int'l L. 269.

were not intended to prohibit the use of weapons because of their effects; instead they were "modestly intended to reduce the inhumanity and barbarity of war when militarily possible".⁴⁰

However, by confining these treaties to their specific prohibitions, these arguments tend to overlook the more fundamental purposes which the provisions were designed to achieve, namely to prohibit methods of warfare which cause unnecessary suffering or indiscriminate harm. The "purposive dimension"⁴¹ of the law is precisely what unites the various individual prohibitions into a cogent and uniform code of civilized conduct without which the destructiveness of war would know no bounds. Furthermore, such interpretations give rise to troubling anomalies. How, for example, could restrictions on the use of comparatively inconsequential weapons such as "dum-dum bullets" be taken seriously when use of the most destructive weapon of all time is assumed to be lawful? As Professor Fried points out: "It is scurrilous to argue that it is still *forbidden* to kill a *single* enemy civilian with a *bayonet*, or wantonly to destroy a *single* building on enemy territory by *machine-gun* fire — but that it is legitimate to kill *millions* of enemy noncombatants and wantonly to destroy entire enemy cities, regions and perhaps countries . . . by *nuclear* weapons."⁴²

A similar argument denies altogether the relevance of the customary law of war to nuclear weapons. This traditional view is based on the holding in *The Case of the S.S. "Lotus"*⁴³ wherein it was stated that the "rules of law binding upon States . . . emanate from their own free will as expressed in conventions or by usages generally accepted as expressing principles of law".⁴⁴ This theory of international law, requiring restrictions on international conduct to be consented to by the state in question, forms the basis of the American position "that there is at present no rule of international law expressly prohibiting states from the use of nuclear weapons in warfare. In the absence of any express prohibition, the use of such weapons against enemy combatants and other military objectives is permitted."⁴⁵

⁴⁰Cummings, *ibid.* at 273.

⁴¹A. D'Amato, Remarks (1983) 9 Brooklyn J. Int'l L. 311.

⁴²J.H.E. Fried, "First Use of Nuclear Weapons: Existing Prohibitions in International Law" (1981) 12 Bull. Peace Proposals 21 at 28 [emphasis in original].

⁴³(France v. Turkey) (1927), P.C.I.J., ser. A/No. 10.

⁴⁴*Ibid.* at 18.

⁴⁵United States Department of the Navy, *supra*, note 8. It is interesting to contrast this statement with the more ambiguous one, found in paragraph 35 of the United States Department of the Army, *The Law of Land Warfare* (1956): "The use of explosive 'atomic weapons', whether by air, sea or land forces, cannot *as such* be regarded as violative of international law in the absence of a customary rule of international law or international convention restricting their employment"[emphasis added].

This view adopts an overly restricted and somewhat unrealistic approach to the sources of international law. Whether one emphasizes the natural content of the law,⁴⁶ or the communicative process by which the law attains juridical identity,⁴⁷ it is difficult to escape the conclusion that the application of international law, particularly the law of war, is not limited to those few situations for which explicit treaty provisions have been drafted.⁴⁸

Indeed, support for a broader reading of the law is found in the fourth *Hague Convention* of 1907. The "Martens Clause" of the Preamble contains a general measure intended to address the situation in which no explicit treaty prohibits a new weapon or tactic. It provides:

Until a more complete code of the laws of war has been issued, . . . in cases not included in the Regulations adopted by them, the inhabitants and the belligerents remain under the protection and the rule of the principles of the law of nations, as they result from the usages established among civilized peoples, from the laws of humanity, and the dictates of the public conscience.⁴⁹

Similarly, the International Military Tribunal at Nuremberg stated:

The law of war is to be found not only in treaties, but in the customs and practices of states which gradually obtained universal recognition, and from the general principles of justice applied by jurists and practiced by military courts.⁵⁰

This view, of course, corresponds with the sources of valid international law referred to in article 38 of the *Statute of the International Court of*

⁴⁶A. D'Amato, "What 'Counts' as Law?" in N.G. Onuf, ed., *Law-Making in the Global Community* (1982) at 83.

⁴⁷M.S. McDougal & W.M. Reisman, "The Prescribing Function in the World Constitutive Process: How International Law Is Made" (1980) 6 *Yale Stud. World Pub. Ord.* 249. In *Law and Minimum World Public Order: The Legal Regulation of International Coercion*, *supra*, note 6 at 53, McDougal & Feliciano describe the reciprocity expected between states which share a common interest in the application of the law of war:

The common interest which sustains the law of war is the interest of all participants in economy in the use of force — in the minimization of the unnecessary destruction of values. Unnecessary destruction of values constitutes uneconomical use of force not only because it involves, by definition, a dissipation of base values which yields no military advantage; it will also, by operation of the condition of reciprocity, result in the offending belligerent sustaining a positive disadvantage in the form of at least an equal amount of destruction of its own values.

⁴⁸Examples of the same conclusion, arrived at with slightly differing emphasis on each of these approaches to the questions of "what counts as law", may be found in E.L. Meyrowitz, "The Laws of War and Nuclear Weapons" (1983) 9 *Brooklyn J. Int'l L.* 227 and Weston, *supra*, note 5.

⁴⁹*Supra*, note 15 at 309.

⁵⁰*Trial of the Major War Criminals Before the International Military Tribunal*, vol. 22 (1948) at 464.

Justice. Finally, in *The Shimoda Case*, the Japanese District Court explicitly addressed this point and concluded:

[I]t is right that use of a new weapon is legal, as long as international law does not prohibit it. However, the prohibition in this case is understood to include not only the case where there is an express provision of direct prohibition but also the case where it is necessarily regarded that the use of a new weapon is prohibited, from the interpretation and analogical application of existing international laws and regulations. Further, we must understand that the prohibition includes also the case where, in light of principles of international law which are the basis of the above-mentioned positive international law and regulations, the use of a new weapon is admitted to be contrary to the principles. For there is no reason why the interpretation of international law must be limited to grammatical interpretation any more than in the interpretation of domestic law.⁵¹

Another argument, recently advanced by Eugene Rostow⁵² in defense of the legality of nuclear weapons policies, posits that the "authoritative" practice of states in accumulating and threatening to use nuclear weapons has crystallized so as to be recognized and accepted in customary international law. But this is an extremely statist view of international law which begs the central questions of whether general principles of international law place imperative boundaries on the legitimacy of political acts, or whether, in fact, international law amounts to no more than what any given state administration decrees it to be at any point in time. The argument fundamentally ignores the concept of law as an enterprise tailored toward the realization of certain basic, politically immutable values. Such values include the sanctity of human life and the principle of minimizing losses and suffering in armed conflict which constitute the basis of the entire law of war. If advances in weapons technology have rendered past discussions of limiting the effects of war irrelevant, the modern weapons must cede to the principles of law, not the reverse. To suggest otherwise is tantamount to undermining one of the most basic cornerstones of law in our geopolitical system.

Even if Rostow's statist view is correct, there is ample evidence of "authority signals"⁵³ which affirm, rather than contradict, the view that states perceive themselves as customarily bound by the laws of war as they

⁵¹*The Shimoda Case*, *supra*, note 9 at 235.

⁵²E.V. Rostow, Remarks (1982) 76 Proc. Am. Soc. Int'l L. 25.

⁵³McDougal & Reisman, *supra*, note 47.

would be applied to nuclear weapons. Most important is United Nations Resolution 1653 of 1961⁵⁴ which states:

- (a) The use of nuclear and thermonuclear weapons is contrary to the spirit, letter and aims of the United Nations, and, as such, a direct violation of the Charter of the United Nations;
- (b) The use of nuclear and thermonuclear weapons would exceed the scope of war and cause indiscriminate suffering and destruction to mankind and civilization and, as such, is contrary to the rules of international law and to the laws of humanity;
- (c) The use of nuclear and thermonuclear weapons is a war directed not against an enemy or enemies alone but also against mankind in general, since the people of the world not involved in such a war will be subjected to all the evils generated by the use of such weapons;
- (d) Any state using nuclear and thermonuclear weapons is to be considered as violating the Charter of the United Nations, as acting contrary to the laws and humanity and as committing a crime against mankind and civilization

Although resolutions of the United Nations do not themselves, without further evidence of state practice, constitute binding international law, such declarations must be regarded as evidence of a consensus which considers the laws of war as far from outmoded or inapplicable to nuclear weapons.⁵⁵

Moreover, in recent years, leading policy makers have reaffirmed the tradition of *jus in bello* by citing it to criticize strategies of deterrence based exclusively on threats of assured societal destruction. Former Secretary of

⁵⁴*Declaration on the Prohibition of the Use of Nuclear and Thermo-Nuclear Weapons*, United Nations G.A. Res. 1653, 16 U.N. GAOR, Supp. (No. 17) 4, U.N. Doc. A/5100 (1961), reaffirmed by wider margins in 1978 and 1980: United Nations G.A. Res. 22/71-B, 33 U.N. GAOR, Supp. (No. 45) 48, U.N. Doc. 2/33/45 (1978); United Nations G.A. Res. 35/152-0; 35 U.N. GAOR Supp. (No. 48) 69, U.N. Doc. A/35/48 (1980).

⁵⁵In supporting the adoption of the *Resolution on Respect for Human Rights In Armed Conflicts*, United Nations G.A. Res. 2444, 23 U.N. GAOR, Supp. (No. 18) 50 U.N. Doc. A/7218 (1968), the U.S. representative said the following: "(1) There is a limit to the permissible means of injuring the enemy, a limit which is inevitably affected by the actions of all parties to any conflict; (2) Civilian populations may not be attacked as such, but we recognize the co-location of military targets and civilians may make unavoidable certain injuries to civilians. Moreover, we should recognize soberly, that none of these principles offers any significant protection to civilians in the catastrophic event of nuclear war; (3) There are indeed principles of law relative to the use of weapons in warfare, and these principles apply as well to the use of nuclear and similar weapons." See U.S. Delegation to the General Assembly, Press Release US-UN 240 (68), 10 December 1969. These statements seem to be an explicit recognition of the continuing relevance and applicability of the law of war to both conventional and nuclear weapons.

Defense James Schlesinger, for example, has alluded to the moral and legal shortcomings of "assured destruction" in commenting:

Not only must those in power consider the morality of threatening such terrible retribution on the Soviet people for some ill-defined transgression by their leaders; in the most practical terms, they must also question the prudence and plausibility of such a response.⁵⁶

As we shall see below, it is these doubts about the morality and legality of assured destruction strategies which have given rise to the development of increasingly flexible nuclear weapons designed for greater versatility and target selectivity. But whether these changes in doctrine and capabilities actually bring U.S. nuclear policies more into line with international law, as is implied by the conclusions of a recent study by the influential RAND Corporation,⁵⁷ remains to be considered below. First, however, the actual conduct of nuclear warfare as contemplated by existing weapons and strategies must be assessed against the relevant standards of the law of war.

II. The Conduct of Nuclear War

A. *Attributes or Context?*

Although it has been argued on occasion that the attributes of nuclear weapons render them illegal *per se*,⁵⁸ the dominant mode of analysis is to avoid the conclusion that nuclear weapons are necessarily legal or illegal. Instead, the attributes of a given weapon are considered in the specific context in which its use is contemplated, balancing "military necessity" against the predicted effects of its use. In each instance, the contextualists argue, the illegality depends on whether there is "disproportionate and unnecessary destruction of values" in light of the military advantage to be secured.⁵⁹ Questions relevant to an assessment of any particular use of nuclear weapons include: (1) can the weapon be delivered accurately to the target; (2) would its use necessarily result in excessive injury to civilians or damage to civil objects, so as to qualify as an "indiscriminate weapon"; (3) would its effects be uncontrollable in space or time so as to cause disproportionate injury to civilians or damage to civilian objects; and (4) would its use necessarily cause suffering excessive in relation to the military purpose which the weapon serves?⁶⁰

⁵⁶Quoted in W.R. Van Cleave & R.W. Barnett, "Strategic Adaptability" (1975) 18 *Orbis* 655. See also *infra*, note 91 and accompanying text.

⁵⁷Builder & Graubard, *supra*, note 5 at xi.

⁵⁸Singh, *supra*, note 2; Schwarzenberger, *supra*, note 2.

⁵⁹McDougal & Feliciano, *supra*, note 6 at 663.

⁶⁰United States Department of the Air Force, *supra*, note 8 at 6-7.

