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**Report of the Foreign and International Law Committee
of the New York County Lawyers' Association**

***On the Unlawfulness of the Use and Threat of Use of Nuclear
Weapons***¹

SUMMARY

With the end of the Cold War, the United States' reliance on nuclear weapons has substantially decreased. Yet the weapons are still with us, as is the policy of nuclear deterrence threatening the use of these weapons.

While during the Cold War, serious evaluation of the lawfulness of the use of such weapons was difficult, given the strategic position the United States was in vis-à-vis the Soviet Union and the United States' heavy reliance on the policy of nuclear deterrence, now the tables are turned. The United States is the predominant conventional power in the world, and, in addition, the effectiveness of conventional weapons has substantially increased. As the United States has itself recognized, nuclear weapons have themselves become the enemy, more than any hostile power.

So the time seems opportune for the evaluation of the long-lingering issue as to the lawfulness of the use and threat of use of nuclear weapons. And it seems that the task of raising and addressing the issue falls uniquely to lawyers, particularly those interested in international law, Cold War thinking being so deeply entrenched in the public perception of the matter and the applicable legal rules being of such an esoteric nature.

We believe that the use and threat of use of nuclear weapons are unlawful under rules of law recognized by the United States.

¹ This report is issued by the Foreign and International Law Committee of the New York County Lawyers' Association ("NYCLA") and was authorized for issuance by the Board of Directors of NYCLA on September 11, 2000, without either approval or disapproval of the substantive conclusions set forth in the report. Major portions of this report have been drafted by Charles J. Moxley, Jr., a member of the Association's Foreign and International Committee, and adapted, with permission, from Mr. Moxley's book, *NUCLEAR WEAPONS AND INTERNATIONAL LAW IN THE POST COLD WAR WORLD* (Austin & Winfield, Publishers 2000).

The United States has long acknowledged the binding nature of international law, including the law of armed conflict. It has repeatedly recognized the strictures of the rules, *inter alia*, of necessity, proportionality, and discrimination under that law:

- That it is unlawful to use weapons involving a level of force not necessary in the circumstances to achieve the military objective;
- That it is unlawful to use weapons whose probable effects upon combatant or non-combatant persons or objects would likely be disproportionate to the value of the anticipated military objective; and
- That it is unlawful to use weapons that cannot discriminate between military and civilian targets.

The United States has specifically recognized that under these rules it is unlawful to use weapons whose effects are uncontrollable and could not be controlled when the weapons were used. The United States has further recognized (and it is widely established) that the effects of nuclear weapons—including the radiation effects—are uncontrollable.

It seems evident that nuclear weapons are quintessentially the type of uncontrollable weapons whose use is prohibited under international law, including the rules of necessity, proportionality and discrimination.

The use of nuclear weapons is also prohibited under these rules because of the likely effects of such weapons, effects transcending levels that could be deemed necessary, proportionate or discriminate. Nuclear weapons are vastly destructive in their blast, heat, electromagnetic impulse, and radiation effects, threatening destruction of apocalyptic proportions, destroying whole nations, civilization as we know it, the habitability of the earth, and ultimately the human species.

While limited use of highly accurate tactical weapons can be hypothesized, even such use, in the types of circumstances in which it would take place, would likely lead to escalating use of nuclear and other weapons of mass destruction and resultant extreme effects extending widely in time and space. These weapons would only be intentionally resorted to, if ever, in the types of extreme circumstances where an extreme response would be likely.

The rules of the law of armed conflict are violated by prohibited acts committed willfully and recklessly as well as intentionally. The risks inherent in the use of nuclear weapons are known, foreseeable, and predictable, and could only be regarded as willfully and recklessly undertaken, in the types of circumstances, if any, in which the United States might resort to such weapons.

The effects of nuclear weapons would likely also be inconsistent with compliance with the underlying purposes of the law of armed conflict, including the following purposes specifically recognized by the United States: facilitation of the restoration of peace and friendly relations, the assurance of the survival of civilization and of the human species, and the preservation of minimum standards of civilization and common ground of rationality between enemies.

As long as the United States continues to follow the policy of nuclear deterrence threatening the use of these weapons, the risk of use remains very much with us, even with the end of the Cold War.

International law is also clear that it is unlawful to threaten to use weapons which it would be unlawful to use. Accordingly, we conclude that both the use and threat of use of nuclear weapons are unlawful and urge that the United States recognize such unlawfulness.

Background

The Cold War is over and the Soviet Union and threat of Communist domination long gone, but the extensive arsenals of nuclear weapons developed to deal with those threats are still very much with us.

During the Cold War, the United States substantially relied upon nuclear weapons for its national security. From the dawn of the nuclear era, the United States had permitted the Soviets to become superior in conventional weapons capability, relying instead on nuclear weapons and the policy of deterrence, whereby it threatened a nuclear response to a Soviet conventional attack.

Now the tables are turned. The United States is the pre-eminent conventional power threatened by nuclear and other weapons of mass destruction held by States far weaker in conventional weapons. In a sense, the United States no longer needs nuclear weapons, at least not in the way it did before.

Even more importantly, it has been recognized by a substantial portion of the civilian and military leadership of the United States for many decades that these weapons are essentially not usable; they are not even weapons. Their primary value is in the threat of use, a threat that was no longer credible even during the Cold War and that is of dubious effect against terrorist groups and rogue nations.

Perhaps counter-intuitively, the recognition of unlawfulness would make a difference. As the United States lawyer, arguing the point in the recent Nuclear Weapons Advisory case before the International Court of Justice, expressed it,

[E]ach of the Permanent Members of the Security Council has made an immense commitment of human and material resources to acquire and maintain stocks of nuclear weapons and their delivery systems If these weapons could not lawfully be used in individual or collective self-defense under any circumstances, there would be no credible threat of such use in response to aggression²

The 1998 detonation of nuclear devices by India and Pakistan,³ the continuing specter of nuclear trafficking from the disintegrated Soviet Union,⁴ and the increasing availability of long-range missiles capable of carrying nuclear weapons to the United States⁵ only highlight the

² Public Sitting of the International Court of Justice, November 15, 1995, at the Peace Palace, in the case in Legality of the Use by a State of Nuclear Weapons in Armed Conflict (Request for Advisory Opinion Submitted by the World Health Organization) and in Legality of the Threat or Use of Nuclear Weapons (Request for Advisory Opinion Submitted by the General Assembly of the United Nations), Michael J. Matheson arguing, at 78. The Advisory Opinion and certain other documents are available at <<http://www.icj-cji.org>>.

³ See *Pakistan Announces Test Halt*, CHICAGO TRIB., June 11, 1998, NEWS, at 1; <<http://www.fas.org/nuke/guide/>>.

⁴ See U.S. DEPARTMENT OF DEFENSE, PROLIFERATION: THREAT AND RESPONSE, *Former Soviet Union*, 10 (1997), set forth at <<http://www.defenselink.mil/pubs/prolif97/>>; *Weapons of Mass Destruction: Remarks by Defense Secretary William Perry at Georgetown University*, FED. NEWS SERVICE, Apr. 18, 1996; Frans Berkhout et al., *A Cutoff in the Production of Fissile Material*, INT'L SECURITY, vol. 19, No. 3, Winter 1994–1995, at 168; Jessica Eve Stern, *Moscow Meltdown: Can Russia Survive?*, INT'L SECURITY, Spring 1994, vol. 18, No. 4, at 41 (citing Office of Threat Assessment, *The Russian Mafia*, November 1, 1993); Brigid Schulte, *A Timeline of the Nuclear Age*, THE SEATTLE TIMES, August 9, 1995 (citing The Brookings Institution); Nisha Starcevic, *Biggest Find Yet of Bomb-Quality Plutonium in Germany*, ASSOCIATED PRESS, August 13, 1994.

⁵ See WILLIAM J. PERRY, SECRETARY OF DEFENSE, 1995 ANNUAL REPORT TO THE PRESIDENT AND THE CONGRESS 85 (U.S. Government Printing Office) [hereinafter 1995 ANNUAL REPORT OF THE SECRETARY OF DEFENSE]; Lisbeth Gronlund & David Wright, *What They Didn't Do*, BULL. OF THE ATOMIC SCIENTISTS, Nov./Dec. 1998, at 47

practical immediacy of the issue. Such immediacy is also indicated by the fact that several of the missiles launched by the United States in August 1998 against targets in Afghanistan and Sudan reportedly landed in Pakistan,⁶ and similar supposedly highly accurate modern missiles launched by the United States in the 1991 Gulf War⁷ and the 1999 Kosovo operation⁸ ended up hitting the wrong targets.

Recognition of the unlawfulness of the use of these weapons would enable the United States to take the lead de-legitimizing these weapons, as has happened with chemical and biological weapons.

It is a political and psychological phenomenon that a nation, like a person, must be ready to have a particular insight, to integrate it into an overall mindset. We submit that the illegality of the use of nuclear weapon is an idea whose time has come, and that this idea could have a transforming impact on risks inherent in international confrontations.

Ironically, the international law approach, rather than being utopian, may offer the best prospect for a breakthrough in our nation's dealing with these weapons. The delegitimization of nuclear weapons and perhaps eventually substantial denuclearization and regulation, as with chemical and biological weapons, ostensibly offer the prospect of greater security than the continuation of the regime of nuclear deterrence.

The Nuclear Weapons Advisory Opinion of the International Court of Justice

In 1994 the United Nations General Assembly voted to submit to the International Court of Justice, the judicial branch of the United Nations, for advisory opinion the question of whether the threat or use of nuclear weapons could ever be lawful. The World Health Organization submitted a similar request. Representatives of nations from throughout the world appeared and argued the matter.

Among the States appearing was the United States, which took the position it has maintained throughout the nuclear era: that the use of nuclear weapons is subject to the rule of law but cannot be evaluated in the abstract; rather, that each particular use must be examined individually.

Without even asserting the lawfulness of its high yield nuclear weapons making up the vast bulk of its arsenal, the United States drew the line of defense essentially at its relatively small number of low-yield precision nuclear weapons.

The ICJ, in its 1996 advisory opinion, mirrored the United States' non-defense of the lawfulness of the use of large scale nuclear weapons, but found itself unable to decide whether a more limited use of nuclear weapons could ever be lawful.

Specifically, the Court determined that, because of the potential of nuclear weapons to destroy civilization and the entire ecosystem of the planet, the use of nuclear weapons would generally be unlawful, but that it was not in possession of sufficient facts to evaluate whether use

⁶ See John Diamond, *US Strikes May Not Be The Last, Warns Pickering*, BIRMINGHAM POST, Aug. 22, 1998, at 8; Ian Mackinnon, *Pakistan Defuses US Cruise Missile*, THE SCOTSMAN, Aug. 25, 1998, at 8; *Pakistan—Cruise Missile Found Near Pakistan Nuclear Test Site*, FT ASIA INTELLIGENCE WIRE, Aug. 24, 1998.

⁷ See David Fulghum, *Clashes with Iraq Continue After Heavy Air Strike*, AVIATION WEEK & SPACE TECH., Jan. 25, 1993, at 38; *Hundreds of Bombs Miss But Experts Say Accuracy Better than in Previous Wars*, THE WASH. POST, Feb. 24, 1991.

⁸ See *As Strikes Mount, So Do Errors*, THE WASH. TIMES, May 11, 1999, at A1; Joyce Price, *Pentagon Regrets "Embassy Error,"* THE WASH. TIMES, May 9, 1999, at C10; Bill Gertz & Rowan Scarborough, *Inside the Ring*, THE WASH. TIMES, May 14, 1999, at A9.

of nuclear weapons (ostensibly, precision low-yield tactical ones) could be lawful in extreme circumstances of self-defense when a State's survival was at stake.

The Court stated that it did not have sufficient facts to determine the validity of the argument of the United States and other nuclear weapons States to the effect that highly accurate low-yield tactical nuclear weapons could be used in such a way as to limit and control their effects.

Thus, the Court in its decretal paragraphs—the “*dispositif*”—stated that the threat or use of nuclear weapons “would generally be contrary to the rules of international law applicable in armed conflict, and in particular the principles and rules of humanitarian law,” but that “in view of the current state of international law, and of the elements of fact at its disposal, the Court cannot conclude definitively whether the threat or use of nuclear weapons would be lawful or unlawful in an extreme circumstance of self-defense, in which the very survival of a State would be at stake.”⁹

The Court further stated:

95 ... [T]he principles and rules of law applicable in armed conflict—at the heart of which is the overriding consideration of humanity—make the conduct of armed hostilities subject to a number of strict requirements. Thus, methods and means of warfare, which would preclude any distinction between civilian and military targets, or which would result in unnecessary suffering to combatants, are prohibited. In view of the unique characteristics of nuclear weapons, to which the Court has referred above, the use of such weapons in fact seems scarcely reconcilable with respect for such requirements.¹⁰

Binding Nature of International Law

It is beyond question that international law, including the rules of the law of armed conflict applicable to the use of nuclear and other weapons, are the law of the land. The United States has long recognized this. Political though the area of potential use of nuclear weapons may be and central to national defense policy, it is subject to established rules of law.

The U.S. Constitution provides that treaties entered into by the United States are “the supreme Law of the Land.”¹¹ *The Air Force Manual on International Law* notes that “state and federal courts have declared international law to be part of the law of the land.”¹² The manual

⁹ Nuclear Weapons Advisory Opinion ¶ 105. E., at 36, 35 I.L.M. at 835.

Judges Weeramantry and Higgins in their dissenting opinions pointed to the ambiguity introduced by the Court's use of the word “generally.” See dissenting opinion of Judge Weeramantry to the Nuclear Weapons Advisory Opinion at 2, 35 I.L.M. at 80; dissenting opinion of Judge Higgins to the Nuclear Weapons Advisory Opinion at 5, 35 I.L.M. at 936.

¹⁰ Nuclear Weapons Advisory Opinion ¶ 95, at 32, 35 I.L.M. at 829. The Court's language—“scarcely reconcilable”—seems hedged, perhaps the product of drafting compromise. The Court went on to state:

Nevertheless, the Court considers that it does not have sufficient elements to enable it to conclude with certainty that the use of nuclear weapons would necessarily be at variance with the principles and rules of law applicable in armed conflict in any circumstance.

Id.

¹¹ UNITED STATES DEPARTMENT OF THE ARMY, THE LAW OF LAND WARFARE 7 (FM27-10/18 July 1956) with Change No. 1 (15 July 1976) [hereinafter THE LAW OF LAND WARFARE] (quoting U.S. CONST. Art VI, cl. 2). Our analysis of the applicable law is drawn in large measure from statements of that law by the United States.

¹² THE UNITED STATES DEPARTMENT OF THE AIR FORCE, INTERNATIONAL LAW—THE CONDUCT OF ARMED CONFLICT AND AIR OPERATIONS 1-5, n.26 (Air Force Pamphlet 110-31, 19 November 1976) [hereinafter THE AIR

FORCE MANUAL ON INTERNATIONAL LAW] (citing *Ware v. Hylton*, 3 U.S. (3 Dall.) 199 (1796); *Foster v. Neilson*, 27 U.S. (2 Pet.) 252, 314 (1829); and *Asakura v. City of Seattle*, 265 U.S. 332, 341 (1924)).

As to the legal effect of military manuals, THE LAW OF LAND WARFARE states that it is an “official publication” of the Army, but that those of its provisions which are not statutes or the text of treaties to which the United States is a party should be considered not as “binding” but as having “evidentiary value” as to custom and practice. THE LAW OF LAND WARFARE, *supra* note 11, at 3.

The manual further states: “The purpose of this Manual is to provide authoritative guidance to military personnel on the customary and treaty law applicable the conduct of warfare on land and to relationships between belligerents and neutral States.” *Id.* at 3.

THE NAVAL/MARINE COMMANDER’S HANDBOOK is to the same effect, stating that it has been held that military manuals, while not “legislative instruments” possessing “formal binding power,” are “persuasive statements of the law” ultimately to be recognized or not depending upon how accurately they reflect the law. UNITED STATES DEPARTMENT OF THE NAVY ANNOTATED SUPPLEMENT TO THE COMMANDER’S HANDBOOK ON THE LAW OF NAVAL OPERATIONS 1-2 n.2 (Naval Warfare Publication 9, 1987) (With Revision A (5 October 1989), this handbook was adopted by the U.S. Marine Corps as FLEET MARINE FORCE MANUAL (FM FM) 1-10) [hereinafter THE NAVAL/MARINE COMMANDER’S HANDBOOK] (citing THE HOSTAGES TRIAL (Wilhelm List et al), 11 TWC 1237-38, 8 LRTWC 51-52 (U.S. Military Tribunal, Nuremberg, July 8, 1947–Feb. 19, 1948)); The Peleus Trial, 1 LRTWC 19 (British Military Ct., Hamburg, 1945); The Belsen Trial, 2 LRTWC 148–49 (British Military Ct., Luneburg, 1945); The Abbage Ardenne Case (Trial of Brigadefurher Kurt Meyer), 4 LRTWC 110 (Canadian Military Ct., Ausrich, Germany, 1945); NWIP 10-2 ¶ 100 n.1; FM 27-10 ¶ 1; 15 LRTWC, DIGEST OF LAW AND CASES 21–22). THE NAVAL/MARINE COMMANDER’S HANDBOOK indicates that it is intended to be used by military personnel in the performance of their military duties:

This publication ... is intended for the use of operational commanders and supporting staff elements at all levels of command. It is designed to provide officers in command and their staffs with an overview of the rules of law governing naval operations in peacetime and during armed conflict. The explanations and descriptions in this publication are intended to enable the naval commander and his staff to comprehend more fully the legal foundations upon which the orders issued to them by higher authority are premised and to understand better the commander’s responsibilities under international domestic law to execute his mission within that law. This publication sets forth general guidance. It is not a comprehensive treatment of the law nor is it a substitute for the definitive legal guidance provided by judge advocates and others responsible for advising commanders on the law.

Id. at 1-2.

The handbook goes on to emphasize the extent to which it should be used in operational training of naval personnel: “Officers in command of operational units are encouraged to utilize this publication as a training aid for assigned personnel.” *Id.* at 2.

The handbook states that its provisions as to the law of armed conflict apply “to the conduct of U.S. naval forces during armed conflict.” *Id.* at 2. It states that the law of armed conflict set forth in the document are “of special concern to the naval commander during any period in which U.S. naval forces are engaged in armed conflict.” *Id.* at 1.

After stating that it sets forth the applicable international law, the handbook goes on to note the binding nature of international law on naval personnel: “At all times a commander shall observe, and require his command to observe, the principles of international law.” *Id.* at 4. The handbook further notes that this obligation overrides other naval regulations: “Where necessary to fulfillment of this responsibility, a departure from other provisions of Naval Regulations is authorized.” *Id.* at 4. A footnote to the foregoing emphasizes that violation of international law by naval personnel is punishable by court-martial. *See id.* at 4 n.8.