The most notable aspect of the contextualists' approach is that it provides a more significant role for legal and normative considerations in the formation of state practice as compared to a rather inflexible prohibition which, given the centrality of nuclear threats to current global defense planning, would likely be ignored in the event of a crisis or conflict. However, the contextual approach may be criticized for its excessive subjectivity in assuming that an accurate balancing of "military necessity" and "humanity" could take place under the pressure of conflict when national decision-makers are left with almost unfettered discretion to decide what is permissible. Professor Falk has highlighted the lack of consistency inherent in the subjective assessment of "military necessity":

Those tending to widen the context to include the overall war effort and those tending to define belligerent objective as including the realization of peace on an acceptable political and moral basis seem to have a more flexible and manipulative view of when the use of nuclear weapons is legal than do those contextualists who limit what is relevant to the ratio between military and non-military destruction at the scene of the nuclear attack.⁶¹

The problems of defining "military necessity" were compounded, earlier in the nuclear age, by the shortage of reliable evidence about the likely effects of nuclear explosions. Thus, while in *The Shimoda Case* the Japanese court adopted a more conservative definition of context,⁶² concluding that the "total war" claim of military necessity to end the war could not justify nuclear bombing, the dearth of available information concerning the hypothetical effects of nuclear blasts forced even the contextualists to allow that perhaps some military necessity might justify using nuclear weapons "against military objectives which can be destroyed without serious loss of life or injury to health".⁶³ Recent scientific advances have, however, brought new vitality to the contextual approach by providing more precise evidence about the likely medical, biological and ecological consequences of nuclear war in a vastly expanded range of specific circumstances, thus enabling a more precise balancing of the claim of "military necessity" in a given context against the intensity and degree of destruction of the values of humanity. The pertinent questions to be addressed in modern contextual analysis are whether, in the light of this more reliable scientific information, nuclear attack might still be justifiable in particular contexts, and, if so, under what circumstances.

⁶¹R. Falk, *Legal Order in a Violent World* (1968) at 411.

⁶²*Ibid.*

⁶³L. Oppenheim, *International Law: Disputes, War and Neutrality*, 8th ed. by H. Lauterpacht (1967) at 349. See also Lee, *supra*, note 5.

B. Nuclear Exchange: Some Contextual Possibilities

The most recent and most comprehensive contextual assessment of the use of nuclear weapons in light of the humanitarian rules of armed conflict, has been undertaken by Professor Burns Weston.⁶⁴ In his study, Professor Weston applies the six rules set out above⁶⁵ to “first strike” and “retaliatory” “strategic”⁶⁶ nuclear exchanges, distinguishing in both cases between “countervalue”⁶⁷ and “counterforce”⁶⁸ targeting. In addition, the author

⁶⁴Weston, *supra*, note 5.

⁶⁵See *supra*, Part I(A).

⁶⁶Strategic nuclear weapons are designed to destroy the homeland military, political and economic capacity of the adversary. These weapons usually have strike ranges exceeding 3 000 miles, yields up to 20 megatons, and accuracy, measured in terms of “circular error probable” [CEP], of 300 to 2 500 metres. See United Nations, *Comprehensive Study on Nuclear Weapons: Report of the Secretary-General*, 35 U.N. GAOR, Annex (Provisional Agenda Item 48(b)) ch. 2, U.N. Doc. A/35/392 (1980) table 1, cited in Weston, *supra*, note 5 at 576 n. 129 [hereinafter *Report of the Secretary General* cited to U.N. Doc.].

⁶⁷“Countervalue targeting” refers to nuclear attacks on the population centers of the adversary.

⁶⁸“Counterforce targeting” refers to nuclear attacks on the military targets of the adversary, including some economic and industrial targets deemed “war supporting” or “contributing to economic recovery”. The U.S. Department of Defense has listed the following targets (see U.S. Senate Committee on Armed Services, *Department of Defense Authorization for Appropriation for Fiscal Year 1981* (Washington: Government Printing Office, 1980) at 2721):

1. Soviet nuclear forces

Intercontinental and intermediate range ballistic missiles, together with their launch facilities and launch command centers

Nuclear weapons storage sites

Airfields supporting nuclear capable aircraft

Bases for submarines firing nuclear missiles

2. Conventional military forces

Casernes

Supply depots

Marshalling points

Conventional airfields

Ammunition storage facilities

Tank and vehicle storage yards

3. Military and political leadership

Command posts

Key communications facilities

4. Economic and political leadership

a. War-supporting Industry

Ammunition factories

Tank and armored personnel carrier factories

Petroleum refineries

Railway yards and repair factories.

b. Industry contributing to economic recovery

Coal

Basic Steel

Basic Aluminium

Cement

Electrical Power

considers "first strike" and "retaliatory tactical"⁶⁹ uses of nuclear weapons, distinguishing between those involving "theatre" and "battlefield"⁷⁰ targeting.

The analysis that follows will employ many of the same criteria. However, it will not confine assessment to isolated, individual uses of nuclear weapons. Instead, the legal consequences of the use of nuclear weapons will be considered in light of the scenarios for use contemplated by existing strategies and weapons capabilities. The use of nuclear weapons targeted against civilian populations pursuant to a strategy of "assured destruction" will be considered first, followed by an analysis of the legality of various contemplated scenarios of "limited" war, involving tactical and strategic nuclear weapons designed for use against military targets.

1. Assured Destruction

There is now little or no doubt that a significant countervalue exchange of strategic weapons, whether by first strike or in reprisal, would violate each of the six rules set out in Part I(A). In 1975, a special committee of the National Research Council, U.S. National Academy of Sciences released a report entitled *Long Term Worldwide Effects of Multiple Nuclear Weapons Detonations*.⁷¹ The report concluded that the exchange of 10 000 megatons of explosive power in the Northern Hemisphere would constitute a "horrendous" calamity and that "no report can portray the enormity, the utter horror which must befall the target areas and adjoining territories".⁷² Four years later, in May 1979, the Congressional Office of Technology Assessment released its oft-cited, comprehensive study, entitled *The Effects of Nuclear*

The distinction between counterforce and countervalue targeting is not always precise. The essential purpose of counterforce targeting is military defeat, whereas the purpose of countervalue targeting is to threaten massive punishment. On this subject, see also F. Barnaby *et al.*, "Reference Scenario: How a Nuclear War Might Be Fought" (1982) 11 *Ambio* 94.

⁶⁹"Tactical" nuclear weapons are those maintained for more circumscribed purposes than are strategic weapons (*i.e.* for purposes other than striking the homeland). Again, the divisions are not neat: certain weapons considered by the U.S. to be "tactical", such as the Cruise and Pershing II, are easily capable of being used outside a limited theatre to strike the Soviet homeland.

⁷⁰The distinction between "theatre" and "battlefield" targeting is also fairly arbitrary. However, theatre class weapons generally have striking ranges up to 3 000 nautical miles, yield up to one megaton, and CEP accuracy of better than 300 metres. Battlefield class weapons have ranges up to 600 nautical miles, yields up to 100 kilotons, and are highly accurate. See *Report of the Secretary-General, supra*, note 66 at 26-31.

⁷¹Special Committee of the National Research Council, *Long Term Worldwide Effects of Multiple Nuclear Weapons Detonations* (1975).

⁷²*Ibid.*, Preamble.

War.⁷³ That report concluded that in a full-scale strategic war between the Soviet Union and the United States, over 300 million people would be eliminated in the initial exchange alone. Finally, the most recent study concludes that immediate deaths from blast, prompt radiation and fires in any significant countervalue exchange would be as high as 1.1 billion people, with another 1.1 billion people requiring immediate medical attention. Thus, the direct effects of a strategic nuclear war would likely kill or seriously wound over half the world's population.⁷⁴

Predictions about the consequences of all-out strategic attack aside, the well-documented immediate medical and psychological effects of the nuclear blasts at Hiroshima and Nagasaki⁷⁵ provide ample evidence of the disproportionate and cruel nature of what were, by today's standards, virtually insignificant detonations.⁷⁶ The use of a single modern weapon, which might have a million times the yield of strategic bombs used in World War II, or one hundred to one thousand times the yield of the Hiroshima bomb would, in its direct and initial effects, render virtually meaningless the cardinal principles of proportionality, discrimination and humanity embodied in *Rules 1, 2, and 4* (i.e. aggravated devastation, indiscriminate harm as between combatants and noncombatants, disproportionate reprisals).

But that is only the beginning of the story. The 1975 report lists among the likely long term effects of strategic nuclear war the following elements of global physical, biological, and ecological calamity: temperature changes of varying magnitudes and direction; contamination of foods by radio-nuclides; worldwide disease epidemics due to radiation in crops and domestic animals; irreversible injury to sensitive aquatic species; long term carcinogenesis due to inhalation of plutonium particles; some radiation-induced developmental anomalies in persons *in utero* at the time of detonations; increase in skin cancer caused by severe depletion of the ozone layer; and sharply increased incidence of genetic disease that would extend over many generations.⁷⁷

⁷³Congress of the United States, Office of Technology Assessment, *The Effects of Nuclear War* (Washington: Government Printing Office, 1979).

⁷⁴World Health Organization, *Effects of Nuclear War on Health and Health Services* (1983).

⁷⁵The Committee for the Compilation of Materials on Damage Caused by the Atomic Bombs in Hiroshima and Nagasaki, *Hiroshima and Nagasaki: The Physical, Medical and Social Effects of Atomic Bombings*, trans. E. Ishikawa & D. Swain (1981); R.J. Lifton, *Death in Life: Survivors of Hiroshima* (1967). See, also, O. Greene *et al.*, *London After the Bomb: What Nuclear Attack Really Means* (1982) for a systematic account of the effects of a nuclear blast on one large city.

⁷⁶The Hiroshima bomb that killed between 100 000 and 200 000 people was a device of about 12 kilotons yield (the explosive equivalent of 12 000 tons of TNT). A modern thermonuclear bomb uses a device like the Hiroshima bomb as a trigger — the “match” to light the fusion reactor. A typical thermo-nuclear weapon yields about 500 kilotons (the explosive equivalent of half a million tons of TNT). See Sagan, *supra*, note 27.

⁷⁷See L.R. Beres, *Apocalypse: Nuclear Catastrophe in World Politics* (1980) at 139.

Even more alarming is the most recent finding of a group of international scientists, known as TTAPS, that a simultaneous groundburst countervalue detonation of nuclear weapons yielding as little as 100 megatons could trigger prolonged declines in global temperatures (a syndrome referred to as "Nuclear Winter") which would have a catastrophic impact on the ecosphere. The long term effects would include acute shortages of food and fuel, and countless unpredictable "synergies" or "interactive effects" caused by two or more simultaneous assaults on the environment.

To assert that strategic nuclear exchange involving the targeting of cities would violate *Rule 3* (prohibiting the use of tactics and weapons causing severe damage to the environment), *Rule 5* (prohibiting the use of weapons or tactics that violate the neutral status of non-participating states), or *Rule 6* (prohibition of chemical, biological and "analogous" means of warfare) understates the case. A quotation from the summary of findings of the group of biologists assembled in April 1983 to assess the TTAPS conclusions states the point most eloquently:

Species extinction could be expected for most tropical plants and animals and of most terrestrial vertebrates of north temperature regions. . . . Whether any people would be able to persist for long in the face of highly modified biological communities; novel climates; high levels of radiation; shattered agriculture, social, and economic systems; and a host of other difficulties is open to question. It is clear that the ecosystem effects alone resulting from large scale thermonuclear war could be enough to destroy the current civilization in at least the Northern Hemisphere. Coupled with the direct casualties of perhaps two billion people, the combined intermediate and long term effects of nuclear war suggest that there might be no survivors in the North Hemisphere.⁷⁸

In view of the notion, generally accepted even by most military planners, that a "small" strategic exchange involving the targeting of civilian populations would be impossible to contain,⁷⁹ an analysis of the use of countervalue forces in single or isolated circumstances is actually irrelevant. Indeed, circumscribed use of nuclear weapons against cities is not currently contemplated in American strategy. The vast majority of nuclear weapons targeted against civilian populations are large, "dirty", strategic weapons, designed to carry out threats of "assured destruction". If these threats were ever carried out, scientific findings illustrate that the traditional legal balance of "humanity" and "military necessity" would be tipped vastly in favour of outlawing the exchange. It would be straining to perform the function of a bucket attempting to collect a waterfall.

⁷⁸P.R. Ehrlich *et al.*, *The Cold and the Dark: The World After Nuclear War* (1984) 191 at 210.

⁷⁹See, e.g., D. Ball, *Can Nuclear War Be Controlled?* (1981). This point will be examined in greater detail, *infra*, when the implications of the law are considered.

In a world where the potential cost of war extends beyond the scale traditionally measured by legal principles to the elimination of the principles and the socio-cultural context in which they were created, and, in fact, to the destruction of the ecological fabric of the world as we know it — to the extinction of the human enterprise — it is clearly trite to argue that nuclear war would violate the principles of “proportionality” and “target discrimination”. Likewise, it would seem senseless to speak in terms of balancing “military necessity” in circumstances in which the consequences of the contemplated act “would be so catastrophic that they [would] render any notion of ‘victory’ meaningless”.⁸⁰ The absence of a political justification or identifiable military purpose would, in and of itself, provide a sufficient basis for outlawing the aggressive act. Any use of strategic countervalue weapons would thus amount to more than a violation of the traditional law of war. It would likely constitute genocide⁸¹ as well as suicide.

2. Limited Nuclear War

Doubts about the credibility and morality of threatening a devastating “all out” strategic war involving cities have motivated theorists to search for an alternative to Mutual Assured Destruction (MAD), a more flexible strategy which would retain the use of tactical and some strategic nuclear weapons targeted to maintain “control” while sparing civilian populations from the direct consequences of a nuclear war.⁸² Central to the search has

⁸⁰K.N. Lewis, “The Prompt and Delayed Effects of Nuclear War”, *Scientific American* (July 1979) 35 at 47.

⁸¹To the extent that national leaders initiating strategic war with knowledge of the likely consequences (extinction of the enemy rather than victory in any perceptible “military” battle) can be said to intend those consequences, they would be in violation of the *Convention on the Prevention and Punishment of the Crime of Genocide* (1951) 78 U.N.T.S. 277 (adopted by U.N. General Assembly 9 December 1948; entered into force 1 January 1951) [hereinafter *Genocide Convention*].

⁸²In a letter to Cardinal Bernadin, 25 January 1983, William Clark, President Reagan’s National Security Advisor claimed: “For moral, political, and military reasons, the United States does not target the Soviet civilian population as such . . . [and] we do not threaten the existence of Soviet civilization by threatening Soviet cities. Rather, we hold at risk the war-making capacity of the Soviet Union” Quoted in *The Pastoral Letter, supra*, note 4 at 714. The reader will notice use of the words “as such”. The U.S. nuclear targeting plan is reported to include 60 “military” targets in Moscow alone — enough to ensure that even a “military” attack on Moscow using nuclear weapons would cause untold human destruction. There are reportedly a total of 40 000 “military targets” for nuclear weapons which have been identified in the whole of the Soviet Union. See D. Ball, “U.S. Strategic Forces: How They Would Be Used” (1982) 7 *Int’l Security* 31 at 36. See also T. Powers, “Choosing a Strategy for World War III”, *The Atlantic Monthly* (November 1982) 82. Direct urban targeting continues to play an important role in U.S. deterrence strategy, and this will be discussed, *infra*.

been the assumption that increased flexibility would both enhance the credibility of the deterrent and, should deterrence fail, "contain" a nuclear war. As Van Cleave and Barnett have written:

[D]eterrence may fail in any case, and the weapons may have to be used. The ability to conduct selective and limited nuclear strikes for express and restricted purposes . . . promotes the possibility of escalation control, and increases opportunities for war termination without major urban damage.⁸³

The evolution of strategies which contemplate "limited" use of nuclear weapons against selected targets began in earnest as long ago as 1962 with the advocacy of a "no cities" targeting doctrine by Robert McNamara. In his oft-quoted Ann Arbor speech, the then Secretary of Defense said:

The U.S. has come to the conclusion that, to the extent feasible, basic military strategy in a possible nuclear war should be approached in much the same way that more conventional military operations have been regarded in the past. This is to say, principal military objectives . . . should be the destruction of the enemy's forces, not his civilian population.⁸⁴

Throughout the 1960's and early 1970's, while counterforce targeting was not explicitly acknowledged as part of declared U.S. strategy, the assignment of weapons to a growing target list continued in accordance with McNamara's direction.⁸⁵

In the mid-1970's Secretary of Defense James Schlesinger spearheaded the completion of a transition to a policy of "flexible response", under which would be available "a series of measured responses to aggression which bear some relation to the provocation, have prospects of terminating hostilities before general war breaks out, and leave some possibility for restoring deterrence".⁸⁶ Schlesinger's policy for the first time declared American reliance on the availability of "limited nuclear options" designed to be used against precisely selected targets. The policy was affirmed in 1980 by the Carter administration with the issuance of Presidential Directive No. 59. Subsequent explanations of PD 59⁸⁷ and the 1981 defense budget authorized by Secretary of Defense Harold Brown, emphasized that, in order to deter the "full range" of potential Soviet attacks, the U.S. must be prepared to respond "in a selective and measured way" against "a range of military, industrial,

⁸³Van Cleave & Barnett, *supra*, note 56 at 661.

⁸⁴Quoted in D. Ball, *Deja Vu: The Return to Counterforce in the Nixon Administration* (1974) at 14.

⁸⁵A.L. Friedberg, "A History of U.S. Strategic Doctrine: 1945-1980" (1980) 3 J. Strat. Stud. 37 at 43.

⁸⁶U.S. Secretary of Defense J. Schlesinger, *Annual Defense Department Report: Fiscal Year 1975* (Washington: Government Printing Office, 1974) at 38.

⁸⁷See H. Brown, Address (Naval War College, Newport, Rhode Island, 20 August 1980).

and political control targets, while retaining an assured destructive capacity in reserve".⁸⁸

The Reagan administration has continued to move even more in the direction of policies which assume that, should deterrence fail, nuclear war can be waged in much the same way as conventional war, with similar results. This commitment to "atomic superiority" is clearly reflected in the Fiscal Year 1983 defense budget which states: "[S]hould deterrence fail and strategic nuclear war with the U.S.S.R. occur, the United States must prevail and be able to force the Soviet Union to seek earliest termination of hostilities on terms favorable to the United States."⁸⁹

Although current policy likely evolved as a response to the perceived military and political shortcomings of assured destruction, it has been lauded also by conservative "moral counterforce" theorists who base their support of continued weapons development on moral and legal "concerns". These theorists argue that deterrence based on the holding of civilian populations as hostages cannot be reconciled with traditional principles of the just employment of armed force. For example, Fred Iklé has written:

The jargon of American strategic analysis works like a narcotic. It dulls our sense of moral outrage about the tragic confrontation of nuclear arsenals, primed and constantly perfected to unleash widespread genocide. It fosters the current smug complacency regarding the soundness and stability of mutual deterrence.

⁸⁸U.S. Secretary of Defense H. Brown, *Annual Defense Department Report: Fiscal Year 1981* (Washington: Government Printing Office, 1980) at 66.

⁸⁹U.S. Secretary of Defense C. Weinberger, *Annual Defense Department Report: Fiscal Year 1983* (Washington: Government Printing Office, 1982) [hereinafter *Report: FY 1983*]. Secretary Weinberger's most recent Report represents a rhetorical retreat, yet little actual change in strategy or policy:

Even if we ignored the direct and indirect role of nuclear forces in deterring conventional attack, in a world where the knowledge of nuclear weapons cannot be banished, the United States would still have to maintain nuclear forces to deter nuclear attack on its allies and itself. This does not mean we are under any illusions about the damages of nuclear war [W]e believe that neither side could win such a war But while we work to preserve deterrence, we must also think about and plan against possible failures of deterrence. If deterrence should fail, . . . we must plan for flexibility in our forces and in our options for response, so that we might terminate the conflict on terms favorable to the forces of freedom, and reestablish deterrence at the lowest possible level of violence, thus avoiding further destruction.

Annual Defense Department Report: Fiscal Year 1985 (Washington: Government Printing Office, 1984) at 29 [hereinafter *Report: FY 1985*]. It seems somewhat difficult, if not entirely impossible, to reconcile the admission that "neither side could win" a nuclear war with plans to "terminate the conflict on terms favorable to the forces of freedom" should such a war break out.

It blinds us to the fact that our method for preventing war rests on a form of warfare universally condemned since the dark ages — the mass killing of hostages.⁹⁰

The alternative to MAD, it is argued, is the development of a strategic posture similar to that being pursued by the Reagan administration — a posture which combines weapons technologies capable of concentrating with “surgical precision” on the enemy’s military capabilities and command structure with extensive “civil defense” programs.⁹¹

The moral counterforce argument has been most recently supported on legal grounds, in the RAND study of the implications of the international law of armed conflict for assured destruction.⁹² The authors conclude that, based on its likely effects, assured destruction and its derivatives are “directly opposed to international law and, hence, contrary to both domestic law and Department of Defense directives governing individual actions affecting the acquisition, procurement, and use of weapons”.⁹³ Moreover, “the implications of the law of armed conflict are that the weapons being developed and deployed should be intended for use only against military objectives and to be as discriminating as possible in their collateral effects on the civilian population and property”.⁹⁴

On first reflection the reasoning of the RAND report is attractive. The development of more discriminate, flexible weapons systems would provide the United States with a “limited warfighting” option more consistent with the prohibition against indiscriminate civilian bombardment than the earlier “counter city” assured destruction strategy. But if the sole use contemplated for nuclear forces is to destroy military targets, there would be no need to maintain them at all, since they would fail to possess any greater military utility than conventional explosives. This is particularly so in light of the increasing ability of conventional weapons to saturate large areas in much the same way as low-yielding nuclear weaponry.⁹⁵

⁹⁰F.C. Iklé, “Can Nuclear Deterrence Last Out the Century?” (1973) 51 *Foreign Affairs* 261 at 281. See also, P. Ramsay, *The Limits of Nuclear War* (1963) at 48; A.L. Burns, “Ethics and Deterrence: A Nuclear Balance Without Hostage Cities?”, *Adelphi Paper No. 69* (London: International Institute for Strategic Studies, 1970) at 15.

⁹¹C. Gray & K. Payne, “Victory is Possible” (1980) 39 *Foreign Policy* 14; C. Gray, *Strategic Studies and Public Policy: The American Experience* (1982); B.M. Russett, “A Countercoincidental Deterrent? Feasibility, Morality and Arms Control” in S. Sankesian, ed., *The Military-Industrial Complex: A Reassessment* (1972).

⁹²Builder & Graubard, *supra*, note 5.

⁹³*Ibid.* at ix.

⁹⁴*Ibid.* at xi.

⁹⁵According to Senator Sam Nunn, “long range conventional weapons are now being developed that begin to approach the destructive potential of small yield (two to three kiloton) battlefield nuclear weapons”. Senator Sam S. Nunn, “NATO: Can the Alliance Be Saved?” in U.S. Senate, *Report of the Committee on Armed Services* (Washington: Government Printing Office, 1982) at 16.

A closer consideration of the RAND conclusions and the analogous position of the moral counterforce theorists reveals their inadequacy: given the geographic proximity of "military" and "civilian" targets, the effects of an attack on strictly "military" installations would violate the principle of target discrimination. To be consistent with its strategy of deterrence, once population centres have been subject to the incidental effects of such an attack, the adversary is left with no choice but to target a population centre in response. Former Defense Secretary Brown has described this phenomenon:

To have a true countervailing strategy, our forces must be capable of covering, and being withheld from, a substantial list of targets. Cities cannot be excluded from such a list, not only because cities, population, and industry are closely linked, but also because it is essential at all times to retain the option to attack urban-industrial targets — both as a deterrent to attacks on our own cities and as the final retaliation if that particular deterrent should fail. The necessary forces should be included in whatever requirements we set for a strategic nuclear reserve following initial exchanges.⁹⁶

Countervailing strategy does not, therefore, contemplate the substitution of urban targets with more "discriminate" ones; it requires that *both* be maintained simultaneously, in the hope of sustaining "intra war deterrence". The effect of this strategy would be merely to postpone the threat of assured destruction from being made in peacetime, in which it would be used to avoid war, to wartime, in which it would be used as a last-ditch threat of reprisal to keep nuclear war "limited". Far from condemning the worst elements of assured destruction, proponents of greater targeting flexibility actually rely on them to enable the war to be fought and won at lower levels of conflict.

Nevertheless, might not an argument be made that, taken in isolation, a single "clean" strike using low yield battlefield weapons would fall within the law? Indeed, if undertaken for defensive purposes, such a first use might actually serve as the model of "military necessity" — saving lives and property without inflicting disproportionate harm to civilians. Such a claim does not seem implausible *in vacuo*; but it is as unrealistic to limit analysis to more selective counterforce or even isolated battlefield attacks as it would be to assess isolated use of strategic countervalue weapons: all of these weapons were, after all, designed for use in particular strategic and political contexts.

American strategic counterforce and battlefield weapons are intended for use primarily in three warfighting scenarios:⁹⁷ (1) a disarming first strike

⁹⁶U.S. Secretary of Defense H. Brown, *Annual Defense Department Report: Fiscal Year 1980* (Washington: Government Printing Office, 1979).

⁹⁷See. S.M. Keeny, Jr & W.K.H. Panofsky, "MAD versus NUTS" (1981) 60 *Foreign Affairs* 287 at 294.

against ground-launched Intercontinental Ballistic Missiles (ICBM) calculated to force surrender without full scale war; (2) a "de-capitating" first strike designed to "take out" the adversary's command and control facilities; and (3) a selective use of nuclear weapons in battlefields located in Europe or elsewhere, to prevent the collapse of Western forces in the face of an overwhelming Soviet attack. In each of these situations, the collateral damage associated with the use of nuclear weapons would most likely far outweigh the alleged "military necessity".