The Air Force has made similar statements as to the purpose and effects of military manuals. THE AIR FORCE COMMANDER’S HANDBOOK states, “This pamphlet informs commanders and staff members of their rights and duties under the law of armed conflict. It applies to all Air Force activities worldwide, and implements DOD Directives 5100.77, 10 July 1979”; UNITED STATES DEPARTMENT OF THE AIR FORCE, COMMANDER’S HANDBOOK ON THE LAW OF ARMED CONFLICT i (Air Force Pamphlet 110-34, 25 July 1980) [hereinafter THE AIR FORCE COMMANDER’S HANDBOOK]. THE AIR FORCE MANUAL ON INTERNATIONAL LAW, *supra*, similarly states, “This pamphlet is for the information and guidance of judge advocates and others particularly concerned with international law requirements applicable during armed conflict. It furnishes references and suggests solutions to a variety of legal problems but is not directive in nature. As an Air Force pamphlet, it does not promulgate official U.S. Government policy although it does refer to US, DOD and Air Force policies.” *Id.* at i.

states that the United States is bound to follow customary international law “not because a treaty requires it, but because international law imposes the obligation on all states.”¹³

Applicability to Nuclear Weapons of the Rules of the Law of War

The United States, while taking the position that there is no *per se* rule banning the use of nuclear weapons, acknowledges that the use of such weapons is subject to the law of armed conflict, including the rules of proportionality, necessity, moderation, discrimination, civilian immunity, neutrality, and humanity.¹⁴

Thus, in its memorandum to the International Court of Justice in connection with that Court’s consideration of the recent request by the U.N. General Assembly for an advisory opinion on the lawfulness of the use of nuclear weapons, the United States stated, “[T]he legality of use [of nuclear weapons] depends on the conformity of the particular use with the rules applicable to such weapons.”¹⁵

The Naval/Marine Commander’s Handbook states that the use of nuclear weapons “against enemy combatants and other military objectives” is subject to the following principles:

- (1) the right of the parties to the conflict to adopt means of injuring the enemy is not unlimited;
- (2) it is prohibited to launch attacks against the civilian population as such; and

The United States, in its presentation to the ICJ, relied on provisions contained in its military manuals. *See, e.g.,* Conrad K. Harper, Michael J. Matheson, Bruce C. Rashkow, John H. McNeill, *Written Statement of the Government of the United States of America* (June 20, 1995), submitted to the International Court of Justice, (The Hague, The Netherlands), in connection with the Request by the United Nations General Assembly for an Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons (the “U.S. ICJ Memorandum/GA App.”), *reprinted as Written Observations on the Request by the General Assembly for an Advisory Opinion*, 7 CRIM. L.F. 401, 416 n.49 (1996) (citing U.S. Army Field Manual 27-10, Change No. 1, THE LAW OF LAND WARFARE ¶ 40(a)).

¹³ THE AIR FORCE MANUAL ON INTERNATIONAL LAW, *supra* note 12, at 1-7.

¹⁴ *See* U.S. ICJ Memorandum/GA App., *supra* note 12, at 2, 7-47; THE NAVAL/MARINE COMMANDER’S HANDBOOK, *supra* note 12, at 10-1; THE AIR FORCE COMMANDER’S HANDBOOK, *supra* note 12, at 6-1. THE LAW OF LAND WARFARE, *supra* note 11, states that, in the absence of a customary rule of law or international convention restricting the employment of atomic weapons, the use of such weapons cannot be deemed unlawful, although the manual appears to recognize the subjugation of the use of such weapons to the principles of moderation and necessity. *Id.* at 18. *See also* THE AIR FORCE MANUAL ON INTERNATIONAL LAW, *supra* note 12, at 6-1 to 6-8; United States, Department of the Army, *International Law*, vol. II, 27-161-2, at 42, Pamp. 27-161-2 (Oct. 1962), *quoted in* ELLIOTT L. MEYROWITZ, PROHIBITION OF NUCLEAR WEAPONS: THE RELEVANCE OF INTERNATIONAL LAW 223 (Transnational Publishers, Inc. 1990).

¹⁵ *See* Conrad K. Harper (Legal Advisor, Department of State), Michael J. Matheson (Deputy Legal Advisor, Department of State), Bruce C. Rashkow (Assistant Legal Advisor, Department of State), and John H. McNeill (Senior Deputy General Counsel, Department of Defense), *Written Statement of the Government of the United States of America* (June 20, 1995), submitted to the International Court of Justice, The Hague, The Netherlands, in connection with the Request by the United Nations General Assembly for an Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons at 2, 8-14 (“U.S. ICJ Memorandum/GA App.”) (citing U.S. Army Field Manual 27-10, Change No. 1, THE LAW OF LAND WARFARE at 4 ¶ 40(a)). *See also* Conrad K. Harper, Michael J. Matheson, & Bruce C. Rashkow, *Written Statement of the Government of the United States of America* (June 10, 1994), submitted to the International Court of Justice, The Hague, The Netherlands, in connection with the Request by the World Health Organization for an Advisory Opinion on the Question of the Legality Under International Law and the World Health Organization Constitution of the Use of Nuclear Weapons by a State in War or Other Armed Conflict at 2, 16-21 (“U.S. ICJ Memorandum/WHO App.”).

(3) the distinction must be made at all times between persons taking part in the hostilities and members of the civilian population to the effect that the latter be spared as much as possible.¹⁶

The handbook describes these rules as the “three fundamental principles” of the law of armed conflict.¹⁷

The Air Force Commander’s Handbook, while stating that the United States “takes the position” that the use of nuclear weapons is not unlawful, confirms that such use is “governed by existing principles of international law.”¹⁸

The Air Force Manual on International Law, while stating that “the use of explosive nuclear weapons, whether by air, sea or land forces, cannot be regarded as violative of existing international law in the absence of any international rule of law restricting their employment,”¹⁹ similarly recognizes that such use is subject to the principles of the law of war generally.²⁰ The manual states that “[a]ny weapon may be used unlawfully, such as when it is directed at civilians and not at a military objective”²¹ or “to inflict unnecessary suffering.”²²

The manual states that, in comparing the military advantages to be secured by the use of a new weapon to the effects caused by the weapon, the following questions are relevant:

- (1) can the weapon be delivered accurately to the target;
- (2) would its use necessarily result in excessive injury to civilians or damage to civilian objects, so as to be termed an “indiscriminate weapon;”
- (3) would its effects be uncontrollable or unpredictable in space or time 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 so as to violate that prohibition.²³

The Army in its *International Law Manual* states that the provisions of international conventional and customary law that “may control the use of nuclear weapons” include:

- (1) Article 23(a) of the Hague Regulations prohibiting poisons and poisoned weapons;
- (2) the Geneva Protocol of 1925 which prohibits the use not only of poisonous and other gases but also of “analogous liquids, materials or devices;”
- (3) Article 23(c) of the Hague Regulations which prohibits weapons calculated to cause unnecessary suffering; and
- (4) the 1868 Declaration of St. Petersburg which lists as contrary to humanity those weapons which “needlessly aggravate the sufferings of disabled men or render their death inevitable.”²⁴

¹⁶ THE NAVAL/MARINE COMMANDER’S HANDBOOK, *supra* note 12, at 10-1.

¹⁷ *Id.* at 10-1.

¹⁸ THE AIR FORCE COMMANDER’S HANDBOOK, *supra* note 12, at 6-1.

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¹⁹ THE AIR FORCE MANUAL ON INTERNATIONAL LAW, *supra* note 12, at 6-5.

²⁰ *See id.* at 6-1 to 6-8.

²¹ *Id.* at 6-1.

²² *Id.* at 6-8.

²³ *Id.* at 6-7.

Some States have argued that States have an overriding right of self-defense, trumping the limitations of the law of armed conflict, and that the ICJ in its Nuclear Weapons Advisory Opinion included language suggesting that there might be an overriding right of self-defense.

Great Britain's attorney before the ICJ argued that the right of self-defense trumps the requirements of humanitarian law:

It was also said that no balance is possible between the suffering which would be caused by a use—any use—of a nuclear weapon and the military advantage which would be derived from that use. But such an abstract statement does not stand up to analysis. Let me take an example. A State or group of States is faced with invasion by overwhelming enemy forces. That State or group of States is certainly entitled to defend itself. If all the other means at their disposal are insufficient, then how can it be said that the use of a nuclear weapon must be disproportionate? Unless it is being suggested that there comes a point when the victim of aggression is no longer permitted to defend itself because of the degree of suffering which defensive measures will inflict. Such a suggestion is insupportable in logic and unsupported in practice.²⁵

Great Britain further argued:

But if the prohibition in Article 2, paragraph 4, extends to nuclear weapons, so too does the right of self-defense enshrined in Article 51. That is the most fundamental right of all, Mr. President, and it is preserved in terms which are general, not restrictive. It is impossible to argue that this fundamental, inherent right has been limited or abandoned on the basis of mere inferences drawn from other rules, whether conventional or customary. Moreover, the practice of those states vitally affected by such a rule shows that they entirely reject any such inference.²⁶

So also France argued that the law of war and particularly the rule of proportionality does not preclude a State's using whatever weapon is militarily "appropriate" to withstand an attack.²⁷

The United States, in its oral and written presentations to the ICJ, contrary to asserting such broad notions of the rights of self-defense and sovereignty, acknowledged, as noted above, the general applicability to the use of nuclear weapons of the rules of proportionality, necessity, moderation, discrimination, civilian immunity, neutrality, and humanity.²⁸

Thus, in its memorandum to the ICJ on the General Assembly application, the United States stated, as noted above, "As in the use of other weapons, the legality of use depends on the conformity of the particular use with the rules applicable to such weapons."²⁹ U.S. lawyer John McNeill similarly stated, "The United States has long shared the view that the law of armed

²⁴ United States, Department of the Army, *International Law*, vol. II, 27-161-2, at 42, Pamp. 27-161-2 (Oct. 1962), *quoted in* ELLIOTT L. MEYROWITZ, *PROHIBITION OF NUCLEAR WEAPONS: THE RELEVANCE OF INTERNATIONAL LAW* 223 (Transnational Publishers, Inc. 1990).

²⁵ ICJ Hearing, November 15, 1995, at 46–47.

²⁶ *Id.* at 37 (Sir Nicholas Lyell, arguing).

²⁷ Dissenting Opinion of Judge Weeramantry at 12, 35 I.L.M. at 886.

²⁸ *See* MOXLEY, *supra* note 1, Chapter 2, notes 6–8, 27–88, 101–135, and accompanying text. *See also* U.S. ICJ Memorandum/GA App. at 2, 8–14; Conrad K. Harper, Michael J. Matheson, & Bruce C. Rashkow, *Written Statement of the Government of the United States of America* (June 10, 1994), submitted to the International Court of Justice, The Hague, The Netherlands, in connection with the Request by the World Health Organization for an Advisory Opinion on the Question of the Legality Under International Law and the World Health Organization Constitution of the Use of Nuclear Weapons by a State in War or Other Armed Conflict at 2, 16–21.

²⁹ U.S. ICJ Memorandum/GA App. at 2. *See also id.* 7–47.

conflict governs the use of nuclear weapons—just as it governs the use of conventional weapons.”³⁰

The U.S. memorandum formulated the proportionality test as follows:

Whether an attack with nuclear weapons would be disproportionate depends entirely on the circumstances, including the nature of the enemy threat, the importance of destroying the objective, the character, size and likely effects of the device, and the magnitude of the risk to civilians.³¹

Addressing this same question from a different perspective, the I.C.J. noted that various States had argued, based on dicta in the *Lotus* and *Nicaragua* cases, that international law is based on sovereignty and consent, such that States are permitted to do anything that is not precluded by treaty or conventional law.³² The Court concluded that it did not have to reach this issue, since “the nuclear-weapon States appearing before it either accepted, or did not dispute, that their independence to act was indeed restricted by the principles and rules of international law, more particularly humanitarian law, as did the other States which took part in the proceedings.”³³

As to the right of self-defense, the Court stated that the question it was leaving open was that of the right of a state to use nuclear weapons in “an extreme circumstance of self-defense, in which [the State’s] very survival would be at stake.”³⁴

But then the Court, after noting that a State’s exercise of the right of self-defense must comply, *inter alia*, with the principle of proportionality, specifically stated that a “use of force that is proportionate under the law of self-defense, must in order to be lawful, also meet the requirements of the law applicable in armed conflict which comprise in particular the principles and rules of humanitarian law.”³⁵

The Court also quoted the statement on this point by the United Kingdom, “Assuming that a State’s use of nuclear weapons meets the requirements of self-defense, it must then be considered whether it conforms to the fundamental principles of the law of armed conflict regulating the conduct of hostilities.”³⁶ The Court further emphasized in the final paragraph of its decision that the various grounds set forth in the Court’s decision were to be read in the light of one another.³⁷

³⁰ ICJ Hearing, November 15, 1995, at 85. See Chapter 2, note 48 and accompanying text.

³¹ U.S. ICJ Memorandum/GA App. at 23 (citing the Army’s *THE LAW OF LAND WARFARE* at 5).

³² See Nuclear Weapons Advisory Opinion ¶¶ 21–80, at 12–13, 35 I.L.M. at 819–827.

³³ *Id.* ¶ 22, at 13, 35 I.L.M. at 820. See *MOXLEY*, *supra* note 1, Chapter 3, notes 98–99, 262–270, and accompanying text.

³⁴ Nuclear Weapons Advisory Opinion ¶ 97, at 33, 35 I.L.M. 831. See also *id.* ¶ 105, at 36, 35 I.L.M. at 831.

³⁵ *Id.* ¶ 42, at 18, 35 I.L.M. at 822.

Judge Weeramantry in his dissenting opinion develops at length the case for the subjugation of the right of self-defense to the overall requirements of the law of armed conflict. Dissenting opinion of Judge Weeramantry at 58–63, 35 I.L.M. 909–911.

³⁶ Nuclear Weapons Advisory Opinion ¶ 91, at 31, 35 I.L.M. at 829 (citing the written statement of the United Kingdom ¶ 3.44, at 40).

³⁷ The Court stated “that its reply to the question put to it by the General Assembly rests on the totality of the legal grounds set forth by the Court above (paragraphs 20 to 103), each of which is to be read in the light of the others. Some of these grounds are not such as to form the object of formal conclusions in the final paragraph of the Opinion; they nevertheless retain, in the view of the Court, all of their importance.” *Id.* ¶ 104, at 35, 35 I.L.M. at 831.

The Court, notwithstanding a certain ambiguity,³⁸ appears ultimately to have confirmed that all uses of force, including defensive ones of the most extreme sort, must comply with the law of armed conflict. We believe that the right of self-defense is subject to the rules of the law of armed conflict.

Rules of Proportionality, Necessity and Discrimination

Rule of Proportionality

The rule of proportionality prohibits the use of a weapon if its probable effects upon combatant or non-combatant persons or objects would likely be disproportionate to the value of the anticipated military objective.

The Naval/Marine Commander's Handbook recognizes the proportionality requirement as a customary rule of international law and describes the requirement as codified in the prohibition by Additional Protocol I of attacks “which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects ... which would be excessive in relation to the concrete and direct military advantage anticipated.”³⁹ The handbook states that it is not unlawful to cause “incidental injury or death to civilian objects, during an attack upon a legitimate military objective,” but that such effects “should not ... be excessive in light of the military advantage anticipated by the attack.”⁴⁰

Rule of Necessity

The rule of necessity provides that, in conducting a military operation, a State, even as against its adversary's forces and property, may use only such a level of force as is “necessary” or “imperatively necessary” to achieve its military objective, and that any additional level of force is prohibited as unlawful. The State must have an explicit military objective justifying each particular use of force in armed conflict and there must be a reasonable connection between that objective and the use of the particular force in question. If a military operation cannot satisfy this requirement, the State must use a lower level of force or refrain from the operation altogether.

This is a rule of customary international law memorialized in numerous conventions. Violations of this rule served as the basis of convictions at Nuremberg. It is a rule of reason, requiring that a judgment be made as much in advance as possible by appropriately responsible

³⁸ MOXLEY, *supra* note 1, at Chapter 3 notes 41–72, Chapter 29 notes 251–265, and accompanying text.

³⁹ THE NAVAL/MARINE COMMANDER'S HANDBOOK, *supra* note 12, at 5-7 and at 8-5 n.17. *See also* THE AIR FORCE MANUAL ON INTERNATIONAL LAW, *supra* note 12, at 5-9.

⁴⁰ THE NAVAL/MARINE COMMANDER'S HANDBOOK, *supra* note 12, at 8-5. *See also* THE AIR FORCE MANUAL ON INTERNATIONAL LAW, *supra* note 12, at 3-3.

THE NAVAL/MARINE COMMANDER'S HANDBOOK elaborates that the law “recognizes that a certain number of noncombatants may become *inadvertent* victims” and permits this *unavoidable* destruction “when not disproportionate to the military advantage to be gained.” *Id.* at 6-42 (citing STONE, LEGAL CONTROLS OF INTERNATIONAL CONFLICT 352 (1973); MCDUGAL & FELICIANO, LAW AND MINIMUM PUBLIC ORDER 72, 528 (1961); FM 27-10 at 3; Note, *Military Necessity in War Crimes Trials*, 29 BRIT. INT'L L. 442 (1953); GREENSPAN, THE MODERN LAW OF LAND WARFARE 279 (1959); and 3 HYDE, INTERNATIONAL LAW 1801 (1945)).

THE NAVAL/MARINE COMMANDER'S HANDBOOK further states that the use of force in self-defense against armed attack or the threat of imminent armed attack rests upon the elements of necessity and proportionality. *Id.* at 4-9 (citing RESTATEMENT (THIRD) §2, sec. 905(1)(a), cmt. 3, at 387; sec. 905(1)(b) & Reporters' Note 3, at 388–89; U.S. Navy Reg. 1973, art. 0915. 1973).

THE AIR FORCE COMMANDER'S HANDBOOK, *supra* note 12, adds that “every feasible precaution should be taken to keep civilian casualties and damage to a minimum.” *Id.* at 3-3.

decision-makers in light of the reasonably available facts. The State, in planning its military operations, is required to exercise all reasonable precautions to assure that the level of force to be used is within the scope of this rule. The protection of the rule runs to combatant as well as non-combatant persons and objects.

The rule precludes the use of a particular weapon if a less destructive weapon could reasonably be expected to achieve the objective, and outlaws the use of a weapon not capable of being regulated or not in fact regulated by the user. If the military objective is to take out a particular bridge and this can be accomplished through a direct attack on the bridge, it is unlawful to launch a massive attack against the entire county to take out the bridge. If the military objective could be achieved with conventional weapons, the use of nuclear weapons, with the appreciably higher likely levels of destruction, would generally be unlawful. If, on the other hand, it were necessary to destroy the county to take out the bridge, the necessity requirement would ostensibly be met if the other prerequisites were present, but, even then, if taking out the bridge had minor military value compared to the level of resultant devastation, the proportionality requirement would not be met and the strike would be prohibited.

The United States recognizes this rule. *The Naval/Marine Commander's Handbook* states that the law of war seeks to prevent “unnecessary suffering and destruction” and thereby permits “only that degree and kind of force ... required for the partial or complete submission of the enemy with a minimum expenditure of time, life and physical resources.”⁴¹ The handbook repeats that the employment of “any kind or degree of force not required” for that purpose “is prohibited”⁴² and quotes with approval the statement in *The Hostage Case*⁴³ that the destruction of property in war “to be lawful must be imperatively demanded by the necessities of war” and that there must be some “reasonable connection between the destruction of property and the overcoming of the enemy forces.”⁴⁴ The handbook emphasizes that the protection of this rule extends to both combatants and noncombatants.⁴⁵

Rule of Discrimination

The rule of discrimination prohibits the use of a weapon that cannot discriminate in its effects between military and civilian targets. This is a rule designed to protect civilian persons

⁴¹ THE NAVAL/MARINE COMMANDER'S HANDBOOK, *supra* note 12, at 5-2 to 5-4 (citing *The Hostage Case* (United States v. List), 11 TWC 1253-54 (1950); MCDUGAL & FELICIANO, LAW AND MINIMUM WORLD PUBLIC ORDER (1961) 525; *Statement of General Eisenhower*, Historical Research Center, Maxwell Air Force Base, AL, File 622.610-2, Folder 2, 1944-45, *reprinted in* SCHAFFER, WINGS OF JUDGMENT: AMERICAN BOMBING IN WORLD WAR II, at 50 (1985); RICHARDSON, MONTE CASSINO 158 (1984)). *See also* THE NAVAL/MARINE COMMANDER'S HANDBOOK, *supra* note 12, at 6-41; THE AIR FORCE MANUAL ON INTERNATIONAL LAW, *supra* note 12, at 6-1.

As to the demanding nature of the necessity requirement in the *jus ad bellum* context of self-defense, THE NAVAL/MARINE COMMANDER'S HANDBOOK quotes the requirement of U.S. Navy Regulations, 1973, article 0915, that the right of self-defense must be exercised only “as a last resort” and then only “to the extent *absolutely necessary* to accomplish the end required.” *Id.* at 4-10.

⁴² *Id.* at 5-6.