A massive disarming first strike would, using existing capabilities, involve numerous highly accurate but high-yielding weapons to destroy hardened missile silos.⁹⁸ Such an attack, if directed against American Minuteman silos, for example, would involve the detonation of somewhere between 2 000 and 4 500 attacking warheads,⁹⁹ many of which would explode at ground level, thereby substantially aggravating the collateral effects. Although most missile silos in the United States are located in rural areas, major bush fires and fallout would have effects which even former Secretary of Defense Rumsfeld referred to in an Annual Defense Budget as "appalling".¹⁰⁰ Testimony of Dr Sidney Drell before the Senate Subcommittee on Arms Control disclosed that such a Soviet attack would only be 80 per cent effective, causing approximately 18.3 million American fatalities, but still leaving 10 000 strategic warheads intact for retaliation against Soviet populations.¹⁰¹ A similar attack on the Soviet Union would likely be even more devastating, since the Soviet ICBM force forms an even greater portion of the total Soviet nuclear arsenal than that of the United States and would thus attract even more incoming missiles. Worse still, from the Soviet perspective, is the fact that the Soviet "military targets" are heavily concentrated in close proximity to urban population centers. Indeed, if the United States were to attack only *one* of over sixty "military targets" which current war plans have identified within the city of Moscow alone, the effects of the blast and collateral radiation would clearly cause death and suffering among

⁹⁸Such an attack would involve the Soviet Union targeting 1 047 U.S. ICBM launchers or, conversely, the U.S. destroying 1 400 Soviet launchers. See President's Commission on Strategic Forces, *Report* (Washington: Government Printing Office, 1983) at 4. Although the U.S. is currently developing lower yield, high accuracy burrowing warheads (1-10 kiloton range, CEP accuracy 40 meters) suitable for Pershing II missiles, an American attack would probably employ high yield (335 kiloton), relatively inaccurate Minuteman III missiles.

⁹⁹Estimates of Keeny & Panofsky, *supra*, note 97 at 295 ; Sagan, *supra*, note 27 at 276.

¹⁰⁰U.S. Secretary of Defense D. Rumsfeld, *Annual Defense Department Report: Fiscal Year 1978* (Washington: Government Printing Office, 1977) at 73.

¹⁰¹United States Congress Senate Committee on Foreign Relations, Subcommittee on Arms Control, International Law and Organization, *Hearing on Effects of Counterforce Nuclear Attacks* (Washington: Government Printing Office, 1975). The Congressional Office of Technology Assessment estimates fatalities at 2 to 20 million, *supra*, note 73.

perhaps millions of innocent civilians.¹⁰² A “major first strike”, according to a recent scientific report, “would be clearly within the vicinity of, and perhaps well over, the climatic threshold”¹⁰³ beyond which irreversible catastrophic damage could be done to the ecosphere. Clearly, an attack of this magnitude would be well beyond the bounds of even the broadest possible conception of military necessity.

The second scenario, involving decapitation attacks against command, control, communication and intelligence facilities (C³I) is equally problematic. Although some of these targets are “softer” than the hardened missile silos involved in a pre-emptive first strike, thus allowing the use of lower yield weapons to destroy them, the fact that these targets are more likely to be located in or near population centers indicates that the direct effects on civilian populations would be massive. Even the use of accurate 10 to 20 kiloton Pershing II missiles would likely cause aggravated devastation and suffering (*Rule 1*) and indiscriminate harm to noncombatants (*Rule 2*) which could not be justified even by reference to the “military necessity” of pre-empting nuclear hostilities.

A claim of military necessity cannot even be considered overriding where the decapitating blow is made in retaliation, for the purpose of forcing a rapid end to hostilities, since decapitation would likely have the opposite effect. This point was made recently by *New York Times* columnist Flora Lewis in commenting on PD 59’s emphasis on targeting control centres:

A second policy question raised by the latest White House directive is the inclusion of “command and control” targets. One constant of nuclear strategy has been the understanding that, contrary to conventional doctrine, the enemy’s command should be left intact so that there is still someone capable of stopping action with whom to negotiate before escalation becomes automatic and unconditional for humankind. Is this axiom being abandoned?¹⁰⁴

Indeed, the confusion and suffering created by a decapitating strike would likely elicit a massive all-out response from the adversary. It, too, would therefore seem to be lacking in legally justifiable military purpose.

The third scenario is the one most often cited as a justification for continued deployment of modernized and more flexible nuclear weapons. This scenario envisages selective use of tactical weapons to contain and terminate Soviet conventional aggression in Western Europe or in some other sphere of American interest.

¹⁰²See *supra*, note 82.

¹⁰³Sagan, *supra*, note 27 at 270.

¹⁰⁴F. Lewis, “Old Strategy or New Risk?”, *The New York Times* (15 August 1980) A 23.

At first glance, the justification for an isolated use of battlefield weapons in the heat of a massive Soviet attack seems compelling. In view of the increasing capacity of nuclear weapons to destroy discrete targets, and the increasingly destructive character of conventional weaponry, nuclear conflict at the lowest level might arguably be only incrementally more destructive than high-intensity conventional war.¹⁰⁵ As such, the use of nuclear weapons to repel a massive conventional attack might arguably constitute a permissible, proportionate act of self-defense within the meaning of article 51 of the *United Nations Charter*. Moreover, it would probably bring an early end to hostilities while at the same time conveying to the enemy an intention to defeat him militarily without inflicting excessive damage or annihilation. As well, the use of tactical weapons would maintain the so called "coupling effect" by providing an added layer of deterrence — the threat of escalation to all out strategic war — in the event of conventional aggression.

However, the collateral effects, on noncombatants and neutrals as well as on the environment, of an attack employing even a single 100 kiloton weapon would be extreme. Such an attack would likely destroy 50 to 100 armoured fighting vehicles (the equivalent of one regiment), and the direct effects would incinerate all people and structures within fifteen square miles, likely including, in the best case, villages and towns containing thousands of persons.¹⁰⁶ Moreover, there is little reason to expect that an initial battlefield detonation would not attract retaliation from the adversary.

During the resulting uncertainty and escalation from battlefield to the broader combat theatre, heavily populated areas would easily, by advertence or otherwise, become unwitting targets. In 1971, two former Pentagon aides described the effects of such a "limited" war in Europe as follows:

Even under the most favourable assumptions, it appeared that between 2 and 20 million Europeans would be killed, with widespread damage to the economy of the affected area and a high risk of 100 million dead if the war escalated to attacks on cities.¹⁰⁷

The recent Report of the Secretary General of the United Nations confirms that, notwithstanding advances in the accuracy and decreases in the yield of tactical weapons, a limited nuclear war in Europe involving 200 tactical weapons targeted against "military" targets would cause five to six million immediate civilian, and 400 000 military casualties, plus an additional 1.1

¹⁰⁵See *supra*, note 95 and accompanying text. For an excellent account of these developments in weapons capabilities, see M.T. Klare, "Conventional Arms, Military Doctrine and Nuclear War: The Vanishing Firebreak" (1984) 59 *Thought* 53.

¹⁰⁶S.J. Deitchman, *New Technology and Military Power: General Purpose Military Forces for the 1980's and Beyond* (1979) at 12.

¹⁰⁷A.C. Enthoven & K.W. Smith, *How Much is Enough?* (1971) at 128.

million civilians suffering the collateral effects of radiation.¹⁰⁸ Another recent estimate concludes that a European tactical nuclear war “could kill nearly all the persons in the urban centers of Western Europe and subject those areas to near total destruction”.¹⁰⁹

The likely collateral effects of “limited” war in each of the scenarios contemplated by American countervailing strategy — ranging from the immediate death of thousands or millions of innocent citizens to climatic catastrophe — should serve as clear evidence of the falsity of the RAND study’s conclusion that improved discrimination in targeting would bring American strategy into line with the law of war. Those who remain unconvinced must be reminded of a second, even greater problem confronting strategies which assume a selective, military role for nuclear weapons: there has yet to be advanced a credible reason to believe that the use of nuclear weapons, even on the smallest scale, would remain limited. On the contrary, there seems to be every reason to believe that once the nuclear firebreak is crossed, rapid escalation to conflict involving the largest number of weapons possible would take place.

Limitation of nuclear war is unlikely to succeed because of Soviet non-reciprocity. Even in the event that the U.S. could maintain the discipline and coordination to administer selectively controlled reprisals during the chaos of nuclear war, Soviet defense planning apparently rejects the notion of “limited” or “controlled” war scenarios. Instead, the Soviets could be expected to opt for a strategy which would be most likely to result in the quickest possible victory by destruction of all targets necessary to the adversary’s war-waging ability. According to John M. Collins, author of a recent study of the U.S.-Soviet military balance:

The Politburo assigns a low priority to sophisticated concepts for limited nuclear war, if known Soviet doctrines are any indication. There is doubt, for example, that diplomatic ballets and finely-tuned bargaining would reduce the danger. Esoteric signals, such as symbolic, exemplary and talionic [tit-for-tat] strikes, might well be missed or misunderstood in the heat of the nuclear battle The Soviets therefore may well abandon most constraints once the threshold of nuclear war has been crossed and, abiding by the adage “never send a boy to do a man’s job”, employ whatever power is needed to defeat opponents expeditiously.¹¹⁰

Whether the Soviet distaste for limiting nuclear war is explained as a lack of desire to “play the game” according to Western rules, or as an attempt

¹⁰⁸*Report of the Secretary-General, supra*, note 66.

¹⁰⁹H.W. Kendall, Professor of Physics at M.I.T., cited in Beres, *supra*, note 77 at 33.

¹¹⁰Cited in L.R. Beres, *Mimicking Sisyphus: America’s Countervailing Nuclear Strategy* (1983) at 35. Soviet military thought is described in B.S. Lambeth, “How to Think About Soviet Military Doctrine” in J. Bayis & G. Segal, eds, *Soviet Military Strategy* (1981) at 105-23 and A.A. Sidorenko, *The Offensive* (1970).

to avoid the contradiction involved in attempting to justify to the population plans to limit a war argued to be "just" according to Soviet ideology, is irrelevant. The essential fact is that it takes both parties to agree to a code of conduct for limiting the scope of hostilities.

Perhaps even more importantly, Western academics and policy makers have long recognized the lack of any convention for termination which would confer political benefits on a "victor" rather than causing mutual annihilation. This dilemma was expressed by Defense Secretary Brown:

I do not wish to pretend . . . that anyone has found a way of conducting a strategic nuclear exchange that remotely resembles a traditional campaign fought with conventional weapons. . . . Admittedly, counterforce and damage-limiting campaigns have been put forward as the nuclear equivalents of traditional warfare. But their proponents find it difficult to tell us what objectives an enemy would seek in launching such campaigns and how these campaigns would terminate.¹¹¹

Four well-known former government officials and experts in nuclear policy are even more blunt about the prospects for limiting nuclear hostilities to the military battleground:

It is time to recognize that no one has ever succeeded in advancing any persuasive reason to believe that any use of nuclear weapons even on the smallest scale, could reliably be expected to remain limited. Every serious analysis and every military exercise, for over 25 years, has demonstrated that even the most restrained battlefield use would be enormously destructive to civilian life and property. There is no way for anyone to have any confidence that such a nuclear action will not lead to further and more devastating exchanges. Any use of nuclear weapons in Europe, by the Alliance, or against it, carries with it a high and inescapable risk of escalation into the general nuclear war which would bring ruin to all and victory to none.¹¹²

Having considered this and other difficulties with the assumption of limit and control, a prominent group of scientists recently concluded that "there is no plausible scenario for the use of nuclear weapons in a conflict between the superpowers that does not carry with it the danger of catastrophic escalation".¹¹³ Bearing in mind the weight of this authority, it seems reasonable to conclude that if there is indeed a warfighting scenario which does not carry with it the probability of rapid escalation, the onus must lie with those who assert its existence to provide proof.

¹¹¹U.S. Secretary of Defense H. Brown, *Annual Report of Department of Defense: Fiscal Year 1979* (Washington: Government Printing Office, 1978) at 75-6.

¹¹²Bundy *et al.*, *supra*, note 3 at 757.

¹¹³K. Gottfried, H.W. Kendall & J.M. Lee, "No First Use of Nuclear Weapons", *Scientific American* (March 1984) 33 at 34.

In the absence of a plausible convention for limiting the escalation of nuclear conflict, no victor could emerge from a nuclear war, since victory implies that "the peace of one's people is better after the war than before" and "is only possible if a quick result can be obtained or if a long effort can be economically proportioned to the national resources".¹¹⁴ With the hope of victory frustrated by the devastating effects of an extended nuclear war, a state would have no political or military purpose for entering into nuclear hostilities in the first place. There being, thus, no possible "military necessity" against which any violation of the principle of humanity could be balanced, it may be concluded that any use of nuclear weapons would violate the law of war.

At the end of the day, therefore, a contextual analysis of nuclear warfare which takes into account currently existing weapons and strategies yields the same practical conclusion as a finding of intrinsic illegality: although nuclear weapons are not illegal *per se*, their likely effects and the absence of any mechanism to control the escalatory spiral once the firebreak is crossed render virtually any use inconsistent with the fundamental objectives and principles of war. The use of nuclear weapons would therefore be unlawful, even during a war of legitimate self-defense.

III. The Threatened Use of Nuclear Weapons: Addressing the "Paradox of Deterrence"

If a course of action is illegal, then moral and legal logic dictate that its preparation and planning should be prohibited as well. Since nuclear weapons are by their nature illegitimate, because their use cannot be controlled nor their effects limited, the deterrence structures which rest on the manufacture, possession, and threats to use these weapons would seem, *prima facie*, to be unlawful.

Similarly, there is a legal basis for criminalizing the manufacture, possession and deployment of nuclear weapons. The *Genocide Convention*, by Article 1, clearly recognizes as a crime any conspiracy, incitement or attempt to commit genocide or any complicity in the commission of the actual crime.¹¹⁵ To the extent that the use of nuclear weapons would constitute an action taken intentionally¹¹⁶ against a national, ethnic, racial or religious group, the language of the *Convention* would clearly embrace actions which form the basis of threats to use them. Moreover, the judgements of the

¹¹⁴B.H. Liddell-Hart, *Strategy* (1974) at 357.

¹¹⁵*Genocide Convention*, *supra*, note 81, Article 3 at 280.

¹¹⁶"Intention" is interpreted here as meaning either purposeful conduct, or conduct undertaken with knowledge of the likely consequences.

Nuremberg Tribunal, codified in 1950 by the International Law Commission and unanimously approved by the United Nations General Assembly,¹¹⁷ provide authority for the imposition of direct criminal liability on those persons responsible for the use or threatened use of nuclear weapons as part of "the planning, preparation, initiation, or waging of a war of aggression or a war in violation of international treaties, agreements or assurances" or participation in a "common plan or conspiracy" for the accomplishment of such purposes.

Finally, throughout this century, a body of authority has emerged which prohibits not only aggressive war, but also the threat of war. The Kellogg-Briand Pact of 1927 and the subsequent *General Treaty for the Renunciation of Wars* for the first time formally outlawed war and the use of force in international affairs.¹¹⁸ While these instruments failed to prevent the advent of World War II and the ensuing neglect of international norms of law and morality, their validity and relevance was affirmed by the Nuremberg Tribunal in 1946. The nations of the world reacted to the horrors of World War II by proclaiming in the Preamble to the *United Nations Charter* that the purpose of the organization was "to save succeeding generations from the scourge of war". This commitment is also reflected in Article 2(4) of the *Charter* which prohibits the use and threatened use of force "against the territorial integrity or independence of any state", except in self-defense or under authority of the United Nations.¹¹⁹ The principle that war of aggression warrants the highest degree of international opprobrium, namely to be branded as an international crime, was also affirmed by the Nuremberg Tribunals, and has been so often reaffirmed by the General Assembly as to have become an undisputed axiom of international law.

¹¹⁷United Nations G.A. Res. 95 (I), U.N. Doc. A/64/Add.1 (1946).

¹¹⁸*General Treaty for the Renunciation of Wars*, 27 August 1928, 46 Stat. 2343, 94 L.N.T.S. 57, provides:

Article I: The High Contracting Parties solemnly declare that they condemn recourse to war for the solution of international controversies, and renounce it as an instrument of policy in their relations with one another.

Article II: The High Contracting Parties agree that the settlement of all disputes or conflicts, of whatever origin they might be, which might arise among them, shall never be sought except through pacific means.

¹¹⁹Article 2(4) provides:

All members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the purposes of the United Nations.

Article 51 provides:

Nothing in the present Charter shall impair the inherent right of individual and collective self-defense if an armed attack occurs against a member of the United Nations, until the Security Council has taken measures necessary to maintain international peace and security.

Analysts who resist the application of this body of law to the manufacture, deployment and threatened use of nuclear weapons have cited a troubling and paradoxical reality concerning the modern international system: the possession and threatened use of nuclear weapons is claimed by each of the nuclear powers to be necessary for the prevention of unlawful uses by the adversary. According to this view, it is perfectly lawful for a state to threaten to do in peacetime that which would be unlawful in wartime, as long as the peacetime threat can be considered as rationally contributing to the end of deterring the unlawful nuclear attack.¹²⁰ According to Michael Reisman,¹²¹ in the present world of sovereign and suspicious states there is "a Gresham's Law of weapons in international law: the stability that one seeks in a decentralized system requires the development and maintenance of the very weapon that threatens us and that we would like to eliminate".¹²²

Even if it is assumed that nuclear deterrence is an acceptable means of preventing nuclear war,¹²³ the objectives of U.S. nuclear policy have never been limited to that end.¹²⁴ Contrary to the belief held by a vast majority of Americans that U.S. "deterrence policy" contemplates the use of nuclear weapons "if and only if" the United States is first attacked with nuclear weapons,¹²⁵ nuclear threats have, since their inception, played an essential

¹²⁰See, e.g., H.H. Almond, Jr, "Deterrence Processes and Minimum Order" (1983) 4 N.Y.L. Sch. J. Int'l & Comp. L. 283.

¹²¹W.M. Reisman, "Nuclear Weapons in International Law" (1983) 4 N.Y.U. L. Sch. J. Int'l & Comp. L. 339.

¹²²Reisman, *ibid.* at 341. In "The Abolition", New Yorker [Magazine] (2 January 1984) 36 and (9 January 1984) 43, Jonathan Schell describes a regime of "weaponless deterrence" which provides for complete nuclear disarmament while preserving the balance of power and state sovereignty system. He proposes a four part treaty by which nuclear states would agree to complete denuclearization and a balance of conventional forces, permitting the development of anti-missile systems as a "hedge against cheaters". Once disarmed, former nuclear states would agree on a "defined state of readiness" for rearmament, which would deter potential "cheaters" from clandestine production and threatened use. Although implementation of Schell's proposal would be fraught with difficulty, it does provide at least one vision of a world of sovereign states in which the actual possession and threatened use would not be necessary for purposes of deterring nuclear attack.

¹²³This will be discussed at greater length in Part IV, *infra*.

¹²⁴For the remainder of this article, an important distinction will be drawn between two uses of the term "deterrence". "Minimal" or "pure" deterrence involves threatening to use nuclear weapons only for retaliation in response to nuclear attack by the adversary. Its purpose is to discourage direct nuclear attack on the homeland of the deterring nation by promising nuclear response. "Extended" deterrence involves threats to use nuclear weapons in response to a broader spectrum of undesirable behaviour by the adversary. Its purpose is to threaten unacceptable destruction in order to discourage the adversary from either undertaking or continuing to use conventional as well as nuclear force.

¹²⁵D. Yankelovich & J. Doble, "The Public Mood: Nuclear Weapons and the U.S.S.R." (1984) 63 Foreign Affairs 33 at 45.

role in the attainment of other objectives of U.S. foreign policy — a role that is closely associated with the protection of American geopolitical interests and the projection of American power in the world. As two influential theorists have written:

There should be no misunderstanding the fact that the primary interest of U.S. strategy is deterrence. However, American strategic forces do not exist solely for the purpose of deterring a Soviet nuclear threat or attack against the United States itself. Instead, they are intended to support U.S. foreign policy as reflected, for example, in the commitment to preserve Western Europe against aggression. Such a function requires American strategic forces that would enable a President to initiate strategic nuclear use for coercive, though politically defensive, purposes.¹²⁶

The centrality of nuclear diplomacy — the threat to initiate nuclear attack — to the conduct of post-World War II U.S. foreign policy can be traced as far back as the period following the Soviet incorporation of Eastern Europe and threatened expansion into Greece and Turkey, the Truman Doctrine of 1947, the Berlin crisis of the following year, and the creation of NATO. With the adoption of National Security Memorandum 68 (NSC-68)¹²⁷ and the policy of containment¹²⁸ in 1950, a new major function of U.S. nuclear weapons became dissuasion of Soviet conventional aggression in Western Europe. Since then, nuclear weapons have been integrated to an increasing extent into the overall military posture of the United States. They have been designed with sufficient flexibility and in great enough numbers to respond both to changes in the definition of perceived threats to U.S. security interests which have generated changes in the “missions” which U.S. forces are designed to serve, and to improvements in Soviet military capabilities which have undermined the credibility of U.S. extended deterrent threats. Accordingly, while changes in nuclear doctrine have carried the role of nuclear weapons from threatening “massive retaliation instantly,

¹²⁶C.S. Gray & K. Payne, “Victory is Possible” (1980) 39 *Foreign Policy* 14 at 20.

¹²⁷U.S. National Security Council, “NSC-68: A Report to the National Security Council, April 14, 1950” [May-June 1975] *Naval War College Rev.* at 68.

¹²⁸Conceived primarily by Paul Nitze, now Chief Arms Control Negotiator of the Reagan administration, the policy of containment articulated in NSC-68 sought “by all means short of war to (1) block further expansion of Soviet power, (2) expose the falsities of Soviet pretensions, (3) induce a retraction of the Kremlin’s control and influence and (4) in general, so foster the seeds of destruction within the Soviet system that the Kremlin is brought at least to the point of modifying its behaviour to conform to generally accepted standards”. *Ibid.* at 68. The policy of containment committed the United States unequivocally to a sustained drive for military strength and superiority, including increases “in the size of our atomic capacity as rapidly as other considerations make appropriate”. According to NSC-68: “Without superior aggregate military strength, in being and readily mobilizable, a policy of containment — which is in effect a policy of gradual coercion — is no more than a policy of bluff.” *Ibid.*

by means and places of our own choosing"¹²⁹ in the 1950's, to exhibiting a "declared willingness to escalate as necessary"¹³⁰ in the 1960's, and providing "a series of measured responses to aggression which bear some relation to the provocation, have some prospects of terminating hostilities before general nuclear war breaks out, and leave some possibility for restoring deterrence"¹³¹ in the 1970's, threats of nuclear retaliation have never been limited exclusively to responding to nuclear attack.

The Reagan nuclear weapons strategy carries the logic of extended deterrence to its ultimate end by expanding the number of missions and flexibility of nuclear threats further than any of its progenitors.¹³² The current "countervailing strategy" envisages "a single coherent policy that governs the linkage among our conventional, non-strategic nuclear, and strategic nuclear weapons",¹³³ so as to ensure both willingness and capability to fight and emerge victorious at any level of contemplated violence. According to the Reagan defense budget of 1983, nuclear forces are retained in the policy of "escalation dominance" for four purposes: (1) "to deter nuclear attack on the United States or its allies"; (2) "to help deter major conventional attack against U.S. forces and our allies, especially in NATO"; (3) "to impose termination of a major war — on terms favourable to the United States and our allies even if nuclear weapons have been used, and in particular to deter escalation in the level of hostilities"; and (4) "to negate possible Soviet nuclear blackmail against the United States and our allies".¹³⁴

In geopolitical terms, according to the most recent defense budget, U.S. forces are now designed "to project forces over long distances to austere regions", to "deliver forces rapidly to distant trouble spots and to sustain

¹²⁹U.S. Secretary of State J.F. Dulles, "Evolution of Foreign Policy" (Address to the Council on Foreign Relations, 12 January 1954), excerpted in U.S. State Department, *American Foreign Policy: Basic Documents, 1950-55*, vol. 1 (1971) at 80-5.

¹³⁰U.S. Secretary of Defense R.S. McNamara, Address (Commencement Exercises at the University of Michigan, Ann Arbor, 16 June 1982), quoted in W. Kaufman, *The McNamara Strategy* (1964) at 116.

¹³¹Schlesinger, *supra*, note 86 at 35.

¹³²By the end of 1980, following the adoption of the Carter/Brown doctrine embodied in PD-59, American forces were said to serve four primarily geopolitical functions: (1) deterrence of Soviet nuclear attack on the U.S.; (2) deterrence of Soviet invasion of Western Europe using conventional, chemical, or tactical nuclear weapons; (3) defeat of Soviet seizure of Persian Gulf oil fields; and (4) capacity to fight an extra "half war" while fighting a major war against the Soviet Union. See B. Posen & S. Van Evera, "Defense Policy and the Reagan Administration" (1983) 8 *Int'l Security* 3.

¹³³Weinberger, *Report: FY 1983*, *supra*, note 89 at 56.

¹³⁴*Ibid.* at 1-18.

them once deployed", and "to possess the advantage at every level of potential conflict" in "any number of regions around the world".¹³⁵ It has been suggested that this policy adds at least three more "missions" to U.S. conventional and nuclear forces: (1) the ability to launch a disarming counterforce attack against the Soviet Union; (2) increased offensive capability; and (3) increased capability to intervene in the Third World.¹³⁶ In sum, according to Eugene Rostow, a former Director of the United States Arms Control and Disarmament Agency, U.S. foreign policy "turns ultimately on the deterrent power of the American nuclear umbrella — the rock on which the renaissance of the West since 1945 was built and the foundation for its security".¹³⁷

So long as nuclear weapons are assigned such a broad geopolitical role, it is clear that threats to use them will be far more frequent than if nuclear threats were limited to deterrence of nuclear attack. Indeed, although little is known about the process by which nuclear threats are formulated and communicated, except that they are made at the highest levels of government and generally without consultation with democratically elected representatives,¹³⁸ recently declassified documents show that "since 1945 there

¹³⁵Weinberger, *Report: FY 1985*, *supra*, note 89. The commitment of nuclear weapons, as the backbone of U.S. foreign policy, to such a broad range of missions raises legal questions which are unrelated to the law of war as described in this article. The constant demands for increases in the sophistication and number of nuclear weapons to carry out the missions of the extended deterrent policy seem entirely inconsistent with obligations to "achieve the discontinuance of all test explosions for all time" found in the *Partial Test Ban Treaty* of 1963, 14 U.S.T. 1313, T.I.A.S. 5433, 480 U.N.T.S. 43, and the *Threshold Test Ban Treaty* of 1974, reprinted in U.S. Arms Control and Disarmament Agency, *Arms Control and Disarmament Agreements*, 5th ed. (1982) at 167, and the obligation in Article VI of the 1968 *Non-Proliferation Treaty*, 21 U.S.T. 483, T.I.A.S. 6839, 729 U.N.T.S. 161, "to pursue negotiations in good faith on effective measures relating to the cessation of the nuclear arms race at an early date and to nuclear disarmament". As Dimitri Simes has written, "[w]e cannot simultaneously have it both ways — enjoy meaningful nuclear arms control and at the same time believe that under some circumstances we may rely on first use of nuclear weapons". Quoted in A.L. Neidle, ed., *Nuclear Negotiations: Reassessing Arms Control Goals in U.S.-Soviet Relations* (1982) at xxv. More recently, Richard Wagner, Assistant to the Secretary of Defense for Atomic Energy, stated: "Even if our best efforts at arms control succeed, we are going to need new weapons designs in the nineties and beyond." U.S. House of Representatives, Armed Services Committee, *Atomic Energy Defense Activities: Fiscal Year 1984* (Washington: Government Printing Office, 1983) at 26.