⁴³ *Id.* at 5-5 (citing United States v. List, 11 TWC 1253-54 (1950)).

⁴⁴ *Id.* at 5-4 to 5-5 n.5.

⁴⁵ *Id.* at 5-4. THE AIR FORCE MANUAL ON INTERNATIONAL LAW, *supra* note 12, relies upon this same statement of the rule by the U.S. Military Tribunal in *The Hostage Case*:

The destruction of property to be lawful must be imperatively demanded by the necessities of war. Destruction as an end in itself is a violation of international law. There must be some reasonable connection between the destruction of property and the overcoming of the enemy forces.

Id. at 15-5; 15-10 n.40 (citing *The Hostage Case*, United States v. List, 11 TRIALS OF WAR CRIMINALS BEFORE THE NUREMBERG MILITARY TRIBUNALS 1253-54 (1950)).

and objects. The law recognizes that the use of a particular weapon against a military target may cause unintended collateral or incidental damage to civilian persons and objects and permits such damage, subject to compliance with the other applicable rules of law, including the principle of proportionality. However, the weapon must have been intended for—and capable of being controlled and directed against—a military target, and the civilian damage must have been unintended and collateral or incidental.

Thus, if the weapon or its effects were not susceptible of being controlled and directed against a military target in the first place, the resultant damage to civilian persons and objects would not be unintended, collateral or incidental—and the use would be prohibited. Similarly, if the very purpose of the strike were to put pressure on the adversary through attacks on its population (the classic Cold War deterrence theory of “mutual assured destruction” or “MAD”), the strike would be unlawful.

The discrimination requirement is recognized by the United States. *The Air Force Commander’s Handbook* states that a weapon is not unlawful “simply because its use may cause incidental casualties to civilians, as long as those casualties are not foreseeably excessive in light of the expected military advantage,” but that weapons that are “incapable of being controlled enough to direct them against a military objective”⁴⁶ are unlawful. *The Air Force Manual on International Law* defines indiscriminate weapons as those “incapable of being controlled, through design or function,” such that they “cannot, with any degree of certainty, be directed at military objectives.”⁴⁷

The *Naval/Marine Commander’s Handbook* states that the law of war “is based largely on the distinction to be made between combatants and noncombatants”⁴⁸ and hence prohibits making noncombatants the “object of attack”⁴⁹ or targeting them “as such”⁵⁰ and requires that civilians be safeguarded against “injury not incidental” to attacks against military objectives.⁵¹

Two of the three “fundamental principles of the law of war” identified by the handbook focus upon the requirement of discrimination:

2. It is prohibited to launch attacks against the civilian population as such.
3. Distinctions must be made between combatants and noncombatants, to the effect that noncombatants be spared as much as possible.⁵²

The handbook states that the foregoing points “2” and “3” were customary rules of international law codified for the first time in Additional Protocol I, articles 51(2) and 57(1), respectively.⁵³

⁴⁶ THE AIR FORCE COMMANDER’S HANDBOOK, *supra* note 12, at 6-1.

⁴⁷ THE AIR FORCE MANUAL ON INTERNATIONAL LAW, *supra* note 12, at 6-3.

⁴⁸ THE NAVAL/MARINE COMMANDER’S HANDBOOK, *supra* note 12, at 5-9. The handbook defines “noncombatants” as “those individuals who do not form a part of the armed forces and who otherwise refrain from the commission or direct support of hostile acts.” *See id.*

⁴⁹ *Id.* at 5-10.

⁵⁰ *Id.* at 8-1. *See also* THE LAW OF LAND WARFARE, *supra* note 11, at 16.

⁵¹ THE NAVAL/MARINE COMMANDER’S HANDBOOK, *supra* note 12, at 5-10.

⁵² *Id.* at 8-1 (citations omitted). Principle No. 1 identified by the handbook is “The right of belligerents to adopt means of injuring the enemy is not unlimited.” *Id.* at 8-1.

⁵³ *Id.* at 8-1 n.3-4.

***Per Se* Unlawfulness Under Established Principles of International Law**

The Air Force Manual on International Law states that the use of a weapon may be unlawful based not only on “expressed prohibitions contained in specific rules of custom and convention,” but also on “those prohibitions laid down in the general principles of the law of war.”⁵⁴

Similarly, in discussing how the lawfulness of new weapons and methods of warfare is determined, the manual states that such determination is made based on international treaty or custom, upon “analogy to weapons or methods previously determined to be lawful or unlawful,” and upon the evaluation of the compliance of such new weapons or methods with established principles of law, such as the rules of necessity, discrimination and proportionality.⁵⁵

The manual notes that the International Military Tribunal at Nuremberg in the case of the *Major War Criminals* found that international law is contained not only in treaties and custom but also in the “general principles of justice applied by jurists and practiced by military courts.”⁵⁶

The Air Force Manual on International Law further states that the practice of States “does not modify” the legal obligation to comply with treaty obligations since such obligations are “contractual in nature.”⁵⁷

The Army’s *Law of Land Warfare* states “[t]he conduct of armed hostilities on land is regulated by the law of land warfare which is both written and unwritten.”⁵⁸

The United States recognizes “analogy” as well as “general principles” as sources of the law of armed conflict. *The Air Force Manual on International Law* states:

The law of armed conflict affecting aerial operations is not entirely codified. Therefore, the law applicable to air warfare must be derived from general principles, extrapolated from the law affecting land or sea warfare, or derived from other sources including the practice of states reflected in a wide variety of sources. Yet the US is a party to numerous treaties which affect aerial operations either directly or by analogy.⁵⁹

The manual notes that *per se* unlawfulness is not limited to prohibitions established in treaties or customary law:

[A] new weapon or method of warfare may be illegal, *per se*, if it is restricted by international law including treaty or international custom. The issue is resolved, or attempted to be resolved, by analogy to weapons or methods previously determined to be lawful or unlawful.⁶⁰

It seems clear that the use of nuclear weapons can be unlawful *per se* regardless of whether there is a treaty or custom establishing such unlawfulness.

We note that, unlike the statements of the rules of necessity, proportionality and discrimination, this point may be controversial. The United States argued before the ICJ that there is no *per se* rule banning the use of nuclear weapons because the United States has not

⁵⁴ THE AIR FORCE MANUAL ON INTERNATIONAL LAW, *supra* note 12, at 6-1, 6-9 n.3.

⁵⁵ *Id.* at 6-7.

⁵⁶ *Id.* at 1-6.

⁵⁷ *Id.* at 1-15 n.35.

⁵⁸ THE LAW OF LAND WARFARE, *supra* note 11, at 3.

⁵⁹ THE AIR FORCE MANUAL ON INTERNATIONAL LAW, *supra* note 12, at 1-7.

⁶⁰ *Id.* at 6-7.

consented to any such rule, and hence that each contemplated use of such weapons must be evaluated on an *ad hoc* basis.

The United States' essential position is that it is only bound by conventional law specifically agreed to by the United States and customary law established by the practice of the community of nations, including the nations specially involved (here, the nuclear powers), out of a sense of obligation. The United States concludes that, since it has not agreed to a convention specifically prohibiting the use of nuclear weapons and has not refrained from their use out of a sense of obligation, such use cannot be *per se* unlawful.

Conrad K. Harper, Legal Advisor of the United States Department of State, told the Court that its "starting point in examining the merits" should be "the fundamental principle of international law that restrictions on States cannot be presumed, but must be established by conventional law specifically accepted by them, or in customary law established by the conduct of the community of nations."⁶¹

Michael J. Matheson, the Deputy Legal Advisor, Department of State, in his presentation to the Court, made the same point: Restrictions upon States must "be found in conventional law specifically accepted by States, or in customary law generally accepted as such by the community of nations."⁶² Matheson relied upon the Court's statement in the *Nicaragua* case that:

"in international law there are no rules, other than such rules as may be accepted by the State concerned, by treaty or otherwise, whereby the level of armaments of a sovereign State can be limited."⁶³

We conclude that the U.S. position on this point, as presented to the ICJ, overlooks the existence of other sources of international law, including general principles of law—sources which, as discussed above, have been specifically recognized by the United States as potential bases of *per se* rules. The U.S. position before the ICJ ignored the fact that the United States has recognized that the broad rules of the law of armed conflict—such as the rules of proportionality, necessity, discrimination, and neutrality—apply to nuclear weapons⁶⁴ and that *per se* rules can arise from them.⁶⁵ The U.S. statements in its military manuals are compelling and hence a *per se* rule of unlawfulness can arise under established principles of international law.

⁶¹ ICJ Hearing, November 15, 1995, at 70. See MOXLEY, *supra* note 1, Chapter 2, notes 42–49 and accompanying text.

⁶² *Id.* at 74–75. See MOXLEY, *supra* note 1, Chapter 2, notes 43–45 and accompanying text.

⁶³ *Id.* (citing *Nicaragua v. United States* (1986 I.C.J. 135)).

⁶⁴ The United States has recognized these rules as arising under customary and treaty law and general principles of law. See MOXLEY, *supra* note 1, Chapter 2, notes 77, 88–91 (proportionality), 54–56 (necessity), 57–65 (moderation; discrimination), 111–119 (neutrality), and accompanying text.

The United States has recognized these rules as customary and generally accepted rules of law and as embodied in conventions. See, e.g., *id.* Chapter 1, notes 246–252 and accompanying text.

⁶⁵ See *id.* Chapter 29 notes 10–15 and accompanying text. In its arguments before the ICJ, the United States acknowledged that scientific evidence could justify a total prohibition of nuclear weapons if it demonstrated the unlawfulness of all such uses: "[S]cientific evidence could only justify a total prohibition on the use of nuclear weapons if such evidence covers the full range of variables and circumstances that might be involved in such uses." ICJ Hearing, November 15, 1995, at 90.

Uncontrollability as Connoting Unlawfulness

The United States has recognized that the rules of discrimination, necessity, and proportionality prohibit the use of weapons whose effects cannot be controlled by the user.

Uncontrollability under Rule of Discrimination

The Air Force Commander's Handbook states that weapons that are “incapable of being controlled enough to direct them against a military objective” are unlawful.⁶⁶ *The Air Force Manual on International Law* defines indiscriminate weapons as those “incapable of being controlled, through design or function,” such that they “cannot, with any degree of certainty, be directed at military objectives.”⁶⁷

In its military manuals the United States has acknowledged that the scope of this prohibition extends to the *effects* of the use of a weapon. *The Air Force Manual on International Law* states that indiscriminate weapons include those which, while subject to being directed at military objectives, “may have otherwise uncontrollable effects so as to cause disproportionate civilian injuries or damage.”⁶⁸ The manual states that “uncontrollable” refers to effects “which escape in time or space from the control of the user as to necessarily create risks to civilian persons or objects excessive in relation to the military advantage anticipated.”⁶⁹ It is noteworthy that this prohibition encompasses the causing of risks, not just injury.

As a “universally agreed illustration of ... an indiscriminate weapon,” *The Air Force Manual on International Law* cites biological weapons, noting that the uncontrollable effects from such weapons “may include injury to the civilian population of other states as well as injury to an enemy’s civilian population.”⁷⁰ *The Naval/Marine Commander's Handbook* states that such weapons are “inherently indiscriminate and uncontrollable.”⁷¹

The Air Force Manual on International Law further cites Germany’s World War II V-1 rockets, with their “extremely primitive guidance systems” and Japanese incendiary balloons, without any guidance systems.⁷² The manual states that the term “indiscriminate” refers to the “inherent characteristics of the weapon, when used, which renders (*sic*) it incapable of being directed at specific military objectives or of a nature to necessarily cause disproportionate injury to civilians or damage to civilian objects.”⁷³

As an example of an indiscriminate weapon, *The Air Force Commander's Handbook* similarly cites the use of unpowered and uncontrolled balloons to carry bombs, since such weapons are “incapable of being directed against a military objective.”⁷⁴

Uncontrollability under Rule of Necessity

The requirement that the level of force implicit in the use of a weapon be controllable and controlled by the user is a natural implication of the necessity requirement. If a State cannot control the level of destructiveness of a weapon, it cannot assure that the use of the weapon will involve only such a level of destructiveness as is necessary in the circumstances.

⁶⁶ See THE AIR FORCE COMMANDER’S HANDBOOK, *supra* note 12, at 6-1.

⁶⁷ THE AIR FORCE MANUAL ON INTERNATIONAL LAW, *supra* note 12, at 6-3.

⁶⁸ See *id.* at 6-3.

⁶⁹ *Id.*

⁷⁰ *Id.*

⁷¹ THE NAVAL/MARINE COMMANDER’S HANDBOOK, *supra* note 12, at 10-21.

⁷² THE AIR FORCE MANUAL ON INTERNATIONAL LAW, *supra* note 12, at 6-3.

⁷³ *Id.* at 6-9 n.7.

⁷⁴ THE AIR FORCE COMMANDER’S HANDBOOK, *supra* note 12, at 6-1.

The Air Force Manual on International Law recognizes as a basic requirement of necessity “that the force used is capable of being and is in fact regulated by the user.”⁷⁵

Uncontrollability under Rule of Proportionality

So also, if the State using a weapon is unable to control the effects of the weapon, it is unable to evaluate whether the effects would satisfy the requirement of being proportionate to the concrete and direct military advantage anticipated from the attack or to assure such limitation of effects.

The Air Force Manual on International Law notes that the requirement of proportionality prohibits “uncontrollable effects against one’s own combatants, civilians or property.”⁷⁶

We believe these statements of the law are not controversial. What the United States put in contention before the ICJ and what it generally argues, as reflected in its military manuals, is that, as a matter of fact, it is able to control the effects of nuclear weapons.⁷⁷

The Fact of Uncontrollability

If the United States were ever to use nuclear weapons, it would likely be multiple strategic weapons, and any use of nuclear weapons, in the circumstances in which such use would likely take place, would likely result in escalation and other uncontrollable effects.

U.S. Acknowledgment of Uncontrollability

The U.S. position appears to be inconsistent with the nature of nuclear weapons and their effects; the make-up of the U.S. nuclear force structure; the circumstances, if any, in which the United States would likely resort to nuclear weapons; the types of nuclear weapons it would likely use in such circumstances; the accuracy with which it could deliver the weapons; and the likely responses of targeted States and their allies.

Outside the courtroom, the United States recognizes the potential uncontrollability of the effects of nuclear weapons. This can be seen from the Chairman of the Joint Chief’s *Joint Pub 3-12, Doctrine for Joint Nuclear Operations*, setting forth the current operational planning for the integrated use by U.S. forces of nuclear weapons in conjunction with conventional weapons.⁷⁸

[T]here can be no assurances that a conflict involving weapons of mass destruction could be controllable or would be of short duration. Nor are negotiations opportunities and the capacity for enduring control over military forces clear.⁷⁹

As noted by Judge Shahabuddeen in his dissent in the Nuclear Weapons Advisory Decision, the United States, in ratifying the Treaty of Tlatelolco, subscribed to the following statement of preamble as to the indiscriminate and excessive injury caused by nuclear weapons:

The preamble to the 1967 Treaty of Tlatelolco, Additional Protocol II of which was signed and ratified by the five [nuclear weapons states, including the United States], declared that the Parties are convinced

⁷⁵ THE AIR FORCE MANUAL ON INTERNATIONAL LAW, *supra* note 12, at 1-6.

⁷⁶ *Id.* at 6-2. See also *id.* at 5-10.

⁷⁷ MOXLEY, *supra* note 1, Chapter 2, notes 67–73, 77, 88–89, 92–95 and accompanying text.

⁷⁸ JOINT CHIEFS OF STAFF, JOINT PUB 3-12, DOCTRINE FOR JOINT NUCLEAR OPERATIONS i, (Dec. 15, 1995), available at <http://www.dtic.mil/doctrine/jel/new_pubs/jp3_12.pdf>. See MOXLEY, *supra* note 1, at Chapters 26, 27; Chapter 2, note 75, Chapter 17, notes 38–53, Chapter 18, note 56, and accompanying text.

⁷⁹ DOCTRINE FOR JOINT NUCLEAR OPERATIONS, *supra* note 78, at i, I-6–7 (emphasis omitted).

“That the incalculable destructive power of nuclear weapons has made it imperative that the legal prohibition of war should be strictly observed in practice if the survival of civilization and of mankind itself is to be assured.

That nuclear weapons, whose terrible effects are suffered, indiscriminately and inexorably, by military forces and civilian population alike, constitute, through the persistence of the radioactivity they release, an attack on the integrity of the human species and ultimately may even render the whole earth uninhabitable.”⁸⁰

The extreme and disproportionate effects threatened by nuclear weapons are acknowledged by the U.S. military in their operational policy, training, and planning. The *Nuclear Weapons Joint Operations* manual states:

US nuclear forces serve to deter the use of WMD [“weapons of mass destruction,” including chemical, biological, and nuclear weapons] across the spectrum of military operations. From a massive exchange of nuclear weapons to limited use on a regional battlefield, US nuclear capabilities must confront an enemy with risks of unacceptable damage and disproportionate loss should the enemy choose to introduce WMD into a conflict.⁸¹

Similarly:

[S]omeday a nation may, through miscalculation or by deliberate choice, employ these weapons. ... [A]n opponent may be willing to risk destruction or disproportionate loss in following a course of action based on perceived necessity, whether rational or not in a totally objective sense. In such cases deterrence, even based on the threat of massive destruction, may fail.⁸²

The U.S. Nuclear Force Structure

The U.S. nuclear force structure is comprised predominantly of high kilotonnage strategic nuclear weapons threatening devastating effects. In its active arsenal, United States currently has some 7206 strategic versus 1070 tactical warheads,⁸³ and, of those tactical warheads, none are limited to 10 kilotons or less, the military’s outer limit for “low” yield nuclear weapons.⁸⁴

The United States has professedly de-emphasized nuclear weapons, particularly tactical nuclear weapons.⁸⁵ The Army and Marines have been de-nuclearized.⁸⁶ The Navy no longer

⁸⁰ Treaty for the Prohibition of Nuclear Weapons in Latin America (Treaty of Tlatelolco), Feb. 14, 1967, 22 U.S.T. 762, 634 U.N.T.S. 762, *quoted in* dissenting opinion of Judge Shahabuddeen at 5–6, 35 I.L.M. at 863–864..

⁸¹ DOCTRINE FOR JOINT NUCLEAR OPERATIONS, *supra* note 78, at I-2 (emphasis omitted).

⁸² *Id.* at I-2 (emphasis omitted).

⁸³ See MOXLEY, *supra* note 1, at Chapter 19, notes 7–8 and accompanying text and charts.

⁸⁴ See *id.*, *supra* note 1, at Chapter 19, notes 20–25 and accompanying text and yield chart. See also JOINT CHIEFS OF STAFF, JOINT PUB 3-12.1, DOCTRINE FOR JOINT THEATER NUCLEAR OPERATIONS GL-3 (Feb. 9, 1996) (prepared under direction of the Chairman of the Joint Chiefs of Staff), as set forth at <http://www.dtic.mil/doctrine/jel/new_pubs/jp3_12_1.pdf>; JOHN BURROUGHS, THE (IL)LEGALITY OF THREAT OF USE OF NUCLEAR WEAPONS 76 n.89 (1997).

⁸⁵ See MOXLEY, *supra* note 1, at Chapters 18, 19; Chapter 3, note 95, Chapter 18, notes 19–27, Chapter 19, notes 7–16, and accompanying text; 1995 ANNUAL REPORT TO THE PRESIDENT AND THE CONGRESS, *supra* note 5, at 10, 86–87; Secretary William S. Cohen, *Speech to Coalition to Advance Sustainable Technology*, at Denver International Airport, Denver, Colo., June 26, 1998.