¹³⁶Posen and Van Evera, *supra*, note 132.

¹³⁷Eugene V. Rostow, Address (World Affairs Council, Los Angeles, California, 10 September 1982), quoted in G. Prins, ed., *The Nuclear Crisis Reader* (1984) at 3.

¹³⁸The impact on the normal processes of democratic societies of such enormous power residing in the hands of a few, often unelected bureaucrats and executive advisors is more fully considered in R.A. Falk, "Nuclear Weapons and the End of Democracy" (1982) 2 *Praxis Int'l* 1.

have been some twenty occasions during which responsible officials of the United States government formally considered the use of nuclear weapons".¹³⁹

Moreover, as extended deterrence is enhanced by the increased ability to deliver more flexible nuclear weapons to those areas in which interests are perceived to be at stake, nuclear threats become extraordinarily subtle, and thus more easily relied upon. Whereas in the 1950's the United States communicated its nuclear threats verbally,¹⁴⁰ by the Yom Kippur war of 1973 the emplacement of U.S. ICBM forces at an increased level of alert¹⁴¹ made clear to the Soviet Union that the interference with U.S. geopolitical interests in the Middle East might provoke nuclear response. In the 1980's, the mere dispatch of mobile of nuclear-capable naval or land forces to a given geographic region constitutes clear communication of the threat to use nuclear weapons.

In addition to expanding the range of circumstances in which nuclear threats are made, extended deterrence portends to increase to a virtually irrevocable level of commitment the promise that such threats will be carried out,¹⁴² thereby increasing the likelihood of nuclear war. This is the case for two reasons. First, at the battlefield or theatre level, the integration of highly selective and mobile nuclear artillery and warhead launchers into conventional naval and land forces designed to insure "victory at every level of contemplated violence" means that in a conventional battle the losing side would be faced with only two choices: either to use its nuclear weapons or to allow them to be overrun by the enemy. The net result is a severe erosion of the critical manoeuvring space or "firebreak" between conventional and nuclear war.¹⁴³ In Western Europe, for example, nuclear weapons are so

¹³⁹Ball, *supra*, note 82 at 42. See also D. Ellsberg, "Introduction" in E.P. Thompson & D. Smith, eds, *Protest and Survive* (1981).

¹⁴⁰President Truman, for example, stated at a press conference in November, 1950 that nuclear attack on North Korea was "under active consideration". H.S. Truman, *Memoirs: Years of Trial and Hope, 1946-1952*, vol. 2 (1965) at 450-1.

¹⁴¹M. Kalb & B. Kalb, *Kissinger* (1974) 491-2.

¹⁴²See President John F. Kennedy, "The Soviet Threat to the Americas" (Address), reprinted in (1962) 47 U.S. State Dep't Bull. 715 at 716. President Kennedy seemed to recognize the legal and moral significance of the increase in the level of commitment to use nuclear weapons signified by the combination of weapons capabilities and political purposes, when he stated, *ibid.*, (with reference to the potential deployment of nuclear weapons in Cuba):

Neither the United States of America nor the world community of nations can tolerate deliberate deception and offensive threats on the part of any nation, large or small. We no longer live in a world where only the actual firing of weapons represents a sufficient challenge to a nation's security to constitute maximum peril. Nuclear weapons are so destructive and ballistic missiles are so swift that any change in their deployment may well be regarded as a threat to peace.

¹⁴³The dangers of the eroding firebreak are more fully discussed in Klare, *supra*, note 105.

heavily relied upon that the Supreme Allied Commander of NATO's European forces (SACEUR) recently stated: "If attacked conventionally NATO would face fairly quickly the agonizing decision of escalating to a nuclear response in order to try and convince the aggressor to halt his advance. In essence, we have mortgaged NATO's defense to the nuclear response."¹⁴⁴

Second, at the strategic level, an extended deterrent, war winning strategy encourages the production, deployment and threatened use of newer, more accurate, and quicker weapons whose purpose is to destroy the adversary's military facilities. As improvements in technology make both sides' arsenals more provocative, each moves closer to a "launch on warning" posture, under which its weapons would be launched in the event of a crisis, before they could be attacked and lost.¹⁴⁵

It should be clear, therefore, that both modern nuclear weapons and doctrines for their use simply cannot be considered to be solely reactive in their orientation. Instead, contemporary deterrence has steadily evolved into something much more closely approximating the traditional conception of military force applied in the pursuit of national objectives.

We must recall here our earlier conclusion that even within the current international system, the only possible legal justification for threats to use nuclear weapons is to dissuade nuclear attacks. Since extended deterrence strategies and capabilities involve threats to *initiate* nuclear war for the broader purpose of providing a credible contingency for warfighting victory, they must be considered as violating of international law. Any nuclear weapons in excess of those required to fulfill the minimal function of retaliation must therefore be viewed as unconditionally unlawful.

Policy-makers continue, nevertheless, to assert the legality of the first-use option, basing this view on the rights of "individual and collective self-defense" recognized by article 51 of the *United Nations Charter*. As early as 1962, Secretary of State Dean Rusk articulated the rationale which has since been used by the United States to justify its opposition to or abstention from successive U.N. resolutions against the use of nuclear weapons:

The defense system of the United States and its allies, freely arrived at in accord with the United Nations Charter, includes nuclear weapons. This must

¹⁴⁴Statement of General Bernard B. Rogers, Supreme Allied Commander of Europe in U.S. House of Representatives, Committee on Armed Services, *Hearings on Department of Defense Authorizations of Appropriations for Fiscal Year 1985* (Washington: Government Printing Office, 1984) at 897.

¹⁴⁵Such policies further subvert democratic processes by shifting authority and control over nuclear weapons not only from consideration by elected representatives, but also from the President, to advanced computer systems capable of detecting and immediately responding to a possible nuclear attack.

continue to be the case as long as it is impossible to be certain through measures of verification that the other states, which could use such weapons for aggressive purposes, do not retain a similar array of weapons in their national arsenals. The United States government can and does offer the fullest assurances that it will never use any weapons, large or small, with aggressive intent. But the United States, like other free nations, must be fully prepared to exercise effectively the inherent right of individual and collective self-defense as provided in the United Nations Charter.¹⁴⁶

More recently, President Reagan stated: "The U.N. Charter . . . neither prohibits the use of force in self-defense, nor outlaws nuclear weapons for defense or deterrence."¹⁴⁷

One of two assumptions necessarily underlies this interpretation of the law: either that any degree of force is acceptable; or that the defensive use of nuclear weapons could take place in accordance with the rules of *jus in bello*. Both of these seem unfounded. First, on any meaningful interpretation of the law of war, even the most justified uses of force cannot be unlimited in their scope or destructiveness. Second, as was considered above,¹⁴⁸ in view of the likely consequences of even the most circumscribed uses of nuclear weapons and the overwhelming likelihood of rapid escalation once the nuclear threshold is crossed, any "defensive" use of nuclear weapons is virtually certain to violate the law. The threat of nuclear retaliation in response to conventional aggression amounts, therefore, to no more than what has often been described as "either a bluff or a suicide pact". In either case it is unlawful.

According to another interpretation, the first-use option can be defended as part of a law-making process of expectation and communication which involves "a balancing of weapons and threats to ensure a deterrence equilibrium",¹⁴⁹ and thus the prevention of any aggressive change in relations between nuclear states which could result in nuclear war. In policy terms, this interpretation is based on the view that the best way to prevent nuclear war is by deterring conventional war which could escalate, and the best way to deter conventional war is to threaten nuclear retaliation. According to Secretary of Defense Weinberger: "The nuclear option remains an important element in deterring Soviet attack. If the Soviet leadership is aware that NATO, if attacked, will employ, if required, all means necessary to defend itself and prevent the U.S.S.R. from achieving its war aims, then

¹⁴⁶United States Arms Control and Disarmament Agency, *Documents on Disarmament* (Washington: Government Printing Office, 1962) at 630.

¹⁴⁷U.S. State Department, *United States Participation in the U.N.: Report by the President to the Congress for the Year 1981* (Washington: Government Printing Office, 1981) at 54.

¹⁴⁸See *supra*, notes 81-114 and accompanying text.

¹⁴⁹Almond, *supra*, note 120 at 286.

deterrence is strengthened and the chances of both conventional and nuclear war are reduced."¹⁵⁰

Even if it is assumed that the nuclear threat, and not other political and economic factors, has prevented conventional assault on Europe, this defense of extended deterrence seems circular. If indeed the requirements of conventional and nuclear deterrence have merged, it is only because the nuclear option has wedded conventional war to nuclear war, rendering the integrated conflict unwinnable and suicidal. Far from providing grounds for legal support of the first-use option, this fact is the very cause of its unlawfulness. Moreover, the political objective of controlling conventional aggression is irrelevant to a consideration of the legality of the means chosen. The defense of "necessity", which might justify limited nuclear threats to deter nuclear attack within the balance of power system, is inapplicable to the objective of deterring conventional attack. This objective can be obtained by a variety of other means.

IV. Implications for U.S. Defense Planning: Toward a Legal Regime for Nuclear Weapons

A. *The Short Term: A Minimal and Stable Deterrence*

If state practice is to respect international law, the following notions must be recognized: (1) crossing the nuclear firebreak would result in a grave violation of the modern law of armed conflict; (2) avoidance of nuclear war lies, therefore, at the pinnacle of the hierarchy of objectives pursued by the law of war in the nuclear age,¹⁵¹ and if there is any function of nuclear weapons which might possibly be consistent with this objective, it is only to deter their use;¹⁵² (3) current U.S. nuclear policy is unlawful because it contemplates the first use of nuclear weapons for unlawful purposes (to reinforce the application of offensive conventional force in the Third World) or for purposes of escalating defensive uses of military force beyond the level of intensity or scope permitted by the rules of target discrimination and proportionality; and (4) nuclear weapons which are vulnerable to pre-emption or which threaten the adversary's retaliatory forces are of no deterrent value and are thus unlawful *per se*.

The immediate implication for U.S. defense planners, who are bound by treaty and national directives to observe the requirements of the law of

¹⁵⁰Weinberger, *Report: FY 1983*, *supra*, note 89 at 57.

¹⁵¹For this term, I am indebted to Richard A. Falk, "Toward a Legal Regime for Nuclear Weapons" (1983) 28 McGill L.J. 519 n. 31.

¹⁵²See *supra*, note 122 and accompanying text.

war,¹⁵³ is that nuclear policies and capabilities must be revised in a manner which reserves the threatened use of nuclear weapons exclusively for deterring nuclear attack on the U.S. homeland, and no longer for integration as a “coherent” and “responsive” instrument of foreign policy. Rather than being calculated to create an apprehension that nuclear responses are flexible enough to retaliate credibly to unspecified “provocations”, military arsenals should be restructured to create a small, invulnerable, non-threatening defensive deterrent.¹⁵⁴ Such a force posture would pose no threat of first strike or attack to the adversary, while deterring nuclear attack by ensuring the survivability and possible use of a strong enough nuclear force to cause devastating consequences to an adversary who might be tempted to launch a nuclear attack.

The transition to a posture of “minimal deterrence” would involve the elimination of all but approximately four hundred survivable warheads¹⁵⁵ and a restructuring of military arsenals in a way that would make credible a bilateral “no first use” arrangement.¹⁵⁶ It would confine the military to stable defense as follows:

¹⁵³Article 86 of the 1977 Geneva Protocol I Additional, *supra*, note 21 provides:

In the study, development, acquisition or adoption of new weapons, means or method of warfare, a High Contracting Party is under an obligation to determine whether its employment would, in some or all circumstances, be prohibited by the Protocol or by any rule of law applicable to the High Contracting Party.

Also relevant is Department of Defense Instruction 5500.15, dated October 1974 (see United States Department of the Air Force, *supra*, note 8) which stipulates that:

All actions of the Department of Defense with respect to the acquisition and procurement of weapons, and their intended use in armed conflict, shall be consistent with the obligations assumed by the United States Government under all applicable treaties, with customary international law, and in particular with the laws of war.

¹⁵⁴See V. Ferraro & K. Fitzgerald, “The End of the Strategic Era: A Proposal for Minimum Deterrence” (1983) 1 *World Policy J.* 30.

¹⁵⁵The question “How much is enough?” was addressed by Secretary of Defense Robert McNamara over two decades ago. After having considered the effect of nuclear weapons in relation to Soviet demographics, McNamara concluded that very little additional damage could be accomplished in a nuclear war beyond the 200-400 one-megaton-equivalent warheads. In fact, his calculations illustrated that 400 warheads would destroy 76% of Soviet industry; any warheads beyond this number would destroy only 1% additional industry due to widespread dispersion across the Soviet countryside at that level. The 400 figure would also enhance the credibility of the deterrent by threatening damage below the threshold of nuclear winter. On this point, see Sagan, *supra*, note 27.

¹⁵⁶Soviet Defense Minister D. Ustinov stated in 1982 that “only extraordinary circumstances — a direct nuclear aggression against the Soviet state or its allies — can compel us to resort to a retaliating nuclear strike as a last means of self-defense”. Quoted in R. McNamara, “The Military Role of Nuclear Weapons” (1983) 62 *Foreign Affairs* 50 at 66. At the United Nations Special Session on Disarmament in 1982, the Soviet Union “solemnly” pledged that it “would not be the first to use nuclear weapons”. China has made a similar commitment and, as recently as September 1984, at the United Nations, has called upon other nuclear powers to reciprocate. See, J. Feron, “China Calls on Nuclear Powers For Pledge on First Use of Weapons” *The New*

1. *Elimination of first-strike and otherwise destabilizing missiles.*

The elimination of first-strike weapons — those capable of attacking the adversary's missile silos and military command centres — would require an immediate return to single warhead missiles, as well as a de-emphasis on missile accuracy, payload size, and delivery speed. Of greatest immediate concern are the MX missiles which are highly accurate as well as extremely vulnerable, the Mark 12-A "hard-target-kill" warhead deployed on existing Minuteman ICBMs, the highly accurate and swift Trident II (D-5) missile (under development) and the Pershing II missile, each of which increases the gravity of threat to Soviet military facilities, placing the Soviets in a "launch on warning" status which increases the likelihood of an outbreak of nuclear war by accident or miscalculation.

2. *Elimination of "coupling" doctrines and capabilities tending to erode the firebreak between nuclear and conventional conflict.*

In order to strengthen the nuclear firebreak so as to decrease the likelihood that any conventional war would escalate to nuclear war, U.S. forces should be de-nuclearized by the removal of dual-capable and tactical weapons from forward-base areas and the discontinuance of production of such weapons. Included in this category are nuclear artillery warheads (W-33, W-78, W-79) and their dual-capable launchers, Lance, Honest John and Nike-Hercules, as well as the Joint Tactical Missile system now under development. Dual-capable air-launched, ground-launched and sea-launched (Tomahawk) cruise missiles, which are highly accurate and difficult to detect, with their corresponding nuclear warheads, should be eliminated and their production arrested. Finally, ASROC, SUBROC, and Terrier anti-submarine missiles and their nuclear warheads should be destroyed.

3. *Removal of conventional "trip-wires" which erode the firebreak between war and peace, and strengthening of norms against interventions.*

To reduce the risk of accidental engagement in a superpower conflict which might result in escalation to nuclear war, offensive conventional forces should be pulled back or withdrawn from volatile regions such as the Persian Gulf and the Kola Peninsula. Further, recognizing the potentially deadly

York Times (27 September 1984) A 4. The difference between a bilateral *declaration* of "no first use" and a bilateral "no first use" *arrangement* is most important. A no first use declaration should be followed by withdrawal of all nuclear weapons which have warfighting rather than deterrent functions. This would include virtually all short-range nuclear weapons. According to Paul Warnke, former SALT II negotiator and Director of the Arms Control and Disarmament Agency, "[s]o long as both sides deploy thousands of tactical weapons in close proximity to the borders that divide the NATO countries from those of WTO, statements by the leaders of either side that they will not be the first to utilize them are of little practical value". P. Warnke, "Should the United States Commit Itself Not to Be the First to Use Nuclear Weapons?" in F. Blackaby, J. Goldblat & S. Lodgard, eds, *No First Use* (1984) at 122.

connection between Third World intervention and the possibility of nuclear conflict, the nuclear powers should reaffirm their obligation to refrain from any intervention, direct or indirect, in the internal affairs of another sovereign state that in any way impairs the exercise of its citizens' right to self-determination.

The elimination of the most provocative and vulnerable elements of the nuclear triad,¹⁵⁷ and reliance on a reduced retaliatory nuclear force posture designed only for deterring nuclear attack, would substantially stabilize and reduce the threat of intentional or accidental nuclear war. In addition, it would remove the unlawful, escalatory character of the extended deterrent threat. However, stabilizing and minimizing the deterrent does not resolve all of the legal difficulties encountered by contemporary deterrence policies. An important issue related to targeting remains to be considered.

In order to provide a credible deterrent against attack, each side must demonstrate to its adversary that a nuclear attack would carry a convincing possibility of nuclear retaliation of sufficient magnitude to destroy it as a viable military and economic entity. To create such a deterrent without aggressively targeting "hardened" military targets, each side would necessarily be forced to target some "soft" industrial and economic recovery facilities, in addition to facilities more directly connected with the adversary's war-making efforts. It is true that improvements in technology have vastly enhanced target discrimination, making control over destruction of economic and military targets more likely than in the early days of assured destruction. However, given that the majority of these "soft" targets are located in or near population centres, it seems inconceivable that a breakdown in deterrence would result in anything less than overwhelming non-combatant casualties, in serious breach of the law.

The law of war is therefore confronted with a paradoxical trade-off between two potential defense postures: (1) a stable deterrent, which maximizes the inhibitions against resort to the use of nuclear weapons but does so by increasing the degree of threat and thus the seriousness of possible breach; (2) a more selective strategy which restricts its targets to military installations but actually increases the likelihood of accidental or preemptive nuclear attack, either by failing to threaten sufficient retaliatory destruction, or by provoking the adversary, in times of crisis, to launch its missiles first, before they are lost. Recalling our earlier conclusion that the only possible legal claim for deterrence is the *avoidance* of any use of nuclear weapons, we must reluctantly resolve the tension in favour of a stable deterrent which minimizes the likelihood of any use of nuclear weapons, rather than a more

¹⁵⁷The term "triad" refers to what is currently the basic structure of the United States force, composed of land-based, sea-based and air-launched nuclear tipped missiles.

discriminating deterrent which creates the illusion of damage control once nuclear war has begun. A deterrent force most consonant with all nuclear war avoidance would favour more stable (invulnerable) yet more destructive (less accurate) submarine-launched missiles, over less stable (more vulnerable) but less destructive (more discriminate) ICBM and bomber-launched missiles.

The choice of even this minimal, stable deterrent is, however, truly a choice of the lesser of two evils. At best, even a minimal deterrent promises only to decrease the likelihood of unlawful nuclear attack by displacing the assumption that the threatened use of nuclear weapons is a legally acceptable means of attaining a variety of foreign policy goals. It cannot prevent the use of nuclear weapons. By definition, any system of offensive deterrence involves maintaining a "balance of terror" based on both willingness and capability to inflict unacceptable harm, factors which are constantly subject to irrationality, accident or miscalculation. In essence, if the letter and spirit of the law of war are to be observed, mechanisms must be developed to ensure that nuclear weapons cannot, under any circumstances, be employed against civilian populations.

B. The Long Term

1. Ballistic Missile Defense?

In March 1983, President Reagan called for a "comprehensive and intensive" effort to develop anti-ballistic missile systems (ABM) to serve as "the means of rendering these nuclear weapons obsolete"¹⁵⁸ by providing a secure defense against strategic nuclear attack. According to preliminary studies, plans involve the deployment, in this century, of ABM systems capable of attacking Soviet ICBMs continuously during each of three stages of flight: hitting boosters within the first five minutes (before they disgorge their multiple independently-targeted warheads); hitting separate warheads while in mid-course trajectory; and hitting those warheads which penetrate the first two layers of defense in a last-ditch, point-blank effort using nuclear tipped rockets.

Generally, it has been argued that any possibility of successful defense of American civilian populations would depend on the development of a ballistic missile defense system (BMD) capable of intercepting the vast majority of Soviet missiles in the first phase of flight, before their multiple

¹⁵⁸President R. Reagan, "President's Speech on Military Spending and a New Defense", *The New York Times* (24 March 1983) A 20.

warheads can be released. Such a system would require laser beam technology capable of attacking upwards of 2 000 boosters within 300 seconds of their exit from missile silos and submarine hatches.¹⁵⁹

Arriving at a feasible basing mode for these lasers promises to be a near-impossible task. A space-based system, involving thousands of sensors and mirrors deployed at 100-ton orbiting space stations, would be extremely vulnerable to Soviet attack in the event of a crisis and might, in fact, help to hasten the outbreak of nuclear war. The alternatives to orbital based systems — ground-based, airborne, or “pop-up” systems designed to boost mirrors into firing position after the enemy missile launch — are said to be less capable of intercepting missiles in the early phases of flight.¹⁶⁰

Even if a suitable basing mode were developed, its operation would depend on the ability of computer software, which has never been tested under actual war conditions, to track and control hundreds of thousands of objects by carrying out billions of operations per second. Then, if the adversary refrained from using decoy missiles and anti-satellite technology to confuse the system, and it otherwise operated entirely as theoretically conceived, optimistic proponents still expect that there would be “leakage” of between 5 and 30 per cent. According to a recent study, “best case” leakage of 5 per cent of *current* Soviet ballistic warheads would immediately kill up to one half of the urban population of the United States. Leakage of ten per cent would kill two-thirds.¹⁶¹ In both cases, the consequential damage to the environment would most likely trigger nuclear winter.¹⁶²

The foregoing assumes that the BMD operates against existing Soviet capabilities. It also ignores the existence of cruise missiles, which will likely destroy BMD ground control assets, even before they have a chance to defend against incoming ballistic missiles. For all of these reasons, the U.S. Congressional Office of Technology Assessment recently concluded that the prospect of such technology operating as envisaged by President Reagan “is so remote that it should not serve as the basis of public expectation or national policy”.¹⁶³ Ambassador Gerard Smith, who negotiated the Anti-Ballistic Missile Treaty and who is a former director of the Arms Control

¹⁵⁹W.E. Burrows, “Ballistic Missile Defense: The Illusion of Security” (1984) 62 Foreign Affairs 843 at 848.

¹⁶⁰K. Gottfried *et al.*, “Reagan’s Star Wars”, excerpted in *New York Review of Books* (26 April 1984) 47 at 49.

¹⁶¹A. Carter & D.N. Schwartz, eds, *Ballistic Missile Defense* (1984).

¹⁶²Sagan, *supra*, note 27 at 282.

¹⁶³U.S. Congressional Office of Technology Assessment, *Directed Energy Missile Defense in Space*, reprinted in Senate Committee on Foreign Relations, *Strategic Defense and Anti-Satellite Weapons* (Washington: Government Printing Office, 1984) 259 at 322.

and Disarmament Agency, stated even more pointedly: "This strikes me as having been a cruel illusion to put in the minds of the American people."¹⁶⁴

The realization that the President's vision is more of a dream has not, however, prevented proponents from arguing for a more "limited", imperfect set of BMD systems. The development of near-term BMD technology is promised to "provide the means for the important lower tiers of conventional defense designed to defend U.S. intercontinental ballistic missiles (ICBMs), strategic bomber bases, and selected critical command, control, and communication facilities".¹⁶⁵ Deterrence, it is argued, would no longer involve "mutual vulnerability" but instead a "defensive capability to deny plausibility any Soviet 'theory of victory'".¹⁶⁶ Such a deterrent would ensure Soviet "inability to defeat the United States — promising a long and potentially unwinnable war which could allow the vastly superior U.S., and U.S.-allied, military-industrial potential to come into play".¹⁶⁷

These arguments rely on the tenuous assumption that BMD would somehow render "protracted" nuclear war fightable and winnable by the United States in the event of deterrence failure. As discussed above, the leak factor places "safe" conduct of nuclear war far beyond the realm of plausibility, even with the most advanced BMD technology. BMD thus provides a false sense of security, while encouraging flood targeting by the adversary against the urban centres that the plan is supposedly designed to protect.

Rather than enhancing deterrence, the acquisition of BMD is likely to be perceived as an effort to gain the capability to strike first against the Soviet Union and to defend against a ragged Soviet retaliation. This is so because BMD would be useful only to an attacker, since it would be easily overcome by a well-executed first strike, but not by a weakened retaliatory attack. Far from serving its stated humanitarian purposes, BMD represents an effort to reduce fatalities, and thus the "costs" of nuclear war, for purposes of controlling Soviet behaviour by more credibly threatening offensive nuclear attack in times of crisis.¹⁶⁸

Equally important, for purposes of international law, is the effect which the so-called "Strategic Defense Initiative" (SDI) is likely to have on the existing legal arms control regime. The ABM Treaty of 1972, perhaps the

¹⁶⁴Prepared statement of Gerard Smith, reprinted in Senate Committee on Foreign Relations, *ibid.* at 57.