In the 1960s, when the number of warheads peaked at over 32,000, the U.S. forces consisted predominantly of tactical forces. By 1975, the United States maintained 10,311 tactical nuclear weapons overseas. See ARKIN ET AL.,

deploys non-strategic nuclear weapons⁸⁷ and the Air Force has dramatically cut its tactical nuclear stockpile.⁸⁸ The United States has also passed legislation outlawing research and development that could lead to production of a low-yield nuclear weapon, defined for that purpose as one with a yield of less than five kilotons.⁸⁹

Volatile and Extreme Circumstances of Any Possible Use

The United States recognizes the extreme risks inherent in the use of nuclear weapons. Its essential policy is one of deterrence, based on the hope that the threat of the use of such weapons will preclude the need ever to use them. The United States would ostensibly only intentionally resort to nuclear weapons, if at all, in the most serious and extreme of military situations threatening the most fundamental interests of the United States or possibly its allies, circumstances that would by their nature be extremely volatile, pressured, and threatening to all concerned.⁹⁰

Such a situation would ostensibly only arise in the context of an adversary capable of inflicting severe injury on the United States or possibly its allies and with a perceived determination to do so.⁹¹ If the situation were deemed imperative enough to require nuclear weapons, it would likely be deemed to require the greater destructive capability of strategic nuclear weapons.

Particularly given the vagaries of targeting just one or a small number of missiles, the limitations of experience with the use of nuclear weapons and their delivery mechanisms, and the inherent volatility of the situation that by definition would exist, the United States, if it were to resort to nuclear weapons at all, would almost certainly do so in a way conducive to having

TAKING STOCK: WORLDWIDE NUCLEAR DEPLOYMENTS 1998 16 (NRDC 1998); COCHRAN, ARKIN & HOENIG, 1 NUCLEAR WEAPONS DATABOOK 3–4, 38 (NRDC 1984). By 1983, when the U.S. arsenal was at 26,000, the numbers of tactical and strategic weapons were about even, with tactical still slightly outnumbering strategic weapons. COCHRAN ET AL., *supra*, at 4, 15, 39, 102.

⁸⁶ See MOXLEY, *supra* note 1, at Chapter 18, notes 19–27, Chapter 19, notes 7–10, 25, and accompanying text and charts. See also ARKIN ET AL., TAKING STOCK, *supra* note 85; MORRISON & TSIPIS, REASON ENOUGH TO HOPE, AMERICA AND THE WORLD OF THE 21ST CENTURY (M.I.T. Press 1998); COCHRAN ET AL., *supra* note 85, at 3–4, 38; 1995 ANNUAL REPORT TO THE PRESIDENT AND THE CONGRESS, *supra* note 5, at 83.

⁸⁷ See MOXLEY, *supra* note 1, at Chapter 18, notes 22–23, Chapter 19 notes 8–10, 25, and accompanying text and charts. See also Robert S. Norris & William M. Arkin, *US Nuclear Stockpile, July 1998*, BULL. OF THE ATOMIC SCIENTISTS, vol. 54, no. 4, Jul. 1998; MORRISON & TSIPIS, REASON ENOUGH TO HOPE, *supra* note 86; 1995 ANNUAL REPORT TO THE PRESIDENT AND THE CONGRESS, *supra* note 5, at 83.

⁸⁸ See MOXLEY, *supra* note 1, at Chapter 18, notes 22–23, Chapter 19, notes 8–10, and accompanying text. See also ARKIN ET AL., TAKING STOCK, *supra* note 85; 1995 ANNUAL REPORT TO THE PRESIDENT AND THE CONGRESS, *supra* note 5, at 83.

⁸⁹ See National Defense Authorization Act for Fiscal Year 1994, Pub Law, 103-160, 30 November 1993; § 3136 of P.L. 103-160; 42 USCS § 2121 (1998) Prohibition on Research and Development of Low-Yield Nuclear Weapons, Act. Nov. 30, 1993, P.L. 103-160, Div C. Title XXX, Subtitle C § 3136, 107 Stat. 1946; MOXLEY, *supra* note 1, at Chapter 3, notes 48, 95, Chapter 19, notes 11–16, and accompanying text.

⁹⁰ See MOXLEY, *supra* note 1, at Chapter 2, notes 78–85, Chapter 3, notes 88–94, 96, Chapter 17, notes 5–10, 25–27, Chapter 18, notes 34–35, 37, and accompanying text. See also NUCLEAR WEAPONS SYSTEMS SUSTAINMENT PROGRAMS (updated, 16 Jun 1998) <<http://www.defenselink.mil/pubs/dswa/>>; DOCTRINE FOR JOINT NUCLEAR OPERATIONS, *supra* note 78, at I-4, III-8; dissenting opinion of Judge Weeramantry at 27, 35 I.L.M. at 893–915.

⁹¹ See MOXLEY, *supra* note 1, at Chapter 2, note 91; Chapter 3, note 213, Chapter 16, notes 14–15, Chapter 27, notes 79–83, and accompanying text. See also dissenting opinion of Judge Higgins at 3, 35 I.L.M. at 936; *The History of the U.S. Strategic “Doctrine,” 1945–1980*, THE J. OF STRATEGIC STUDIES, Dec. 1980; DOCTRINE FOR JOINT NUCLEAR OPERATIONS, *supra* note 78, at I-1.

maximum impact on the enemy, and hence would likely strike with multiple nuclear weapons.⁹² Any one weapon could fail or miss its target.

The pressure on a nuclear State to “use ‘em or lose ‘em” in a major nuclear confrontation,⁹³ given the attractiveness of nuclear assets as targets and the inevitable escalation risks, as well as the risk that an adversary might be in a “launch on warning mode,”⁹⁴ would foster the early use of multiple nuclear weapons, particularly fixed base “sitting duck” nuclear weapons and other vulnerable such weapons.⁹⁵

The circumstances in which the United States might actually resort to nuclear weapons would be unlikely in the end to be logical or controlled, and the likely bias would be towards over-use. Threat would have led to counter-threat and events, even technology, would have taken on a life of their own, contrary probably to either side’s desires or expectations. The enemy’s response and the circumstances of the fog of war, misperception, failure of command and control, and human and equipment failure would likely be driving events. Rationality, even self-preservation, would have been left behind.⁹⁶

Use of Tactical Nuclear Weapons Unlikely

The United States, in defending the lawfulness of the use of nuclear weapons before the ICJ, argued that the use of a limited number of low-yield nuclear weapons could be used lawfully in non-urban areas. Such hypothetical low-yield surgical strikes at remote targets not precipitating escalation do not appear to be realistic in light of the full range of relevant facts.

While a very limited low-yield tactical nuclear strike against, say, a hardened underground WMD facility, such as Libya’s chemical weapons production facility at Tarhunah,⁹⁷ might seem plausible, the United States either has or could develop a conventional capability to deal with such targets, and hence such use could not be deemed militarily or legally necessary.⁹⁸

⁹² See MOXLEY, *supra* note 1, at Chapter 16, notes 15–18, 39–46, Chapter 27, note 83, and accompanying text. See also DOCTRINE FOR JOINT NUCLEAR OPERATIONS, *supra* note 78, at II-6; David Alan Rosenberg, *A Smoking Radiating Ruin at the End of Two Hours: Documents on American Plans for Nuclear War with the Soviet Union, 1954–55*, INT’L SECURITY, vol. 2, no. 3, Winter 1981–1982, at 3; David Alan Rosenberg, *The Origins of Overkill: Nuclear Weapons and American Strategy, 1945–1960*, INT’L SECURITY, vol. 7, no. 4, Spring 1993, at 3.

⁹³ See MOXLEY, *supra* note 1, at Chapter 2, notes 86–87, Chapter 16, notes 29–30, 86–87, Chapter 22, notes 5–6, and accompanying text. See also DOCTRINE FOR JOINT THEATER NUCLEAR OPERATIONS, *supra* note 84, at ix, I-5–6.

⁹⁴ See MOXLEY, *supra* note 1, at Chapter 15, notes 24–25, Chapter 22, notes 5–6, and accompanying text.

⁹⁵ See *id.* at Chapter 15, notes 24–25, 121, Chapter 16, note 8, Chapter 22, notes 5–6, and accompanying text. See also Spurgeon M. Keeny, Jr. & Wolfgang K. H. Panofsky, *MAD versus NUTS: Can Doctrine or Weaponry Remedy the Mutual Hostage Relationship of the Superpowers?*, 60 FOREIGN AFF. 287, 294 (Winter 1981–1982); Victor Utgoff, *In Defense of Counterforce*, INT’L SECURITY, vol. 6, no. 1, Spring 1982, 44–60.

⁹⁶ See MOXLEY, *supra* note 1, at Chapter 15, note 24; Chapter 18, notes 54–55, Chapter 20, note 21, Chapter 22, notes 6–7, Chapter 25, notes 9–10, and accompanying text. See also Paul Bracken, *War Termination*, in MANAGING NUCLEAR OPERATIONS 197 (Ashton B. Carter et al. eds., 1987); PAUL BRACKEN, THE COMMAND AND CONTROL OF NUCLEAR FORCES 198 (1983); HERMAN KAHN ET AL., WAR TERMINATION ISSUES AND CONCEPTS, FINAL REPORT 197–214 (1968); ROBERT S. MCNAMARA, JAMES G. BLIGHT, & ROBERT K. BRIGHAM, ARGUMENT WITHOUT END: IN SEARCH OF ANSWERS TO THE VIETNAM TRAGEDY 9–15 (1999); DOCTRINE FOR JOINT OPERATIONS, at I-2.

⁹⁷ See MOXLEY, *supra* note 1, at Chapter 27, notes 75–77, Chapter 28, notes 54–72, and accompanying text. See also *Use of Nuclear Arms Still Viable in Some Cases, Says US Agency*, JANE’S DEFENCE WEEKLY, vol. 28, no. 8, Aug. 27, 1997, at 3. *USA Seeks More Protection Against WMD*, JANE’S DEFENCE WEEKLY, vol. 29, no. 21, p. 13, May 27, 1998; Robert Waller, *Libyan Chemical Warfare Raises the Issue of Pre-emption*, JANE’S INTELLIGENCE REV., November 1, 1996.

⁹⁸ See MOXLEY, *supra* note 1, at Chapter 12, notes 15–16; Chapter 18, notes 28–29, Chapter 28, notes 5, 13, 47, 68–70, and accompanying text. See also National Defense Panel, *Transforming Defense: National Security in the 21st Century* 51 (Dec. 1997); 1995 ANNUAL REPORT TO THE PRESIDENT AND THE CONGRESS, *supra* note 5, 85.

The same is true of virtually any imaginable threat by a “rogue nation” to use nuclear, chemical or biological weapons. With the modern high technology revolution, our conventional weapons are sufficient not only to deter any threat but also to address virtually any military need, including virtually any threat that might otherwise have been the basis of using tactical nuclear weapons.⁹⁹

In any event, even the most limited of uses of the smallest of tactical nuclear weapons, in the circumstances in which such use would likely take place, would likely precipitate escalatory nuclear, chemical or biological attacks from the target state or one of its allies or some other adversary of the United States,¹⁰⁰ whether because the enemy or some other State:¹⁰¹

- perceived the strike as a major strategic attack or anticipated such a strike;¹⁰²
- saw the crossing of the nuclear threshold as the abandonment of restraint;¹⁰³
- felt the need to demonstrate its own resolve and national standing or to warn the United States against further escalation;¹⁰⁴

⁹⁹ See MOXLEY, *supra* note 1, at Chapter 18, notes 38–40, 50–52, 63–64, Chapter 28, notes 47, 53–72, and accompanying text. See also *Prepared Statement of Secretary of Defense William S. Cohen to the Senate Armed Forces Committee, Feb. 3, 1998*; *New Defense Strategy: Shape, Respond, Prepare*, DEFENSE ISSUES, vol. 13, no. 13, <<http://www.defenselink.mil/speeches/1998/t19980203-secdef.html>>; William J. Perry, *Desert Storm and Deterrence*, FOREIGN AFF., vol. 70 no. 4, Fall 1991, at 66; NATIONAL DEFENSE PANEL, TRANSFORMING DEFENSE: NATIONAL SECURITY IN THE 21ST CENTURY 51 (Dec. 1997).

Recent statements of U.S. policy have further confirmed the extent to which nuclear deterrence is today directed against a potential adversary’s nuclear as opposed to conventional assets and aspirations. See JOHN M. SHALIKASHVILI, CJCS, NATIONAL MILITARY STRATEGY: SHAPE, RESPOND, PREPARE NOW—A MILITARY STRATEGY FOR A NEW ERA (1997), <<http://www.dtic.mil/jcs/nms>>; WILLIAM S. COHEN, REPORT OF THE QUADRENNIAL DEFENSE REVIEW, MAY 1997, § III, Defense Strategy, <<http://www.fas.org/man/docsqdr/sec3.html>>.

¹⁰⁰ See MOXLEY, *supra* note 1, at Chapter 25; Chapter 1, notes 183, 270–273; Chapter 2, notes 14–15, 71–87; Chapter 3, notes 31, 46, 89–90; Chapter 4, note 50; Chapter 15, note 22, and accompanying text. See also THE AIR FORCE COMMANDER’S HANDBOOK, *supra* note 12, at 8-1; DOCTRINE FOR JOINT NUCLEAR OPERATIONS, *supra* note 78, at I-3–6; DOCTRINE FOR JOINT THEATER NUCLEAR OPERATIONS, *supra* note 84, at ix, III-7–8; *Legality of the Threat or Use of Nuclear Weapons*, International Court of Justice, Advisory Opinion, General List ¶ 94 at 32 (July 8, 1996) [hereinafter Nuclear Weapons Advisory Opinion]; declaration of President Bedjaoui ¶ 22, 35 I.L.M. at 1345; dissenting opinion of Judge Weeramantry at 27, 59, 35 I.L.M. at 909, 893.

¹⁰¹ See MOXLEY, *supra* note 1, at Chapter 3, notes 151–153, Chapter 27, notes 2–5, 61, 68–85, and accompanying text. See also U.S. Congress, Office of Technology Assessment, *Proliferation of Weapons of Mass Destruction, Assessing the Risks* 61, 100 (1993) (report prepared at request of Congress “to assist Congress in its efforts to strengthen and broaden U.S. policies to control the proliferation of weapons of mass destruction”); dissenting opinion of Judge Schwebel at 3, 12, 35 I.L.M. 842; U.S. DEPARTMENT OF DEFENSE, PROLIFERATION: THREAT AND RESPONSE *Middle East and North Africa* 10 (1997).

For a review of statements of civilian, military and policy leaders of the United States throughout the nuclear era as to the lack of military usefulness of nuclear weapons, see MOXLEY, *supra* note 1, at Chapter 24. For similar statements as to the likelihood that even the most limited use of nuclear weapons would lead to escalation to higher levels of such use, see *id.* at Chapter 25. For a discussion of the risks of escalation inherent in the proliferation of chemical and biological weapons, see *id.* Chapter 27.

¹⁰² See MOXLEY, *supra* note 1, at Chapter 20; Chapter 2, notes 83–84, Chapter 3, notes 88–90, Chapter 16, notes 35–36, Chapter 18, note 56, Chapter 25, notes 18, 39, and accompanying text. See also DOCTRINE FOR JOINT NUCLEAR OPERATIONS, *supra* note 78, at I-5–6; dissenting opinion of Judge Weeramantry, 35 I.L.M. at 909; Paul Bracken, *War Termination, in* MANAGING NUCLEAR OPERATIONS 197 (1987); PETER PRINGLE & WILLIAM ARKIN, S.I.O.P., THE SECRET U.S. PLAN FOR NUCLEAR WAR 193–94 (1983).

¹⁰³ See MOXLEY, *supra* note 1, at Chapter 1, note 34, Chapter 3, note 95, Chapter 16, notes 36–38, Chapter 22, note 22, Chapter 25, notes 34, 45, Chapter 26, note 1, and accompanying text.

¹⁰⁴ See *id.* at Chapter 2, notes 15, 78, 83, Chapter 23, note 5, Chapter 25, note 9, and accompanying text. See also DOCTRINE FOR JOINT THEATER NUCLEAR OPERATIONS, *supra* note 84, at III-7–8; *United Kingdom Nuclear*

- felt the need to use its own nuclear weapons before they were destroyed by a further U.S. strike;¹⁰⁵
 - resolved to destroy U.S. nuclear weapons before more could be launched;¹⁰⁶
 - felt it could control escalation, going only one step up the escalatory ladder;¹⁰⁷
- or
- was driven by bloodlust or suicidal vengefulness or human or equipment failure or cultural factors or the like.¹⁰⁸

The nuclear response by the adversary, or even the likelihood of such a response, would likely lead to escalating nuclear strikes by the United States for the same types of reasons that would have driven the enemy's actions.¹⁰⁹

Doctrine: Deterrence After The INF Treaty, in UNITED NATIONS DEPARTMENT FOR DISARMAMENT AFFAIRS, NUCLEAR WEAPONS: A COMPREHENSIVE STUDY 158–59 (1991) [hereinafter UNITED NATIONS DEPARTMENT].

¹⁰⁵ See MOXLEY, *supra* note 1, at Chapter 2, notes 86–87, Chapter 15, notes 24–25, Chapter 18, note 55, Chapter 22, note 32, Chapter 25, notes 1–3, 37, 40, Chapter 27, note 7, and accompanying text. See also UNITED NATIONS DEPARTMENT, *supra* note 104, at 116; DOCTRINE FOR JOINT THEATER NUCLEAR OPERATIONS, *supra* note 84, at ix; Bruce M. Russett, *The Doctrine of Deterrence*, in CATHOLICS AND NUCLEAR WAR 149, 161 (1983); Steven E. Miller, *The Case Against a Ukrainian Nuclear Deterrent*, FOREIGN AFF., vol. 72, no. 3, Summer 1993, at 67, 71.

¹⁰⁶ See MOXLEY, *supra* note 1, at Chapter 2, notes 78–82, Chapter 15, notes 24, 25, and accompanying text. See also DOCTRINE FOR JOINT NUCLEAR OPERATIONS, *supra* note 78, at III-8.

¹⁰⁷ See MOXLEY, *supra* note 1, at Chapter 2, notes 87, 134, Chapter 16, notes 1–11, 30, Chapter 17, notes 47–59, Chapter 25, notes 21–25, 45, and accompanying text. See also ICJ Hearing, November 15, 1995, at 86; BERNARD BRODIE, THE ABSOLUTE WEAPON: ATOMIC POWER AND WORLD ORDER 70–77 (1946); SECRETARY OF DEFENSE JAMES R. SCHLESINGER, 1975 DEPARTMENT OF DEFENSE ANNUAL REPORT, DETERRENCE, ASSURED DESTRUCTION, AND STRATEGIC OPTIONS 32–38; Secretary of Defense Robert McNamara, *Defense Arrangements of the North Atlantic Community* (Department of State Bulletin, 9 July 1962) in AMERICAN DEFENSE POLICY 295 (1990); DOCTRINE FOR JOINT NUCLEAR OPERATIONS, *supra* note 78, at i, I-1–2; *Hearings before the Special Panel on Arms Control and Disarmament of the Procurement and Military Nuclear Systems Subcommittee of the Committee on Armed Services of the House of Representatives*, 98th Cong. 282 (1985) (statement of Adm. Noel Gayler, U.S.N (Retired), American Committee on East-West Accord); *Hearings on The Role of Arms Control in U.S. Defense Policy, before the Committee on Foreign Affairs, House of Representatives*, 98th Cong. 2nd Sess. (June 20, 21, 26; July 25, 1984), at 158; Robert S. McNamara, *The Military Role of Nuclear Weapons: Perceptions and Misperceptions*, in THE NUCLEAR CONTROVERSY, A FOREIGN AFFAIRS READER 90 (1985); HAROLD BROWN, 1976 DEPARTMENT OF DEFENSE ANNUAL REPORT TO THE PRESIDENT AND CONGRESS; General A. S. Collins, Jr., *Theater Nuclear Warfare: The Battlefield*, in AMERICAN DEFENSE POLICY 359–60 (J.F. Reichart & S. R. Stern 5th ed. 1982); CENTER FOR DEFENSE INFORMATION, NUCLEAR WAR QUOTATIONS at 42.

¹⁰⁸ See MOXLEY, *supra* note 1, at Chapter 3, notes 77–78, 92, Chapter 15, note 108, Chapter 18, notes 47–52, Chapter 22, notes 26–37, Chapter 25, note 9, Chapter 27, note 7, Chapter 16, notes 48–50, and accompanying text. See also dissenting opinion of Judge Weeramantry at 60, 35 I.L.M. at 910 (citing *Risks of Unintentional Nuclear War*, BULL. OF THE ATOMIC SCIENTISTS, Vol. 38, p. 68, June 1982); Carl Sagan, *Nuclear War and Climatic Catastrophe: Some Policy Implications*, 62 FOREIGN AFF. 257, 259–261 (Winter 1983/1984); Ashton B. Carter, *Sources of Error and Uncertainty*, in MANAGING NUCLEAR OPERATIONS 611–12, 625 (1987); UNITED NATIONS DEPARTMENT, *supra* note 104, at 116; *Proliferation of Weapons of Mass Destruction: Assessing the Risks*, *supra* note 101, at 70; DOCTRINE FOR JOINT NUCLEAR OPERATIONS, *supra* note 78, at I-2; ROBERT S. MCNAMARA, JAMES G. BLIGHT, & ROBERT K. BRIGHAM, ARGUMENT WITHOUT END: IN SEARCH OF ANSWERS TO THE VIETNAM TRAGEDY 9–15 (1999); Pastoral Letter on War and Peace, The Challenge of Peace: God's Promise and Our Response (May 3, 1983), at 48; *The Consequences of Nuclear War on the Global Environment, Hearing Before the Subcommittee on Investigations and Oversight of the Committee on Science and Technology*, 97th Cong. (1982) (Resolution of April 27, 1982, statement of Dr. Sidney D. Drell).

¹⁰⁹ See MOXLEY, *supra* note 1, Chapter 17, notes 1–21, Chapter 27, notes 1–5, Chapter 30 notes 58–66, and accompanying text. See also LT. COL. JERRY M. SOLLINGER, IMPROVING US THEATER NUCLEAR DOCTRINE: A CRITICAL ANALYSIS (1983); PROLIFERATION: THREAT AND RESPONSE, *supra* note 101, at *Middle East and North*

Given the fog of war and the inherent uncertainties as to the enemy's perception of the attack and reaction thereto, a low level nuclear attack would have all the disadvantages of crossing the nuclear Rubicon, including substantially the same risks of precipitating escalation, without delivering the potential firepower of a strategic attack and without knocking out some of the enemy's WMD capability.

Thus, if the strike was going to be perceived as a major nuclear attack, eliciting a response as if it were such an attack, it might as well be such an attack.

Uncontrollability of Risks as to Likely Escalation

The U.S. military's recognition of the potential need for preemptive strikes against enemy delivery systems highlights the risks of escalation. As reflected in the *Doctrine for Joint Theater Nuclear Operations*, "Operations must be planned and executed to destroy or eliminate enemy WMD delivery systems and supporting infrastructure before they can strike friendly forces."¹¹⁰

Also inherently of an escalatory nature is the U.S. nuclear targeting doctrine of decapitation, as reflected in the *Joint Theater Nuclear Operations* manual, whereby the command and control centers of an opposing nation are "facilities that may be likely targets for nuclear strikes:"

Enemy combat forces and facilities that may be likely targets for nuclear strikes are:

- WMD and their delivery systems, as well as associated command and control, production, and logistical support units;
- Ground combat units and their associated command and control and support units.¹¹¹

The *Joint Theater Nuclear Operations* manual notes that "there may be a rapid escalation" once strikes against nuclear assets begin to affect "the forces available for nuclear employment."¹¹²

The military's policies of concentration of force and redundant targeting, including "layering"¹¹³ and "cross-targeting,"¹¹⁴ potentially involving the use of multiple nuclear weapons, are inherently escalatory.

The quality of decisions being made will be affected by the severe time constraints caused by such factors as "the relatively short flight time of tactical missiles and potential increased uncertainty of mobile offensive force target locations."¹¹⁵

Africa 14, quoting Secretary of Defense William J. Perry; William M. Arkin & Hans Kristensen, *Dangerous Directions*, BULL. OF THE ATOMIC SCIENTISTS, vol. 54, no. 2, Mar. 1, 1998.

¹¹⁰ DOCTRINE FOR JOINT THEATER NUCLEAR OPERATIONS, *supra* note 84, at ix (emphasis omitted). See MOXLEY, *supra* note 1, at Chapter 3, notes 86–87 and accompanying text. See also *id.* Chapter 26, notes 12–15 and accompanying text, for discussion of the new post–Cold War asymmetric risks of a weaker power using a WMD, including a nuclear weapon, against the United States.

¹¹¹ DOCTRINE FOR JOINT THEATER NUCLEAR OPERATIONS, *supra* note 84, at III-6–7. See also Eric Schmitt, *50's Riddle Returns in Treaty Debate: Do Weapons Controls Erode or Enhance U.S. Deterrence*, THE NEW YORK TIMES, Oct. 10, 1999, at A10; NATIONAL DEFENSE PANEL, TRANSFORMING DEFENSE: NATIONAL SECURITY IN THE 21ST CENTURY 51 (Dec. 1997). See MOXLEY, *supra* note 1, at Chapter 2, note 17, Chapter 18, notes 52–55, Chapter 25, note 26, Chapter 26, notes 16–18, and accompanying text.

¹¹² DOCTRINE FOR JOINT THEATER NUCLEAR OPERATIONS, *supra* note 84, at I-5–6.

¹¹³ *Id.* at II-6.

¹¹⁴ *Id.* at II-6.

¹¹⁵ *Id.* at III-8.

Noting that the joint force commander should have access to “near-real-time tradeoff analysis when considering the execution of any forces,”¹¹⁶ the *Joint Theater Nuclear Operations* manual states:

Very short timelines impact decisions that must be made. In a matter of seconds for the defense, and minutes for the offense, critical decisions must be made in concert with discussions with NCA.¹¹⁷

The *Joint Nuclear Operations* manual also notes the risk of misperception and non-susceptibility to deterrence, “It is possible ... that an adversary may misperceive or purposefully ignore a credible threat.”¹¹⁸

Uncontrollability as to Delivery of Nuclear Weapons

U.S. nuclear weapons would typically be delivered to their targets by missiles based on either land, submarine, surface vessel or aircraft, or dropped by bombers.¹¹⁹

Statistically, modern U.S. missiles are generally capable of extreme accuracy.¹²⁰ A high percentage of missiles launched can be expected to strike within a close distance of their intended targets.¹²¹

However, this tells only part of the story. The accuracy of any particular missile is uncertain and no one can know where it might end up.¹²²

Variables affecting this matter are legion, including the weather; gravitational effects; the accuracy of test or computational assumptions as to how the missile will perform and as to the location and nature of the target; the extent to which the launch was programmed and implemented correctly to reach the target; the extent to which the mechanical and electronic

¹¹⁶ *Id.* III-8.

¹¹⁷ *Id.* at III-8. (emphasis omitted). See MOXLEY, *supra* note 1, at Chapter 2, notes 80–81, Chapter 23, note 30, and accompanying text. Ballistic missiles are extraordinarily fast:

The Air Force said it recently completed two successful unarmed Minuteman III intercontinental ballistic missile launches from Vandenberg AFB, Calif. ... [E]ach ICBM covered 4,200 miles in 30 minutes, hitting predetermined targets at the Kwajalein Missile Range in the western Marshall Islands.

Sarah Hood, *News Notes*, AIR FORCE MAG., Aug., 1997 at 15.

¹¹⁸ DOCTRINE FOR JOINT NUCLEAR OPERATIONS, *supra* note 78, at I-2. .

¹¹⁹ See MOXLEY, *supra* note 1, at Chapter 19; Chapter 15, notes 18–28 and accompanying text; DOCTRINE FOR JOINT NUCLEAR OPERATIONS, *supra* note 78, at II-2; DOCTRINE FOR JOINT THEATER NUCLEAR OPERATIONS, *supra* note 84, at I-3–5.

¹²⁰ See MOXLEY, *supra* note 1, at Chapter 21, notes 8–10, Chapter 19, note 8, endnotes, and accompanying text and charts. See also Kosta Tsipis, *Cruise Missiles*, SCIENTIFIC AMERICAN, Feb. 1977, 20–29; 1 THOMAS B. COCHRAN ET AL., NUCLEAR WEAPONS DATABOOK, UNITED STATES NUCLEAR FORCES AND CAPABILITIES 118, 146 (1984); Nick Cook, John Boatman, *USAF Lifts Veil on 'Secret' ACM*, 14 JANE'S DEFENSE WEEKLY 549, no. 13, September 29, 1990; Strategic Missiles, <<http://www.af.mil/news/airman/0199/missi.htm>>; Robert S. Norris & William M. Arkin, *U.S. Strategic Nuclear Forces End of 1998; Abstract*, BULL. OF THE ATOMIC SCIENTISTS, vol. 55, no. 1, Jan. 1999.

¹²¹ See MOXLEY, *supra* note 1, at Chapter 21, note 11, Chapter 19, note 8, endnotes, and accompanying text and charts. See also David Fulghum, *Clashes with Iraq Continue After Heavy Air Strike*, AVIATION WEEK & SPACE TECH., Jan. 25, 1993, at 38.

¹²² See MOXLEY, *supra* note 1, at Chapter 21, notes 5, 7–17, Chapter 28, notes 42–46, and accompanying text. See also United States General Accounting Office, Report To Congress: Operation Desert Storm: Evaluation of the Air War 5–7 (July 1996); BBC SUMMARY OF WORLD BROADCASTS, Sept. 7, 1998; *Pakistan—Cruise Missile Found Near Pakistan Nuclear Test Site*, FT ASIA INTELLIGENCE WIRE, Aug. 24, 1998.

equipment in the missile functions as intended; the effect of the detonation of other nuclear or other weapons on performance; and the height at which the warhead detonates.¹²³

The United States reportedly achieved an overall accuracy level of some 82% in the Gulf War with its BG-109 Tomahawk cruise missiles, but that was only an average, with some missions achieving a near perfect success rate and one mission obtaining a rate of only 67%.¹²⁴

With the U.S. attacks on terrorist bases in Afghanistan and Sudan in 1998, some missiles reportedly ended up in the wrong country (Pakistan).¹²⁵

Similarly, in the 1999 Kosovo operation, there were numerous missile strikes that ended up at the wrong targets, both because of weapons and human error, including intelligence error.¹²⁶

¹²³ See MOXLEY, *supra* note 1, at Chapter 2, notes 60–62, Chapter 21 notes 1, 5–6, and accompanying text. See also ICJ Hearing, November 15, 1995, at 87, 89 (citing the Secretary-General’s 1990 Report on nuclear weapons, p. 75, para. 290); KOSTA TSIPIS, *ARSENAL: UNDERSTANDING WEAPONS IN THE NUCLEAR AGE 72–75* (1983); Ashton B. Carter, *Sources of Error and Uncertainty*, in *MANAGING NUCLEAR OPERATIONS* 611–639 (1987).

As the United States, through its attorney McNeill, argued to the ICJ, the effects of nuclear weapons depend on such factors as “the explosive yield and height of the burst of individual weapons, on the characteristics of their targets, as well as on climatic and weather conditions,” ICJ Hearing, November 15, 1995, at 87 (citing the Secretary-General’s 1990 Report of Nuclear Weapons, p. 75, para. 290), and on “the technology that occasions how much radiation the weapon may release, where, in relation to the earth’s surface it will be detonated, and the military objective at which it would be targeted.” *Id.* at 89. As to the significance of such factors, McNeill argued, “These differences, distinctions and variables cannot be ignored; they are critical to the appropriate legal analysis.” *Id.* at 87.

¹²⁴ See David Fulghum, *Clashes with Iraq Continue After Heavy Air Strike*, *AVIATION WEEK & SPACE TECH.*, Jan. 25, 1993, at 38; Stanley Kandebo, *Operation Desert Storm—Tomahawk Missiles Excel in First Wartime Use*, *AVIATION WEEK & SPACE TECH.*, vol. 134, no. 3, Jan. 21, 1991, at 61; MOXLEY, *supra* note 1, at Chapter 21, notes 11–14 and accompanying text.

¹²⁵ See BBC SUMMARY OF WORLD BROADCASTS, Sept. 7, 1998; *2nd Unexploded U.S. Missile Found In Pakistan*, *THE COMMERCIAL APPEAL* (Memphis, TN), Aug. 30, 1998, at A2; MOXLEY, *supra* note 1, at Chapter 21, note 17 and accompanying text.

See also John Diamond, *US Strikes May Not Be The Last, Warns Pickering*, *BIRMINGHAM POST*, Aug. 22, 1998, at 8; Ian Mackinnon, *Pakistan Defuses US Cruise Missile*, *THE SCOTSMAN*, Aug. 25, 1998, at 8; *Pakistan—Cruise Missile Found Near Pakistan Nuclear Test Site*, *FT ASIA INTELLIGENCE WIRE*, Aug. 24, 1998; Louise Branson, *US Bombs “Terrorist Bases,”* *THE STRAITS TIMES* (Singapore), Aug. 22, 1998, at 1.

According to a Pakistani foreign ministry spokesman, the two missiles ending up in Pakistan had been fired from U.S. ships 120 nautical miles off the coast of Pakistan, purportedly within the country’s territorial waters, and landed near the sites where Pakistan had tested nuclear weapons on May 28 and 30, 1998. Mackinnon, *supra*, at 8. Thus, the missiles that went astray had not even been sent a long distance.

A third unexploded warhead with its cruise missile delivery vehicle was reportedly found in Afghanistan. See BBC SUMMARY OF WORLD BROADCASTS, Sept. 7, 1998 (Taleban said ready to sell unexploded US cruise missile “to any country.”).

It is sobering that these deviations from targeting could occur in an operation where the United States apparently went to great lengths to achieve accuracy and precision, even to the point, in planning an attack on a chemical plant in Sudan, of modeling the “likely plume of [the] attack beforehand, using such factors as weather conditions, the building’s structure and properties of the suspected chemicals inside.” See John-Alex Romano, *Note, Combating Terrorism and Weapons of Mass Destruction: Reviving the Doctrine of a State of Necessity*, 87 *GEO. L.J.* 1023 (April 1999) (quoting Eugene Robinson & Dana Priest, *Reports of U.S. Strikes’ Destruction Vary; Afghanistan Damage ‘Moderate to Heavy’; Sudan Plant Leveled*, *WASH. POST*, Aug. 22, 1998, at A1).

¹²⁶ See MOXLEY, *supra* note 1, at Chapter 21, notes 21–28 and accompanying text. See also *As Strikes Mount, So Do Errors*, *THE WASH. TIMES*, May 11, 1999, at A1; Joyce Price, *Pentagon Regrets “Embassy Error,”* *THE WASH. TIMES*, May 9, 1999, at C10; Bill Gertz & Rowan Scarborough, *Inside the Ring*, *THE WASH. TIMES*, May 14, 1999, at A9.

Delivery of nuclear weapons by bomber, while having the advantage that a bomber may generally be recalled before releasing its weapons, is subject to equipment, pilot and situational error.¹²⁷

While certain of the more modern U.S. aircraft are extraordinarily fast and ostensibly have the capability of eluding radar detection, aircraft are inherently subject to pursuit, radar and human error—and hence to substantial risk factors as to accuracy of delivery.¹²⁸

These limitations on accuracy of delivery obviously impose limitations on nuclear operations not present as to conventional weapons where the implications of weapons going astray are much less serious.¹²⁹

Even if the warhead is delivered accurately at the target, its performance is subject to its correct functioning.¹³⁰

Uncontrollability of Radiation Effects if Weapons Reach Targets

The following relates to the radiation effects of nuclear weapons:

- Radiation is a defining feature of nuclear weapons. All nuclear weapons emit radiation when detonated.¹³¹
- Radiation is inimical to life and cumulative in its buildup and effects, surviving in the environment and genetically in human and other life forms typically for many years (as to some elements, for thousands of years).¹³²

¹²⁷ See MOXLEY, *supra* note 1, at Chapter 15, notes 22, 24, 28; Chapter 22, note 22, and accompanying text. See also THE DOCTRINE FOR JOINT THEATER NUCLEAR OPERATIONS, *supra* note 84, at I-3–5.

¹²⁸ See MOXLEY, *supra* note 1, at Chapter 14, note 24, Chapter 19, note 8, Chapter 21, note 26, and accompanying text. See also KOSTA TSIPIS, ARSENAL: UNDERSTANDING WEAPONS IN THE NUCLEAR AGE, at 68–76, 114–115, 121–296 (1983); THE DOCTRINE FOR JOINT THEATER NUCLEAR OPERATIONS, *supra* note 84, at I-3–5.

Reportedly the “success level of the United States’ most advanced fighters” is less than the 83% overall success rate that the Navy attained with its BG-109 Tomahawk cruise missiles (conventional) during the 1991 Gulf War. See David Fulghum, *Clashes with Iraq Continue After Heavy Air Strike*, AVIATION WEEK & SPACE TECH., Jan. 25, 1993, at 38.

¹²⁹ See MOXLEY, *supra* note 1, at Chapter 15, notes 99–102, Chapter 21, notes 3–20, 26–28 and accompanying text. See also KOSTA TSIPIS, ARSENAL: UNDERSTANDING WEAPONS IN THE NUCLEAR AGE, at 68–76, 114–115, 121–296; INTERNATIONAL PHYSICIANS FOR THE PREVENTION OF NUCLEAR WAR, BRIEFING BOOK ON NUCLEAR WAR (1992), *quoted in* Peter Weiss, Burns H. Weston, Richard A. Falk, & Saul H. Mendlovitz, Draft Memorial in Support of the Application by the World Health Organization for an Advisory Opinion by the Court of International Justice of the Legality of the Use of Nuclear Weapons Under International Law, Including the W.H.O. Constitution, *reprinted at* 4 TRANSNAT’L L. & CONTEMP. PROBS. 721, 729–732 (1994).

¹³⁰ See MOXLEY, *supra* note 1, at Chapter 21, notes 4–6, and accompanying text; KOSTA TSIPIS, ARSENAL: UNDERSTANDING WEAPONS IN THE NUCLEAR AGE 68–76 (1983).

¹³¹ See MOXLEY, *supra* note 1, at Chapter 2, note 4, Chapter 3, notes 12, 222, Chapter 15, notes 58–98 and accompanying text; NATO HANDBOOK ON THE MEDICAL ASPECTS OF NBC DEFENSIVE OPERATIONS Part I, Chap. 1 (A MedP-6(B) 1996), adopted as Army Field Manual 8-9, Navy Medical Publication 5059, Air Force Joint Manual 44-151; DOCTRINE FOR JOINT THEATER NUCLEAR OPERATIONS, *supra* note 84, at I-1–2; Nuclear Weapons Advisory Opinion, *supra* note 100, ¶ 35, at 16–17, 35 I.L.M. at 821–22; dissenting opinion of Judge Shahabuddeen at 9, 35 I.L.M. at 865; UNITED NATIONS DEPARTMENT, *supra* note 104, at 6–8.

¹³² See MOXLEY, *supra* note 1, at Chapter 3, notes 19–20, Chapter 15, notes 99, 114, 128–136, and accompanying text; NATO HANDBOOK ON THE MEDICAL ASPECTS OF NBC DEFENSIVE OPERATIONS, *supra* note 131, at Part I, Chap. 1; dissenting opinion of Judge Weeramantry at 16–17, 35 I.L.M. at 888 (citing RADIOECOLOGY (1995)); Testimony of Mrs. Lijon Eknilang, of the Marshall Islands, Council Member, Rongelap, I.C.J. materials, 14 November 1995; INTERNATIONAL PHYSICIANS FOR THE PREVENTION OF NUCLEAR WAR, BRIEFING BOOK ON NUCLEAR WAR (1992). Numerous major studies during the Cold War attempted to quantify the casualties that could be expected from limited nuclear attacks. Several found that civilian casualties from a Soviet counterforce strike on

- The spread of radiation from the detonation of nuclear weapons could not be controlled or predicted since radiation is dispersed in the environment by forces such as the winds, the waters, the soil, animals, plants, and genetic effects, as well as vagaries as to the point of delivery of the weapon in relation to the surface and applicable environmental factors.¹³³
- Radiation cannot discriminate between friend and foe, combatant and noncombatant, adversary and neutral, one's own population and forces and those of the enemy.¹³⁴
- Radiation from the Hiroshima and Nagasaki bombs, from atomic testing, and from the Chernobyl releases have caused and continue to cause substantial and widespread injury to human health and other life and may be expected to continue to do so for generations to come.¹³⁵
- With escalation, the levels of radiation will increase.¹³⁶

Uncontrollability of Overall Effects of Nuclear Weapons

Also unfounded is the U.S. position before the Court that effects of nuclear weapons are essentially comparable to those of conventional weapons.