¹⁶⁵C. Gray and K. Payne, "Nuclear Policy and the Defensive Tradition" (1984) 62 Foreign Affairs 820 at 823.

¹⁶⁶*Ibid.* at 827-8.

¹⁶⁷*Ibid.* at 828.

¹⁶⁸U.S. Congressional Office of Technology Assessment, *supra*, note 163 at 318.

most important arms control agreement to date, prohibits the development, testing and deployment of ABM systems or components which are sea-based, air-based, space-based, or mobile land-based, and flatly bans any nation-wide system of defense against ballistic missile attack.¹⁶⁹ The Reagan SDI poses so imminent a threat to those signed and duly ratified provisions that Ambassador Smith concluded in June 1984 that: "We are already in an anticipatory breach of contract."¹⁷⁰

Beyond the abandonment of the ABM regime, the SDI is likely to mean the end of all efforts at arms control. The erosion of the important assumption built into the treaty — that efforts to construct technologically effective defenses to nuclear attack are futile — is likely to stimulate an unrestrained proliferation of both offensive and defensive weapons, as both sides jockey for the advantage of circumventing each other's defenses. A premium in the competition would be placed on large ICBMs, capable of delivering large numbers of warheads, decoys, and penetration aids, on difficult-to-detect weapons designed to circumvent BMD altogether, and on destabilizing weapons such as the Anti-satellite (ASAT) whose purpose is to impair command, control and communications processes. Such a state of affairs would make a mockery of existing legal obligations to negotiate reversal of the arms race toward "complete nuclear disarmament".¹⁷¹

For all of these reasons, as well as the increased likelihood of nuclear war by accident or miscalculation which would be caused by reliance on increasingly complex offensive and defensive technology, the "defensive transition" cannot be relied upon to deliver its promise of rendering "obsolete" the prospect of an illegal use of nuclear weapons. If the principles of international law are to be observed in the long run, a more stable, comprehensive solution to the threatened use of nuclear weapons must be sought.

C. Overcoming Nuclear Deterrence

To the extent that it involves the recognition that nuclear war cannot be fought or won, and that nuclear weapons may not lawfully continue to serve as an instrument of foreign policy, a minimal and stable nuclear deterrent would represent a step in the right direction. It would, however, only

¹⁶⁹*Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Anti-Ballistic Missile Systems* 25 U.S.T. 3435, T.I.A.S. 7503, reprinted in (1972) 11 I.L.M. at 784, art. V.

¹⁷⁰"U.S. Close to Violating ABM Treaty of Security, Panel of Specialists Says", *The Washington Post* (20 June 1984) A 12.

¹⁷¹See discussion in note 135, *supra*.

be a small step, for even a posture of minimal deterrence would remain overshadowed by the paradoxes created by the attempt to maintain balance by threatening to do that which would most flagrantly violate our most basic conceptions of law and morality. As Winston Churchill stated in a speech to the House of Commons in 1955, as long as nuclear deterrence is the "guarantor" of human survival "safety will be the sturdy child of terror, and survival the twin brother of annihilation".¹⁷² In addition, the assumption that any form of deterrence can operate in the long term as a substantial basis for peace and security is inconsistent with both the lessons of history and the original rationale of nuclear deterrence. From the beginning of the atomic era, deterrence has always been viewed as an interim condition¹⁷³ whose lack of permanent viability is derived from the fact that every previous deterrence/balance of power structure throughout the history of great power relations has ended in collapse and the ensuing use of weapons, designed to maintain peace, in devastating global war.¹⁷⁴

The spectre of nuclear war presents a more fundamental legal challenge than management of the size and functions of an arsenal for purposes of reducing the risk of a disastrous breakdown in the system of deterrence. If the integrity of the moral and legal norms reflected in the law of war is to remain intact, a legal regime must be constructed to forever *eliminate*, not merely *control*, the possibility of nuclear catastrophe. The task, though by no account politically simple, is no less than to provide for the elimination of nuclear threats by developing means to eliminate the weapons themselves.

With the nuclear genie out of the bottle, any legal regime for the abolition of nuclear weapons must necessarily confront an important structural weakness in the current international system: the difficulty of applying the concept of "balance of power" to a geopolitical situation in which the accumulation and application of military force is no longer synonymous with the acquisition of power, international triumph, and national security. As events of the past thirty-nine years have illustrated, the procurement of more sophisticated or larger numbers of weapons by each side has only strengthened the adversary's resolve to match capabilities, to the ultimate detriment of the world's people.

Elimination of the nuclear threat will necessarily require a shift in emphasis within the state system, replacing reliance on military force with

¹⁷²Quoted in J. Schell, *The Fate of the Earth* (1982) at 197. See also A. Krass, "The Evolution of Military Technology and Deterrence Strategy" [1981] Stockholm International Peace Research Institute [SIPRI] Yearbook 19 for a useful discussion of the paradoxes of deterrence.

¹⁷³B. Brodie, "War in the Atomic Age" in B. Brodie, ed., *The Absolute Weapon: Atomic Power and World Order* (1946).

¹⁷⁴See, e.g., G. Modelski & P. Morgan, "Understanding Global War", (Address to the American Political Science Association Annual Convention, Washington D.C., August 1984).

improved transnational processes for the maintenance of national security. The transition to what has been referred to as a "Global Security Policy"¹⁷⁵ would involve the realization by world leaders that, in the nuclear age, "to gain limits on the military behaviour of others requires willingness to accept limits on oneself".¹⁷⁶

A Global Security Policy includes five specific features.¹⁷⁷ First, it "tries to prevent the desire for short-range advantage from dominating decisions at the expense of long-run interests". Second, it "emphasizes the importance of providing greatly expanded positive incentives rather than relying largely on negative military threats as the means to influence other nations' security policy and to establish a dependable security order". Third, it "emphasizes a positive image of peace which includes more than war prevention" — an image which integrates the values of peace, human dignity, resource sharing and protection of the environment.¹⁷⁸ Fourth, the approach "moves beyond the familiar, singular focus on security for one nation-state", to an orientation which benefits global citizens on a transnational basis. Finally, a Global Security Policy recognizes the equal importance of normative and territorial boundaries.

To build on the measures set out in Part IV(A) designed to promote minimal and stable deterrence (renunciation of first-use option, non-intervention, and reversal of arms competition), the following are some additional elements of the legal regime which would help to strengthen norms of non-intervention and complete the transition from a minimal deterrence posture to a substantially demilitarized, nuclear-free system of international relations:

1. *Comprehensive transarmament.*¹⁷⁹

This process would involve confining the role of all military power — conventional as well as nuclear — to defense of national territories and

¹⁷⁵R. Johansen, *Toward an Alternative Security System* (New York: World Policy Institute, 1983)

¹⁷⁶*Ibid.* at 31.

¹⁷⁷*Ibid.* at 27-30.

¹⁷⁸These are the "World Order Values" which form the core of the search for a just world order undertaken by contributors to the World Policy Institute's World Order Models Project (WOMP). Among the many works available, see in particular: R. Falk & S. Kim, "An Approach to World Order Studies and the World System", *WOMP Working Paper No. 22* (1982); R. Falk, *A Study of Future Worlds* (1975); J. Galtung, *The Three Worlds: A Transnational Perspective* (1980); S. Mendlovitz, ed., *On the Creation of a Just World Order* (1975); R. Falk, S. Kim & S. Mendlovitz, eds, *Toward a Just World Order*, vol. 1 (1982).

¹⁷⁹This term and its meaning are fully discussed in D. Fischer, *Preventing War in the Nuclear Age* (1984). See also R. Forsberg, "The Freeze and Beyond: Confining the Military to Defense" (1983) 1 *World Policy J.* 288; and Alternative Defense Commission, *Defense Without the Bomb* (1983).

borders. Aggressive capabilities, foreign bases and alliances would be abolished and replaced with strictly defensive systems such as anti-aircraft, anti-tank, mines, radar, and non-military means of defense. The current Swiss system of defense provides a good example.¹⁸⁰

2. Increased reliance on non-military methods of dispute resolution and enhancement of confidence building measures.

U.S. failure to ratify the judicial settlement provisions of the *Law of the Sea Treaty*, refusal to recognize the jurisdiction of the International Court of Justice in relation to recent Nicaraguan claims, and public accusations of Soviet non-compliance with existing arms control arrangements (despite the existence of the Standing Consultative Council established by SALT I to deal with such disputes), represent steps in the wrong direction. The United States should reaffirm its commitment to encourage the expansion of these arrangements. Specifically, the jurisdiction of the International Atomic Energy Agency (IAEA) should be strengthened to enable that body to play a more active and effective role in safeguarding against proliferation of fissionable materials used in the construction of nuclear weapons. The establishment of a neutral International Satellite Monitoring Agency would also contribute greatly, by providing important, impartial information to ensure compliance with arms control agreements, and to deter clandestine arms tests or transfers.

3. Increased reliance on international peacekeeping forces.

The creation of permanent local and global peacekeeping forces would reduce the temptation to resort to force unilaterally and would contribute, in a way which would minimize the risk of escalation by third party engagement, to control of border violations and other national skirmishes which might nevertheless arise. Regional peacekeeping forces would also serve as an important local mechanism for compliance with arms control and arms transfer agreements. As well, such forces would enhance the prospects for international peace by engendering a sense of international community.

4. Promotion of world authority and cooperation.

The Independent Commission on Disarmament and Security Issues ("Palme Commission") recently recommended the following measures related to strengthening the current United Nations system: achieving agreement between the Third World countries and the permanent members of the Security Council to ensure observance of the territorial integrity and political independence of Third World countries; a more active role by the

¹⁸⁰D. Fischer, "Invulnerability Without Threat: The Swiss Concept of General Defense" (1982) 19 J. Peace Research [Oslo] 205.

Security Council in pre-empting conflict; greater use of civilian fact finding, U.N. observers, and U.N. forces in areas of potential conflict; and greater restraint with respect to use of the Security Council veto power.¹⁸¹ Increased commitment to the United Nations process by all powers, most particularly by the United States and the Soviet Union, would greatly enhance the demilitarization process while at the same time maintaining the benefits of cultural pluralism and self-determination embodied in the concept of the nation state.

Conclusion

The most fundamental objective of any legal system is the maintenance of peace and social order. In the international system, law protects against arbitrariness and chaos in interstate relations. Among the normative obligations most central to the international ordering process are those rules which, regardless of time or location, prescribe the limits beyond which no state may transgress in the treatment of innocents caught in political conflict. Although paradoxes abound in reconciling the imperatives of humanity with the ends of military ambition in the 1980's, to renounce the effort is to neglect the purported ends of the international order and the avowed purposes of all national governments: the protection of human life.

Despite advances in targeting capabilities, contextual analysis yields the conclusion that the initiation of nuclear war, either in the first instance or through the resulting uncontrolled escalation, would be fundamentally inconsistent with the letter and spirit of the law of war. Nuclear war might indeed cause the end of humanity, making it, whether for "offensive" or "defensive" purposes, a form of self-inflicted genocide which could scarcely find "legal justification" in a system tailored to the exigencies of humanity.

To challenge the legality of nuclear war is to restate an already vexing moral, scientific and political problem. Indeed, virtually everyone must by now be in accord with President Reagan who, despite having presided over the largest peacetime military build-up in American history, has often stated that "nuclear war can never be won and must never be fought".

The true legal challenge presented by nuclear weapons is to articulate the implications flowing from the illegality of nuclear war. First, and most important, is that the prevention of any use of nuclear weapons must be recognized as the over-arching imperative of the law of war. Of course, there are many means by which nuclear war might possibly be *avoided*, but there

¹⁸¹Independent Commission on Disarmament and Security Issues, *Common Security: A Blueprint for Survival* (1982).

is only one way to guarantee that it is *prevented*. The weapons which make it possible must be eliminated.

In order to respond meaningfully to prevailing political realities, however, the law must develop a regime for compliance which, without triggering the undesired breach, poses a set of interim measures, each of which represents sustained progress toward the next step in the direction of the ultimate goal of complete denuclearization. It is in this remedial, solution-oriented role that legal analysis might be distinguished from even important moral and scientific enquiry.

The initial step in the process of building a legal regime for nuclear weapons requires a clear consideration and circumscription of the role of nuclear weapons. "Extended deterrent" capabilities and threats designed to facilitate the pursuit of geopolitical interests by threatening nuclear response to lesser provocations are unlawful, since they are based on willingness to *initiate* nuclear war in violation of the cardinal principles of discrimination and proportionality. The role of nuclear threats must unequivocally be confined to dissuasion of nuclear attack by means of a promise of unacceptable retaliation.

A stable deterrent is not, however, the end; it would merely facilitate the next set of steps. The final goal is to create an international system of security and dispute resolution which would serve as the foundation for complete dismantling of all nuclear arsenals.