The ICJ described the "unique characteristics" of nuclear weapons:

The Court ... notes that nuclear weapons are explosive devices whose energy results from the fusion or fission of the atom. By its very nature, that process, in nuclear weapons as they exist today, releases not only immense quantities of heat and energy, but also powerful and prolonged radiation. According to the material before the Court, the first two causes of damage are vastly more powerful than the damage caused by other weapons, while the phenomenon of radiation is said to be peculiar to nuclear

the U.S. would result in virtually as many deaths from radiation as from direct blast. See William Daugherty et al., *The Consequences of "Limited" Nuclear Attacks on the United States*, INT'L SECURITY vol. 10 no. 4 (1986), at 35; Frank N. von Hippel et al., *Civilian Casualties from Counterforce Attacks*, SCIENTIFIC AMERICAN vol. 259 no. 3, Sept. 1988, at 42; Barbara G. Levi et al., *Civilian Casualties from "Limited" Nuclear Attacks on the USSR*, INT'L SECURITY, vol. 12, no. 3, Winter 1987/1988, at 168.

¹³³ See MOXLEY, *supra* note 1, at Chapter 2, notes 63–64, Chapter 3, notes 12, 228–231, Chapter 15, note 9, Chapter 21, notes 3–6, and accompanying text; DOCTRINE FOR JOINT THEATER NUCLEAR OPERATIONS, *supra* note 84, at III-2–3; THE NUCLEAR READER: STRATEGY, WEAPONS AND WAR 320–26 (1985); NATO HANDBOOK ON THE MEDICAL ASPECTS OF NBC DEFENSIVE OPERATIONS, *supra* note 131, at Part I, Chap. 1, Chap 3, §§ I-303(c), IV-320; U.S. Congress, Office of Technology Assessment, *The Effects of Nuclear War*, NTIS order no. PB-296946 (Washington, DC: U.S. Government Printing Office, May 1979), at 113 Table 14; 8 CHARLES S. GRACE, NUCLEAR WEAPONS: PRINCIPLES, EFFECTS AND SURVIVABILITY 29–30 (Brassey's 1994); KOSTA TSIPIIS, ARSENAL: UNDERSTANDING WEAPONS IN THE NUCLEAR AGE 68–76, 114–115, 121–296 (1983).

¹³⁴ See MOXLEY, *supra* note 1, at Chapter 2, note 96, Chapter 3, notes 3, 11, 32, 37, 192–193, 228–235, 249, and accompanying text; DOCTRINE FOR JOINT THEATER NUCLEAR OPERATIONS, *supra* note 84, at II-7; Nuclear Weapons Advisory Opinion ¶ 95, at 32 35 I.L.M. at 829; dissenting opinion of Judge Shahabuddeen at 5–6, 35 I.L.M. at 863–864 (quoting Javez Perez de Cuellar, *Statement at the University of Pennsylvania, 24 March 1983*, in DISARMAMENT, vol. VI, no. 1, 91); declaration of President Bedjaoui ¶ 20, 35 I.L.M. at 1345, 1349 (No. 6 November 1996); dissenting opinion of Judge Schwebel at 7, 35 I.L.M. at 839; dissenting opinion of Judge Weeramantry at 48, 35 I.L.M. at 904; dissenting opinion of Judge Koroma at 14, 35 I.L.M. 931.

¹³⁵ See MOXLEY, *supra* note 1, at Chapter 3, notes 12, 121, Chapter 15, notes 9, 10, 55, 137–195, and accompanying text; Nuclear Weapons Advisory Opinion ¶ 35, at 16–17, 35 I.L.M. at 821–22; dissenting opinion of Judge Shahabuddeen at 6, 35 I.L.M. at 864, UNITED NATIONS DEPARTMENT, *supra* note 104, at 79–83.

¹³⁶ See MOXLEY, *supra* note 1, at Chapter 3, notes 17–18, Chapter 15, notes 101–102, and accompanying text; *The Effects of Nuclear War*, *supra* note 133, at 22–25, 81; dissenting opinion of Judge Weeramantry, at 19, 35 I.L.M. at 870.

weapons. These characteristics render the nuclear weapon potentially catastrophic. The destructive power of nuclear weapons cannot be contained in either space or time. They have the potential to destroy all civilization and the entire ecosystem of the planet.

The radiation released by a nuclear explosion would affect health, agriculture, natural resources and demography over a very wide area. Further, the use of nuclear weapons would be a serious danger to future generations. Ionizing radiation has the potential to damage the future environment, food and marine ecosystem, and to cause genetic defects and illness in future generations.

36. In consequence ... it is imperative for the Court to take account of the unique characteristics of nuclear weapons, and in particular their destructive capacity, their capacity to cause untold human suffering, and their ability to cause damage to generations to come.¹³⁷

The effects of nuclear weapons were described further in dissenting opinions of individual judges of the ICJ. Judge Weeramantry stated that “[a] 5-megaton weapon would represent more explosive power than all of the bombs used in World War II and a twenty-megaton bomb more than all of the explosives used in all of the wars in the history of mankind.”¹³⁸

Judge Koroma stated:

According to the material before the Court, it is estimated that more than 40,000 nuclear warheads exist in the world today with a total destructive capacity around a million times greater than that of the bomb which devastated Hiroshima. A single nuclear bomb detonated over a large city is said to be capable of killing more than 1 million people. These weapons, if used massively, could result in the annihilation of the human race and the extinction of human civilization. Nuclear weapons are thus not just another kind of weapon, they are considered the absolute weapon and are far more pervasive in terms of their destructive effects than any conventional weapon.¹³⁹

Judge Shahabuddeen quoted Javier Perez de Cuellar, Secretary-General of the United Nations, to similar effect:

“The world’s stockpile of nuclear weapons today is equivalent to 16 billion tons of TNT. As against this, the entire devastation of the Second World War was caused by the expenditure of no more than 3 million tons of munitions. In other words, we possess a destructive capacity of more than a 5,000 times what caused 40 to 50 million

¹³⁷ Nuclear Weapons Advisory Opinion ¶ 35, at 16–17, 35 I.L.M. at 821–22. *See also* NATO HANDBOOK ON THE MEDICAL ASPECTS OF NBC DEFENSIVE OPERATIONS, *supra* note 131, at Part I, Chap. 1, §102(a); INTERNATIONAL PHYSICIANS FOR THE PREVENTION OF NUCLEAR WAR, BRIEFING BOOK ON NUCLEAR WAR (1992); Carl Sagan, *Nuclear War and Climatic Catastrophe: Some Policy Implications*, 62 FOREIGN AFF. 257, 273 (Winter 1983/1984). *See generally* *The Effects of Nuclear War*, *supra* note 133, at 16–17 (It is estimated that only half of the suffering would be over as of the end of the war itself: “A failure to achieve [social and economic] viability would result in many additional deaths, and much additional economic, political, and social deterioration. This post war damage could be as devastating as the damage from the actual nuclear explosions.” *Id.* at 5).

¹³⁸ Dissenting opinion of Judge Weeramantry at 15, 35 I.L.M. at 887.

¹³⁹ Dissenting opinion of Judge Koroma at 1, 35 I.L.M. at 934.

deaths not too long ago. It should suffice to kill every man, woman and child 10 times over.”¹⁴⁰

The U.S. Joint Chief of Staff’s *Joint Nuclear Operations* manual recognizes that “the use of nuclear weapons represents a significant escalation from conventional warfare.”¹⁴¹ The manual states:

The fundamental differences between a potential nuclear war and previous military conflicts involve the speed, scope, and degree of destruction inherent in nuclear weapons employment, as well as the uncertainty of negotiating opportunities and enduring control over military forces.¹⁴²

Since nuclear weapons have greater destructive potential, in many instances they may be inappropriate.¹⁴³

The immediate and prolonged effects of WMD—including blast, thermal radiation, prompt (gamma and neutron) and residual radiation—pose unprecedented physical and psychological problems for combat forces and noncombatant populations alike.¹⁴⁴

The U.S. Joint Chief of Staff’s *Joint Theater Nuclear Operations* manual similarly states:

Nuclear weapons are unique in this analysis [as to “the long-standing targeting rules of military necessity, proportionality, and avoidance of collateral damage and unnecessary suffering] only in their greater destructive potential (although they also different from conventional weapons in that they produce radiation and electromagnetic effects and, potentially, radioactive fallout).¹⁴⁵

The manual further recognizes that the employment of nuclear weapons “signifies an escalation of the war.”¹⁴⁶

¹⁴⁰ Dissenting opinion of Judge Shahabuddeen at 5–6, 35 I.L.M. at 863–864 (quoting Javez Perez de Cuellar, Statement at the University of Pennsylvania, in *DISARMAMENT*, Vol. VI, No. 1, March, 24 1983, at p. 91).

¹⁴¹ *DOCTRINE FOR JOINT NUCLEAR OPERATIONS*, *supra* note 78, at II-1.

¹⁴² *Id.* at I-6.

¹⁴³ *DOCTRINE FOR JOINT THEATER NUCLEAR OPERATIONS*, *supra* note 84, at v–vi.

¹⁴⁴ *DOCTRINE FOR JOINT NUCLEAR OPERATIONS*, *supra* note 78, at II-7.

¹⁴⁵ *DOCTRINE FOR JOINT THEATER NUCLEAR OPERATIONS*, *supra* note 84, at I-1.

¹⁴⁶ *Id.* at III-1. See Secretary of Defense Harold Brown, *A Countervailing Strategic Strategy: Remarks from Speech to the Naval War College, August 20, 1980*, *DEFENSE*, Oct. 1980, vol. 80, at 2–9. In 1980, Secretary of Defense Harold Brown expressed skepticism about escalation control: “We are also not unaware of the immense uncertainties involved in any use of nuclear weapons.” Brown, *supra*, at 9. “We know that what might start as a supposedly controlled, limited strike could well, in my view would very likely, escalate to full-scale nuclear war.” *Id.*

See also Andrei Sakharov, *An Open Letter to Dr. Sidney Drell*, 61 *FOREIGN AFF.* 1001 (Summer 1983):

I agree that if the “nuclear threshold” is crossed, *i.e.*, if any country uses a nuclear weapon even on a limited scale, the further course of events would be difficult to control and the most probable result would be swift escalation leading from a nuclear war initially limited in scale or by region to an all-out nuclear war, *i.e.*, to general suicide. It is relatively unimportant how the “nuclear threshold” is crossed—as a result of a preventive nuclear strike or in the course of a war fought with conventional weapons, when a country is threatened with defeat, or simply as result of an accident.

Id.

Conclusion as to Uncontrollability

Based on the foregoing, the uncontrollability of the effects of nuclear weapons, including of the escalation, radiation and other destructive effects, seems clear, causing the use of such weapons to be unlawful under the rules of discrimination, necessity, and proportionality.

We recognize that the United States argued before the ICJ that it can control the effects of nuclear weapons. In his arguments before the ICJ on the point, Mr. McNeill stated on behalf of the United States:

Nuclear weapons, as is true of conventional weapons, can be used in a variety of ways: they can be deployed to achieve a wide range of military objectives of varying degrees of significance; they can be targeted in ways that either increase or decrease resulting incidental civilian injury or collateral damage; and their use may be lawful or not depending upon whether and to what extent such use was prompted by another belligerent's conduct and the nature of the conduct.¹⁴⁷

Noting that it has been argued that nuclear weapons are inherently indiscriminate in their effect and cannot reliably be targeted at specific military objectives, McNeill stated:

This argument is simply contrary to fact. Modern nuclear weapon delivery systems are, indeed, capable of precisely engaging discrete military objectives.¹⁴⁸

In its memorandum to the ICJ, the United States, again in the context of the discrimination rule, presented to the Court this same picture that the effects of nuclear weapons—of which radioactive fallout is obviously the most grave—are essentially controllable, and not a real problem. The United States stated that, through the technological expertise of “modern weapon designers,” it is now able to control the effects of nuclear weapons—specifically, “to tailor the effects of a nuclear weapon to deal with various types of military objectives:”

It has been argued that nuclear weapons are unlawful because they cannot be directed at a military objective. This argument ignores the ability of modern delivery systems to target specific military objectives with nuclear weapons, and the ability of modern weapons designers to tailor the effects of a nuclear weapon to deal with various types of military objectives. Since nuclear weapons can be directed at a military objective, they can be used in a discriminate manner and are not inherently indiscriminate.¹⁴⁹

In support of his argument that each use of nuclear weapons would have to be evaluated on an individual basis and not in “the abstract” McNeill noted to the Court that the effects of nuclear weapons depend on such factors as “the explosive yield and height of the burst of individual weapons, on the character of their targets, as well as on climatic and weather conditions,”¹⁵⁰ and on “the technology that occasions how much radiation the weapon may release, where, in relation to the earth's surface it will be detonated, and the military objective at which it would be targeted.”¹⁵¹

¹⁴⁷ ICJ Hearing, November 15, 1995, at 87.

¹⁴⁸ *Id.* at 88.

¹⁴⁹ U.S. ICJ Memorandum/GA App at 23 (citing the Army's *THE LAW OF LAND WARFARE*, *supra* note 11, at 5).

¹⁵⁰ ICJ Hearing, November 15, 1995, at 87 (citing the Secretary-General's 1990 Report on nuclear weapons, p. 75, para. 290).

¹⁵¹ *Id.* at 89.

Addressing the subject of the many studies indicating that impermissible levels of damage would result from the use of nuclear weapons, McNeill objected that any given study “rests on static assumptions” as to such factors as the following: “the yield of a weapon, the technology that occasions how much radiation the weapon may release, where, in relation to the earth’s surface it will be detonated, and the military objective at which it would be targeted.”¹⁵² Again, the United States appeared to be asserting the technological controllability of radiation effects of nuclear weapons.

We find the arguments of the United States that the effects of nuclear weapons are subject to control unpersuasive. The United States’ recognition, outside of the ICJ, of the uncontrollability of the effects of nuclear weapons is compelling.

Further Bases of Unlawfulness

Even beyond the element of uncontrollability, the use of nuclear weapons would violate the law of armed conflict.

Because the legal analysis depends so heavily on issues as to the likely effects of using nuclear weapons, we first address that factual issue.

Overall Risk Factors of Nuclear Weapons Use

The U.S. military recognize the presence of such risk factors. The Joint Chief of Staff’s *Joint Nuclear Operations* manual, for example, as noted, states that “there can be no assurances that a conflict involving weapons of mass destruction could be controllable or would be of short duration.”¹⁵³ The manual further notes that “US forces must be able to survive a first strike and endure conventional and escalatory attrition with sufficient retaliatory strength to inflict unacceptable damage on the enemy in a counterstrike.”¹⁵⁴ To the same effect, the manual states, “From a massive exchange of nuclear weapons to limited use on a regional battlefield, US nuclear capabilities must confront an enemy with risks of unacceptable damage and disproportionate loss should the enemy choose to introduce WMD into a conflict.”¹⁵⁵

The *Joint Theater Nuclear Operations* manual further notes that the risks of using nuclear weapons depend upon such matters as delivery system accuracy and height of burst, certainly themselves prime risk factors.¹⁵⁶ Discussing “Nuclear Collateral Damage,” the manual states, “The amount of damage varies with the protective posture of civilians and friendly units, delivery system accuracy, weapon yield, and height of burst.”¹⁵⁷ In its arguments before the ICJ, the United States acknowledged the significance of “climatic and weather conditions,” certainly risk factors of a notoriously unpredictable nature, as well as the “character of the targets,” also a major variable, particularly given accuracy of delivery and escalation risks.¹⁵⁸

The *Joint Nuclear Operations* manual also emphasizes the extremely compressed time frames in which decisions as to use of nuclear weapons will have to be made, certainly another

¹⁵² *Id.*

¹⁵³ DOCTRINE FOR JOINT NUCLEAR OPERATIONS, *supra* note 78, at I-6–7 (emphasis omitted).

¹⁵⁴ *Id.* at I-3.

¹⁵⁵ *Id.* at I-2 (emphasis omitted).

¹⁵⁶ DOCTRINE FOR JOINT THEATER NUCLEAR OPERATIONS, *supra* note 84, at III-1–2 (emphasis omitted). See KOSTA TSIPIS, ARSENAL: UNDERSTANDING WEAPONS IN THE NUCLEAR AGE 69–76 (1983).

¹⁵⁷ DOCTRINE FOR JOINT THEATER NUCLEAR OPERATIONS, *supra* note 84, at III 1–2.

¹⁵⁸ ICJ Hearing, November 15, 1995, at 87 (citing the Secretary-General’s 1990 Report on nuclear weapons, p. 75, para. 290).

major risk factor: “In a matter of seconds for the defense, and minutes for the offense, critical decisions must be made in concert with discussions with NCA.”¹⁵⁹

The U.S. military’s *Joint Theater Nuclear Operations* and the *Joint Nuclear Operations* manuals note the flexibility of target selection the combat commanders must have in such compressed time frames and the need for ad hoc judgments:

Because preplanned theater nuclear options do not exist for every scenario, CINCs must have a capability to plan and execute nuclear options for nuclear forces generated on short notice during crisis and emergency situations. During crisis action planning, geographic combatant commanders evaluate their theater situation and propose courses of action or initiate a request for nuclear support.¹⁶⁰

Emergent Targets and Adaptive Planning. Even after the initial laydown of nuclear weapons, there may be a residual requirement to strike additional (follow on and/or emerging) targets in support of retaliatory or war-termination objectives. Commanders must maintain the capability to rapidly strike previously unidentified or newly emerging targets. This capability includes planning for and being able to perform “ad hoc” planning on newly identified targets and maintaining a pool of forces specifically reserved for striking previously unidentified targets. It is important to recognize that success in engaging emerging targets depends heavily upon the speed with which they are identified, targeted, and attacked.¹⁶¹

The *Nuclear Weapons Operations* manual further notes the need for decisive strikes, once the decision to go nuclear has been made:

Some targets must be struck quickly once a decision to employ nuclear weapons has been made. Just as important is the requirement to promptly strike high-priority, time-sensitive targets that emerge after the conflict begins. Because force employment requirements may evolve at irregular intervals, some surviving nuclear weapons must be capable of striking these targets within the brief time available. Responsiveness (measured as the interval between the decision to strike a specific target and detonation of a weapon over that target) is critical to ensure engaging some emerging targets.¹⁶²

The manual also notes the potentially provocative nature of resorting to states of increased readiness:

Alert posturing of nuclear delivery systems to dispersal locations can send a forceful message that demonstrates the national will to use nuclear weapons if necessary. For example, the generation of nuclear forces to higher alert levels during the October 1973 Mideast Crisis sent a strong signal. However, the danger also exists that the enemy may perceive either an exploitable vulnerability or the threat of imminent use.¹⁶³

The manual further notes, on the issue of credibility, that, under the policy of deterrence, “[t]he potential aggressor must believe the United States could and would use nuclear weapons

¹⁵⁹ DOCTRINE FOR JOINT NUCLEAR OPERATIONS, *supra* note 78, at III-8 (emphasis omitted).

¹⁶⁰ DOCTRINE FOR JOINT THEATER NUCLEAR OPERATIONS, *supra* note 84, at III-10 (emphasis omitted).

¹⁶¹ DOCTRINE FOR JOINT NUCLEAR OPERATIONS, *supra* note 78, at II-6 (emphasis omitted).

¹⁶² *Id.* at II-3-4 (emphasis omitted).

¹⁶³ *Id.* at I-4 (emphasis omitted).

to attain its security objectives.”¹⁶⁴ The manual notes the interrelationship of operational readiness and escalation:

- Escalation. Should a crisis become so severe as to prompt the United States to place all its nuclear forces at a high level of readiness, the United States must be prepared to posture its nuclear forces as quickly as possible. Nuclear forces should be generated and managed to ensure a sustained high level of readiness. Conventional forces and intelligence activities would have to be prudently managed to ensure avoidance of inadvertent escalation or mistaken warnings of nuclear attack.¹⁶⁵

In terms of the risks of escalation, the U.S. military has recognized the need for preemptive strikes against enemy delivery systems capable of delivering weapons of mass destruction. The *Joint Theater Nuclear Operations* manual states:

Operation planning should include the possibility that an enemy will use WMD. ... Operations must be planned and executed to destroy or eliminate enemy WMD delivery systems and supporting infrastructure before they can strike friendly forces.¹⁶⁶

Obviously, the potential for the United States’ conducting such preemptive strikes is a risk factor as to the overall volatility of weapons of mass destruction in situations of acute crisis, imposing on the adversary the same “use ‘em or lose ‘em” mentality affecting the U.S. policy of preemptive strike in the first instance. A policy—or even the hint of a policy—of preemptive strike inherently breeds a counter policy of preemptive strike—with the potential for escalating levels of hair triggerism.

The *Joint Nuclear Operations* manual notes the risk of rapid escalation if conventional warfare leads to an attrition of nuclear forces and supporting systems, “If this attrition results in a radical change in the strategic force posture by eliminating intermediate retaliatory steps, there may be a rapid escalation.”¹⁶⁷

The manual further notes how the loss of intelligence as to the level of attrition of nuclear and other forces “will directly effect calculations on the termination of war and the escalation to nuclear war.”¹⁶⁸

- Controlling Escalation. Nuclear weapons may influence the objectives and conduct of conventional warfare. Additionally, conventional warfare may result in attrition of nuclear forces and supporting systems (through antisubmarine warfare, conventional attacks in theater, sabotage, or antisatellite warfare), either unintended or deliberate, which could affect the forces available for nuclear employment. If this attrition results in a radical change in the strategic force posture by eliminating intermediate retaliatory steps, there may be a rapid escalation. The ability to precisely gauge the attrition of conventional and nuclear forces will directly effect calculations on the termination of war and the escalation to nuclear war.¹⁶⁹

Another risk factor is the likely use of multiple nuclear weapons, were any such weapons to be used. The U.S. military in their manual *Doctrine for Joint Theater Nuclear Operations*

¹⁶⁴ *Id.* at I-3.

¹⁶⁵ *Id.* at I-4 (emphasis omitted).

¹⁶⁶ DOCTRINE FOR JOINT THEATER NUCLEAR OPERATIONS, *supra* note 84, at ix (emphasis omitted).

¹⁶⁷ DOCTRINE FOR JOINT NUCLEAR OPERATIONS, *supra* note 78, at I-5–6 (emphasis omitted).

¹⁶⁸ *Id.*

¹⁶⁹ *Id.*

characterize “employing multiple weapons” as one of the “[m]ethods for reducing collateral damage.”¹⁷⁰ Redundant targeting—sometimes called “layering”—is part of the U.S. targeting planning for nuclear weapons, as reflected in the *Joint Nuclear Operations* manual:

- Layering. Layering is a targeting methodology that plans employing more than one weapon against a target to increase the probability of its destruction or to improve the confidence that a weapon will arrive and detonate on that target and achieve a specified level of damage.¹⁷¹

Redundant targeting is also accompanied by the use of different types of nuclear weapons and delivery vehicles:

- Crosstargeting. At the same time it incorporates the concept of “layering,” crosstargeting also uses different platforms for employment against one target to increase the probability of at least one weapon arriving at that target. Using different delivery platforms such as ICBMs, SLBMs, or aircraft-delivered weapons increases the probability of achieving the desired damage or target coverage.¹⁷²

The potential for events lurching out of control, causing warfare never intended or desired by combatant States or groups and their leaders, has become a truism. Barbara W. Tuchman in *The March of Folly* traced the vagaries involved in the precipitation of such conflicts as the Trojan War, the Protestant Succession against the Renaissance Popes, the American Revolution, and the Vietnam War.¹⁷³ So also, in *The Guns of August*, Tuchman described steps whereby World War I broke out against the desires and expectations of participants.¹⁷⁴

The recent revelations as to the misinformation leading to the U.S. cruise missile attacks against the pharmaceutical plant at Al Shifa in Sudan in 1998 further illustrate the vagaries of such decision making even in the absence of great military pressure.¹⁷⁵ Serious disagreement existed within various organs of the U.S. government as to whether the target plant was in fact a chemical weapons facility, and it appears that the evidence to that effect was limited¹⁷⁶ and seriously doubted by senior intelligence officials.¹⁷⁷ It further appears that questions and uncertainties as to the legitimacy of the venture were suppressed for purposes of avoiding rocking the boat.¹⁷⁸

Former Secretary of Defense Robert S. McNamara has similarly noted the extraordinary extent of the misinformation under which the United States and the Soviets were laboring during the Cuban missile crisis—and how close the parties came to nuclear war that neither wanted.¹⁷⁹ Secretary McNamara has also described, based on recent exchanges among former leaders of both sides of the Vietnam war, how poor each side’s intelligence was about the other, how

¹⁷⁰ DOCTRINE FOR JOINT THEATER NUCLEAR OPERATIONS, *supra* note 84, at viii.

¹⁷¹ DOCTRINE FOR JOINT NUCLEAR OPERATIONS, *supra* note 78, at II-6 (emphasis omitted).

¹⁷² *Id.*

¹⁷³ See BARBARA W. TUCHMAN, *THE MARCH OF FOLLY: FROM TROY TO VIETNAM* (1984).

¹⁷⁴ See BARBARA W. TUCHMAN, *GUNS OF AUGUST* (1994).

¹⁷⁵ See James Risen, *Question of Evidence, A Special Report; To Bomb Sudan Plant, or Not: A Year Later, Debates Rankle*, NEW YORK TIMES, October 27, 1999, at A1.

¹⁷⁶ *See id.*

¹⁷⁷ *See id.*

¹⁷⁸ *See id.*

¹⁷⁹ See ROBERT S. MCNAMARA, *IN RETROSPECT: THE TRAGEDY AND LESSONS OF VIETNAM* 341–342 (1995).

profound the cultural misunderstandings were, and how mistaken the assessments of each other's intentions and motivations.¹⁸⁰

The reality of the risks of use of nuclear or other weapons of mass destruction can be seen from the numerous instances during the Cold War in which the United States considered, threatened or took preparatory steps for the use of nuclear weapons.¹⁸¹ In addition to the ongoing threat that is inherent in the policy of deterrence, the United States explicitly threatened to use nuclear weapons on at least five occasions during the Cold War, including in Korea in 1950–53, Suez in 1956, Lebanon in 1958, Cuba in 1962, the Middle East in 1973, and, after the Cold War, in Iraq during the Gulf War.¹⁸²

Analysts have noted additional times when “responsible officials of the United States government formally considered the use of nuclear weapons,”¹⁸³ including Vietnam in 1954; Quemoy and Matsu in 1954–1955, 1958; Middle East in 1967; Suez in 1970; Jordan in 1970; Cuba in 1970; India and Pakistan in 1971; Vietnam in 1968–1972; and Lebanon in 1982–1983.¹⁸⁴

And that is just the United States. Each of the other nuclear, chemical and biological weapons States poses its own risk factors, assuring the presence of considerable potential volatility in any significant international crisis.

The extent of the proliferation of these weapons also constitutes a risk factor. Declared nuclear powers, as noted, are the United States, Russia, Britain, France, China, India, and Pakistan.¹⁸⁵ Israel also has nuclear weapons¹⁸⁶ and Brazil and Argentina have an imminent capacity to have such weapons.¹⁸⁷ South Africa, North Korea, Iraq, Iran, Libya, Taiwan, Ukraine, Belarus and Kazakhstan¹⁸⁸ have all had nuclear weapons programs at one time or another and Egypt has declared its determination to acquire nuclear weapons if necessary for its security.¹⁸⁹

More than twenty-five nations possess biological or chemical weapons capability, including North Korea, China, India, Pakistan, Iran, Iraq, Libya, Syria, and Russia, along with such non-national entities and groups as the Aum Shinrikyo in Japan and the Aryan Nations in the United States at various times.¹⁹⁰ Numerous States have long-range missile capabilities, including China, India, Iran, Israel, Libya, North Korea, Syria, and Russia.¹⁹¹

¹⁸⁰ See MCNAMARA, *id.* at 210–215. See also Desmond Ball, *U.S. Strategic Forces: How Would They Be Used?*, 7 INT'L SECURITY 31, 42 (1982); RICHARD K. BETTS, *NUCLEAR BLACKMAIL AND NUCLEAR BALANCE* 38 (Brookings Institution, Washington, D.C. 1987) (*cited in* WILLIAM A. SCHWARTZ ET AL., *A NUCLEAR SEDUCTION, WHY THE ARMS RACE DOESN'T MATTER AND WHAT DOES* 85 (1990)); MCGEORGE BUNDY, *DANGER AND SURVIVAL: CHOICES ABOUT THE BOMB IN THE FIRST FIFTY YEARS*, 266–667, 536–541 (1988).

¹⁸¹ See generally MOXLEY, *supra* note 1, Chapter 20.

¹⁸² See *id.* at Chapter 20, notes 1–7 and accompanying text.

¹⁸³ See Ball, *supra* note 180, at 41–2; MOXLEY, *supra* note 1, at Chapter 20, notes 10–19 and accompanying text.

¹⁸⁴ Ball, *supra* note 180.

¹⁸⁵ See MOXLEY, *supra* note 1, at Chapter 23, notes 2–6 and accompanying text.

¹⁸⁶ See *id.*, Chapter 23, note 7 and accompanying text. As recently as November 1999, Israel affirmed its policy of ambiguity as to its known nuclear status. See Deborah Sontag, *Israel Eases Secrecy over Nuclear Whistleblower's Trial*, THE NEW YORK TIMES, Nov. 25, 1999 at A3.

¹⁸⁷ See MOXLEY, *supra* note 1, at Chapter 23, notes 7–8 and accompanying text.

¹⁸⁸ See *id.* Chapter 23, notes 9–17 and accompanying text.

¹⁸⁹ See *id.* Chapter 23, note 18 and accompanying text.

¹⁹⁰ See *id.* Chapter 27; Chapter 18, note 7, Chapter 27, notes 31–42, and accompanying text.

¹⁹¹ See *id.* Chapter 23, notes 2–7, 12–14, 30–35, Chapter 28, note 23, and accompanying text.

As another risk factor, former Secretary of Defense Robert McNamara has noted the “cavalier” attitude at times the U.S. military has had to the use of nuclear weapons, including towards the potential use of nuclear weapons in the Vietnam war.¹⁹² He cited the Joint Chief’s willingness potentially to use nuclear weapons in Vietnam even at the risk of nuclear confrontation with China and the Soviet Union “in Southeast Asia or elsewhere”¹⁹³ and their willingness potentially to use nuclear weapons even in “southern China” in early 1964.¹⁹⁴

The military and at times the White House appear to have abnegated the pledge made by several Presidents not to use nuclear weapons against non-nuclear adversaries, such pledge being made by the United States first as a matter of policy and then by way of security assurance to non-nuclear States as an inducement to them to extend the Treaty on the Non-Proliferation of Nuclear Weapons.¹⁹⁵

It further appears that the military have pressed in the post Cold War era to extend deterrence to widescale targeting of chemical and biological targets, and that the White House has acceded and at times participated.¹⁹⁶

While in a sense the world seems safer from the perspective of the United States following the demise of the Soviet Union and the end of the Cold War, paradoxically that is not necessarily the case. Extreme as the competition between the U.S. and Soviet blocs seemed at times, with hindsight it obviously served as a unifying force, whereby each of the two leader nations, stalemated by the nuclear confrontation, controlled its respective allies. Today’s multi-polar world offers quite a contrast, with the potential for situations that would have been controlled or prevented by the United States or the Soviet Union to now careen out of control.

Risks of Escalation

But what of the war-fighting theory, the notion that tactical nuclear weapons could be used not cataclysmally against enemy population centers but in a surgical way against significant military targets, such as hardened command centers and weapons of mass destruction? It has been recognized by the political and military leadership of the United States and other defense experts and commentators that even such a limited use of nuclear weapons would likely lead to escalation and massive nuclear exchanges.

As noted above, the U.S. military, in today’s strategic environment, specifically recognizes numerous factors fostering escalation. The overriding factor is the uncontrollability of the situation once nuclear, chemical or biological weapons are used. As reflected in *Joint Pub 3-12, Doctrine for Joint Nuclear Operations*, “There can be no assurances that a conflict involving weapons of mass destruction could be controllable or would be of short duration.”¹⁹⁷

The U.S. military’s recognition of the potential need for preemptive strikes against enemy delivery systems highlights the risks of escalation. As reflected in the *Doctrine for Joint Theater Nuclear Operations*, “Operations must be planned and executed to destroy or eliminate enemy

¹⁹² MCNAMARA, IN RETROSPECT, *supra* note 179, at 160–61.

¹⁹³ *Id.* at 234.

¹⁹⁴ *Id.* at 275.

¹⁹⁵ See Nuclear Weapons Advisory Opinion ¶ 59(c), at 23, 35 I.L.M. at 825; R. Jeffrey Smith, *Ex-Commander of Nukes Wants to Scrap Them, A Believer No More*, THE SACRAMENTO BEE, Mar. 29, 1998; MOXLEY, *supra* note 1, at Chapter 3, notes 127–133, Chapter 17, notes 24–27, Chapter 27, note 80, and accompanying text.

¹⁹⁶ See MOXLEY, *supra* note 1, at Chapter 27, notes 79–97 and accompanying text; Hans Kristensen, *Targets of Opportunity: How Nuclear Planners Found New Targets for Old Weapons*, BULL. OF ATOMIC SCIENTISTS, vol.55, no. 5, Sep./Oct. 1997.

¹⁹⁷ See DOCTRINE FOR JOINT NUCLEAR OPERATIONS, *supra* note 78, at i, I-6–7.

WMD delivery systems and supporting infrastructure before they can strike friendly forces.”¹⁹⁸ The potential for such preemptive strikes fosters the potential for the enemy’s corresponding preemptive strikes.

The *Joint Nuclear Operations* manual notes that “there may be a rapid escalation” once strikes against nuclear assets begin to affect “the forces available for nuclear employment.”¹⁹⁹

The military’s policies of concentration of force and redundant targeting, including “layering”²⁰⁰ and “cross-targeting,”²⁰¹ potentially involving the use of multiple nuclear weapons, are inherently escalatory, as are the extreme time pressures involved—potentially “seconds for the defense, and minutes for the offense.”²⁰² The time is limited because of such factors as “the relatively short flight time of theater missiles and potential increased uncertainty of mobile offensive force target locations.”²⁰³

Also inherently of an escalatory nature is the U.S. nuclear targeting doctrine of decapitation, as reflected in the *Joint Nuclear Operations* manual, whereby the political leadership of an opposing nation is the “central object of deterrence” on the theory that “that is where the ultimate decision to use military force lies.”²⁰⁴

The potential for escalation is also fostered by the risks of miscalculation and irrationality:

“[S]omeday a nation may, through miscalculation or by deliberate choice, employ these weapons. ... [A]n opponent may be willing to risk destruction or disproportionate loss in following a course of action based on perceived necessity, whether rational or not in a totally objective sense. In such cases deterrence, even based on the threat of massive destruction, may fail.”²⁰⁵

The *Joint Nuclear Operations* manual also notes the risk of misperception and non-susceptibility to deterrence, “It is possible ... that an adversary may misperceive or purposefully ignore a credible threat.”²⁰⁶

There have been many statements by the leadership of the United States over the years as to the unlikelihood that a low level use of nuclear weapons would stay at that level.

Legal Effects of such Risk Factors

The presence of such risk factors is a basis for the unlawfulness of the use of nuclear weapons under the law of armed conflict, including under the rules of proportionality, discrimination, and necessity.

Rule of Proportionality

If any use would likely involve the multiple use of strategic nuclear weapons and subsequent escalation; or if even the most limited of nuclear strikes would likely precipitate

¹⁹⁸ DOCTRINE FOR JOINT THEATER NUCLEAR OPERATIONS, *supra* note 84, ix

¹⁹⁹ DOCTRINE FOR JOINT NUCLEAR OPERATIONS, *supra* note 78, at I-5-6.

²⁰⁰ *Id.* at II-6.

²⁰¹ *Id.* at II-6.

²⁰² *Id.* at III-8.

²⁰³ *Id.* at III-8.

²⁰⁴ *Id.* at I-2.

²⁰⁵ *Id.* at I-2 (emphasis omitted).

²⁰⁶ *Id.* at I-2.

escalation to broader use of nuclear, chemical and/or biological weapons, it would seem the potential risks would virtually always outweigh the potential military benefits.

Valuation Issues

But what of the valuation issues: What of the State that says, “The chance of saving my country justifies risking substantial injury to the rest of the world!”

This valuation question, in a world of sovereign nations, is, of course, a difficult one. But there is an answer. Indeed, several answers.

First of all, the proportionality, necessity, and discrimination rules, as we have seen, are rules of reason subject to an objective standard.²⁰⁷

Thus, *The Naval/Marine Commander’s Handbook*, addressing how the proportionality determination is to be made, states that the commander “must determine whether incidental injuries and collateral damage would be excessive, on the basis of an honest and reasonable estimate of the facts available to him.”²⁰⁸ “[T]he commander must decide, in light of all the facts known or reasonably available to him ... whether to adopt an alternate method of attack, if reasonably available, to reduce civilian casualties and damage.”²⁰⁹

Secondly, the rules of interpretation would appear to offer a principled basis for resolving any stalemate, particularly the rule that the law is to be interpreted in light of its purpose.

Nature and Purposes of the Law of Armed Conflict

The United States has recognized numerous fundamental purposes of the law of armed conflict that would ostensibly preclude actions precipitating the extreme effects that could result from the use of nuclear weapons:

- to provide common ground of rationality between enemies;
- to represent minimum standards of civilization;
- to preclude purposeless, unnecessary destruction of life and property;
- to ensure that violence is used only to defeat the enemy’s military forces;
- to safeguard fundamental human rights of persons falling into the hands of the enemy, particularly prisoners of war, the wounded and sick, and civilians;
- to facilitate the restoration of peace and friendly relations; and
- to assure the survival of civilization and of the human species.²¹⁰

²⁰⁷ See generally MOXLEY, *supra* note 1, Chapter 1. See *id.* Chapter 1, notes 84–94, 161, Chapter 5, notes 3–4, Chapter 6, notes 26–27, and accompanying text. See also Vienna Convention on the Law of Treaties Article 32, May 23, 1969, 1155 U.N.T.S. 331, 8 I.L.M. 679; J.L. BRIERLY, *THE LAW OF NATIONS* 67 (1963) (1928); XI INT’L ENCYCLOPEDIA OF COMPARATIVE LAW § 2-114 (1983).

²⁰⁸ THE NAVAL/MARINE COMMANDER’S HANDBOOK, *supra* note 12, at 8-5.

²⁰⁹ *Id.* at 8-5 to 8-6.

²¹⁰ See THE AIR FORCE MANUAL ON INTERNATIONAL LAW, *supra* note 12, at 1-2, 1-3 (quoting 1 Whiteman, *Digest of International Law* 1-2), 1-5, 1-11, 1-13 nn.5–6 (quoting 1 Hackworth, *Digest of International Law* at 1, 7 vols. (1940–43)), 1-15 n.30, n.33; THE NAVAL/MARINE COMMANDER’S HANDBOOK, *supra* note 12, at 5-6, citing *The Krupp Trial (Trial of Alfred Felix Alwyn Krupp Von Bohlen und Halbach and Eleven Others)*, 10 LRTWC 139 (1949). *Hearings on The Role of Arms Control in U.S. Defense Policy, before the Committee on Foreign Affairs, House of Representatives*, 98th Cong. 2nd Sess., (June 20, 21, 26, July 25, 1984) at 82 (statement of Adm. Noel Gayler, U.S. Navy (Retired), Former Commander in Chief, U.S. Forces in the Pacific, Former Director, National Security Agency). Nuclear Weapons Advisory Opinion ¶¶ 79, 84, at 28, 29, 35 I.L.M. 827, 828; declaration of President Bedjaoui, 35 I.L.M., ¶ 13 at 1345; dissenting opinion of Judge Higgins at 8, 35 I.L.M. at 938; dissenting

The Naval/Marine Commander's Handbook states that the “essential” purpose of the law of war is to provide “common ground of rationality between enemies,” adding, “The law of armed conflict is intended to preclude purposeless, unnecessary destruction of life and property and to ensure that violence is used only to defeat the enemy’s military forces.”²¹¹

Sovereign Equality of Individual States

Also relevant to the proportionality analysis is the principle of the equality under international law of the over 190 independent States that exist in the world today.²¹²

Quoting Article 2, paragraph 1 of the Charter of the United Nations (“The Organization is based on the principle of sovereign equality of all of its Members”), Judge Koroma, in his dissenting opinion in the Nuclear Weapons Advisory Decision, stated:

The principle of sovereign equality of States is of general application. It presupposes respect for the sovereignty and territorial integrity of all States. International law recognizes the sovereignty of each State over its territory as well as the physical integrity of the civilian population. By virtue of this principle, a State is prohibited from inflicting injury or harm on another State. The principle is bound to be violated if nuclear weapons are used in a given conflict, because of their established and well-known characteristics. The use of such weapons would not only result in the violation of the territorial integrity of non-belligerent States by radioactive contamination, but would involve the death of thousands, if not millions, of the inhabitants of territories not parties to the conflict.²¹³

Numbers of People Potentially at Risk

Given the genetic and environmental effects of nuclear weapons and the extent to which the applicable legal tests turn on the number of protected persons killed and injured, it is relevant to consider the number of people living in the world and potentially living in the future who could be affected by the use of nuclear weapons today.

The U.S. Census Bureau estimates the number of people living in the world as of September 6, 1999 to be 6,010,449,025²¹⁴ and the Population Division of the United Nations projects the world population as stabilize at 11,600,000,000 just after 2200.²¹⁵

opinion Judge Shahabuddeen at 16–17, 35 I.L.M. at 869; dissenting opinion of Judge Weeramantry at 64, 35 I.L.M. at 912.

²¹¹ THE NAVAL/MARINE COMMANDER’S HANDBOOK, *supra* note 12, at 5-7 n.7. See MOXLEY, *supra* note 1, at Chapter 1, note 28 and accompanying text. See also *id.* Chapter 3, notes 275–296 for the discussion by the ICJ and the individual judges of the court of the underlying purposes of the law of armed conflict and the significance of such matter to the issue of the lawfulness of the use of nuclear weapons.

²¹² See MOXLEY, *supra* note 1, at Chapter 22, notes 13–14 and accompanying text; U.S. State Department, Independent States of the World, as released by the Office of the Geographer and Global Issues, December 2, 1998, <http://www.state.gov/www/regions/independent_states.html>.

²¹³ Dissenting opinion of Judge Koroma at 15, 35 I.L.M. at 932. See MOXLEY, *supra* note 1, at Chapter 1, notes 196–210, Chapter 2, notes 111–119, Chapter 3, notes 218–236, and accompanying text.

²¹⁴ See World POPClock Projection, Source: U.S. Census Bureau, International Data Base <<http://www.census.gov/cgi-bin/ipc/popclockw>>, data updated 12/28/98.

²¹⁵ See United Nations, World Population Growth From Year 0 to Stabilization, Data from the Population Division Department of Economic and Social Information and Policy Analysis, <gopher://gopher.undp.org:70/00/ungophers/popin/wdtrends/histor> (citing J.D. Durand, Historical Estimates of World Population: An Evaluation (1974), mimeo; UNITED NATIONS, THE DETERMINANTS AND CONSEQUENCES OF POPULATION TRENDS, VOL. 1 (1973); UNITED NATIONS, WORLD POPULATION PROSPECTS AS ASSESSED IN 1963 (1966); UNITED NATIONS, WORLD

The High Tech Conventional Weapons Alternative

Also of central relevance to the analysis and the other rules discussed herein is the question of the extent to which the particular mission could be carried out with conventional weapons.

The Air Force Commander's Handbook states that, in making the proportionality determination, the commander must decide, "in the light of all the facts known ... whether to adopt any alternative method of attack to further reduce civilian casualties and damage."²¹⁶

The Air Force Manual on International Law states that application of the proportionality test requires consideration "whether some alternative form of attack would lessen collateral damage and casualties."²¹⁷ The manual adds that "those who plan or decide upon an attack" must "[t]ake all feasible precautions in the choice of means and methods of attack with a view to avoiding, and in any event to minimizing, incidental loss of civilian life, injury to civilians, and damage to civilian objects."²¹⁸

Thus, the determination of proportionality with respect to the use of nuclear weapons includes a comparison of the probable results of using conventional as opposed to nuclear weapons.²¹⁹

During the Cold War the United States had permitted a strategic situation to develop whereby the Soviet Union had a superior conventional weapons capacity to the United States, to the extent that the Soviet Union was potentially able to overrun Western Europe with such weapons.²²⁰

While the United States and Western Europe had had the financial means of developing a conventional weapons capability sufficient to meet the Soviet threat, they had chosen not to do so, relying instead on nuclear weapons and the policy of nuclear deterrence.²²¹

This choice was based on many factors, including perhaps a failure in the beginning to grasp the significance and implications of these weapons and the related risk factors.

Historically, nuclear weapons were seen as cheaper than conventional weapons and hence as a way for the United States to contain the Soviet threat without spending the money necessary

POPULATION PROSPECTS: THE 1994 REVISION (1993); UNITED NATIONS, LONG-RANGE WORLD POPULATION PROJECTION: TWO CENTURIES OF POPULATION GROWTH, 1950–2150 (1992).

²¹⁶ THE AIR FORCE COMMANDER'S HANDBOOK, *supra* note 12, at 3-3.

²¹⁷ THE AIR FORCE MANUAL ON INTERNATIONAL LAW, *supra* note 12, at 5-9.

²¹⁸ *Id.* at 5-9.

²¹⁹ See MOXLEY, *supra* note 1, at Chapter 9; Chapter 2, notes 95, 97–100, Chapter 17, notes 27–36, and accompanying text. See also DOCTRINE FOR JOINT THEATER NUCLEAR OPERATIONS, *supra* note 84, at vii–viii, I-1, II-7, III-1.

²²⁰ See MOXLEY, *supra* note 1, at Chapter 15, notes 14–15, Chapter 17, notes 29–35, and accompanying text. See also 1995 ANNUAL REPORT TO THE PRESIDENT AND THE CONGRESS, *supra* note 5, at 84–85; HENRY KISSINGER, WHITE HOUSE YEARS 218 (1979).

²²¹ See MOXLEY, *supra* note 1, at Chapter 17, notes 30, 32–35, and accompanying text. See also 1995 ANNUAL REPORT TO THE PRESIDENT AND THE CONGRESS, *supra* note 5, at 84–85; Testimony of Adm. Noel Gayler, U.S. Navy (Retired), Former Commander in Chief, U.S. Forces in the Pacific, Former Director, National Security Agency, in Hearings on the Role of Arms Control in U.S. Defense Policy, before the Committee on Foreign Affairs, House of Representatives, Ninety-Eighth Congress, 2nd Sess., at 126 (June 20, 21, 26, July 25, 1984); LAWRENCE FREEDMAN, THE EVOLUTION OF NUCLEAR STRATEGY 88 (1989); NSC-68, in AMERICAN DEFENSE POLICY 288 (Schuyler et al. eds., 1990).

for a conventional capability comparable to that maintained by the Soviet Union and, as a result, to have more funds for civilian pursuits.²²²

That economy has turned out to have been illusory. The direct costs of nuclear weapons have been much higher than anticipated and substantial indirect costs have become apparent, including the ongoing costs of storing and disposing of radioactive and other toxic wastes and of dismantling nuclear weapons systems and disposing of surplus nuclear materials, as well as compensating workers and family members of workers whose health has been impaired by nuclear materials.²²³

While, during the Cold War, the United States depended upon the threat of use of nuclear weapons to compensate for conventional weapons inferiority, today the tables have turned. The United States is the preeminent conventional power in the world and is now itself threatened by the nuclear weapons possessed or potentially possessed by weaker States and groups.²²⁴

In ironic contrast, Russia is now substantially weakened and heavily dependent on nuclear weapons, far more so than the United States ever was.²²⁵

Like nuclear weapons, conventional weapons destroy through blast and heat, but conventional weapons do not generally emit radiation. Their effects are generally limited to the blast and heat.²²⁶

Modern computer technology, with the tradeoff between accuracy and firepower, has led to a revolution in conventional weaponry, as demonstrated in the 1999 Kosovo operation, to the extent that the United States could now likely achieve with conventional weapons most if not all missions for which it might have used strategic or tactical nuclear weapons.²²⁷

The key is twofold (1) the number of weapons used; and (2) the relationship between necessary blast and accuracy of delivery.

While even the most powerful conventional weapons do not have the destructive power of nuclear weapons, such lesser destructiveness can generally be compensated for when

²²² See MOXLEY, *supra* note 1, at Chapter 17, notes 30, 32, Chapter 22, note 44, and accompanying text. See also HENRY KISSINGER, *WHITE HOUSE YEARS* 218 (1979); Stephen I. Schwartz, *Introduction*, in *ATOMIC AUDIT* 3–4 (1998).

²²³ See MOXLEY, *supra* note 1, at Chapter 22, note 44 and accompanying text. See generally *ATOMIC AUDIT* (Stephen I. Schwartz ed., 1998); Arjun Makhjani & Stephen I. Schwartz, *Victims of the Bomb*, in *ATOMIC AUDIT* 395–431 (1998).

²²⁴ See MOXLEY, *supra* note 1, at Chapters 23, 26; Chapter 18, notes 7–13, Chapter 22, notes 18–25, Chapter 27, note 76, and accompanying text. See also *PROLIFERATION: THREAT AND RESPONSE*, *supra* note 101; 1995 ANNUAL REPORT TO THE PRESIDENT AND THE CONGRESS, *supra* note 5, at 85; JOINT CHIEFS OF STAFF, JOINT PUB. 3-11, DOCTRINE FOR NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) DEFENSE (July 10, 1995), Richard K. Betts, *The New Threat of Mass Destruction*, *FOREIGN AFF.*, vol. 77, no. 1, January/February 1998, at 26, 30–31; Jessica Eve Stern, *Moscow Meltdown: Can Russia Survive?* *INT'L SECURITY*, vol. 18, no. 4, Spring 1994, at 40.

²²⁵ See MOXLEY, *supra* note 1, at Chapter 18, note 58, Chapter 23, note 2, and accompanying text. See also 1995 ANNUAL REPORT TO THE PRESIDENT AND THE CONGRESS, *supra* note 5, at 84–85; Robert S. Norris & William Arkin, *Estimated Russian Stockpile, September 1996*, NRDC NUCLEAR NOTEBOOK; *BULL. OF ATOMIC SCIENTISTS*, vol. 63, Aug. 13, 1996, at 62–63; Charles J. Dick, *Past Cruelties Hinder the Taming of the Bear*, *JANE'S INTELLIGENCE REVIEW*, vol. 10, no. 12, Dec. 1, 1998, at 5; Michael R. Gordon, *Maneuvers Show Russian Reliance on Nuclear Arms*, *THE NEW YORK TIMES*, July 10, 1999, at 1; *Editorial, Showdown in Pristina*, *THE NATION*, July 5, 1999, at 3–4.

²²⁶ See MOXLEY, *supra* note 1, at Chapter 2, note 97, Chapter 15, notes 6–12, 15–16, Chapter 28, note 1, and accompanying text. See, e.g., *DOCTRINE FOR JOINT THEATER NUCLEAR OPERATIONS*, *supra* note 84, at I-1.

²²⁷ See MOXLEY, *supra* note 1, at Chapter 28. See also *id.* Chapter 15, notes 15–17, Chapter 28 notes 1, 13–14, 37–52, and accompanying text; NATIONAL DEFENSE PANEL, *TRANSFORMING DEFENSE: NATIONAL SECURITY IN THE 21ST CENTURY* 51 (Dec. 1997); David Learmount, *Smart Bombs in Demand*, *FLIGHT INT'L*, June 9, 1999; William J. Perry, *Desert Storm and Deterrence*, *FOREIGN AFF.*, vol. 70 no. 4, Fall 1991, at 66.

necessary by using a greater number of conventional weapons, particularly given the substantial increase in the accuracy with which such weapons can be delivered.²²⁸

It has always been the case that a combatant could achieve with multiple conventional weapons levels of immediate destruction comparable to those achievable with nuclear weapons. The Allied conventional bombing of Tokyo, involving the use of hundreds of bombers, wrought destruction comparable to that of the single atomic attack on Hiroshima.²²⁹

We saw further examples from the 1991 United Nations analysis to the trade-off between missile accuracy and the level of destructiveness needed for a particular mission:

Missile accuracy is usually given in terms of the circular error probable (CEP), defined as the distance from an aiming point within which, on the average, half the shots aimed at this point will fall. Using this concept, assessments of the efficiency of various missile systems can be illustrated. For example, a 1 Mt nuclear warhead may be needed in order to destroy a particular hardened structure if the CEP of that nuclear weapon is 1 km. The same effect could result from a 125 kt warhead with a 0.5 km CEP accuracy, or a 40 kt warhead with a 0.33 km CEP. Thus, increased accuracy meant that smaller yield warheads could replace high yield warheads as a threat to these types of targets.²³⁰

If, instead even of a 0.33 km CEP, the target can be hit directly on the head, even less firepower, whether delivered by conventional or nuclear weapon, would be necessary.²³¹

The National Defense Panel in its 1997 report stated:

We should also consider the potential of non-nuclear weapons to strengthen deterrence. Advancing military technologies that merge the capabilities of information systems with precision-guided weaponry and real-time targeting and other new weapons systems may provide a supplement or alternative to the nuclear arsenals of the Cold War.²³²

²²⁸ See MOXLEY, *supra* note 1, at Chapter 28, Chapter 28, note 11 and accompanying text. See also 1999 ANNUAL REPORT OF THE SECRETARY OF DEFENSE TO THE PRESIDENT AND THE CONGRESS, (1999), Chap. 10, p. 5, The Revolution in Military Affairs, and Joint Vision 2010, as set forth at <<http://www.dtic.mil/execsec/adr1999/>>.

²²⁹ See LAWRENCE FREEDMAN, THE EVOLUTION OF NUCLEAR STRATEGY 17, 29 (1989), Rufus E. Miles Jr., *Hiroshima: The Strange Myth of Half a Million American Lives Saved*, INT'L SECURITY, vol. 10, no. 2, Fall 1985 121, 125.

²³⁰ UNITED NATIONS DEPARTMENT, *supra* note 104, at 30.

²³¹ See MOXLEY, *supra* note 1, at Chapter 19, note 8 and accompanying text. The main U.S. tactical nuclear weapon delivery vehicle carried by submarine is the Sea Launched Cruise Missile, called the Tomahawk Land Attack Missile/Nuclear. This missile can carry either nuclear or non-nuclear warheads, and launch off of ships or submarines. Its CEP is reported as being 30 meters by a collector of data on missiles worldwide (see Ian Curtis, *The Missile Tables*, DEFENSE & FOREIGN AFFAIRS' STRATEGIC POLICY, Mar. 1991), and as 100 meters by a writer in a military publication (see Tamar A. Mehuron, *Characteristics for Nuclear Weapon Systems, Circa 2006*, AIR FORCE MAG., Mar. 1992, at 10).

The JDAM, or Joint Direct Attack Munition, a strap-on guidance system attached to a gravity bomb, is also extremely accurate. It is reportedly capable of delivering its bomb within twenty feet of the target from 15 miles away through guidance from satellite global positioning technology. See James Wallace, *Boeing—Built System Used on Bombs in Yugoslavia*, SEATTLE POST-INTELLIGENCER, Mar. 27, 1999, at A5; Rowan Scarborough, *What's Left After Kosovo*, WASH. TIMES, June 13, 1999, at C1; Stanley Kandebo, *Operation Desert Storm—Tomahawk Missiles Excel in First Wartime Use*, AVIATION WEEK & SPACE TECH., vol. 134, no. 3, Jan. 21, 1991, at 61.

²³² NATIONAL DEFENSE PANEL, TRANSFORMING DEFENSE: NATIONAL SECURITY IN THE 21ST CENTURY 51 (Dec. 1997).

Conclusion as to Proportionality Rule

Based on the foregoing, it would seem that virtually any realistically likely use of nuclear weapons would violate the proportionality rule.

Rule of Discrimination

Given the facts discussed above, it would seem equally clear that virtually any realistically likely use of nuclear weapons would violate the rule of discrimination. The effects are too big, too broad and too blunderbuss. Even the radiation from a single limited use of nuclear weapons would be potentially so uncontrollable and unlimited as to violate these rules, but that would only be the beginning, given the unrealistic nature of the assumption that that is the way nuclear weapons would be used, if they were ever used, and the likelihood of escalation.

Rule of Necessity

Obviously, the requirement of necessity is not met in circumstances where the mission could be handled by conventional weapons. But there is an additional point that has not been much focused on: The rule of necessity requires that the strike appear likely to yield a concrete military benefit.²³³

Accordingly, a strike that is likely to boomerang, resulting, whether because of escalation or miscalculation or mistake or the operation of the winds and waters or the like, in a net detriment to the acting State, would not satisfy the necessity test.

We do not believe that the above description of applicable risk factors is controversial or that the conclusion is controversial that the widescale use of nuclear weapons would be unlawful because of its likely effects. What is controversial is our conclusion that all uses—even the limited use of so-called precision “low-yield” tactical nuclear weapons—would be unlawful.

Alluding to the assumptions made by the World Health Organization (WHO) in its 1987 study as to the effects of nuclear weapons, McNeill, as noted above, objected to the “four scenarios” depicted by the WHO as “highly selective” in that they addressed “civilian casualties expected to result from nuclear attacks involving significant numbers of large urban area targets or a substantial number of military targets.”²³⁴

But no reference is made in the report to the effects to be expected from other plausible scenarios, such as a small number of accurate attacks by low-yield weapons against an equally small number of military targets in non-urban areas.²³⁵

Reinforcing the point as to “other plausible [low-end use] scenarios,” McNeill stated that such plausibility “follows from a fact noted in the WHO Report by Professor Rotblat: namely, that ‘remarkable improvements’ in the performance of nuclear weapons in recent years have resulted in their ‘much greater accuracy’”²³⁶ stating that such scenarios “would not necessarily raise issues of proportionality or discrimination.”²³⁷

²³³ See MOXLEY, *supra* note 1, at Chapter 1, notes 109–128, 142, Chapter 2, notes 56–59, 98 and accompanying text. See also DOCTRINE FOR JOINT THEATER NUCLEAR OPERATIONS, *supra* note 84, at vii–viii; THE NAVAL/MARINE COMMANDER’S HANDBOOK, *supra* note 12, at 8-2, 10-2; THE AIR FORCE MANUAL ON INTERNATIONAL LAW, *supra* note 12, at 5-9.

²³⁴ ICJ Hearing, November 15, 1995, at 90 (John H. McNeill, arguing).

²³⁵ *Id.*

²³⁶ *Id.*

²³⁷ *Id.*

The ICJ concluded that it did not have sufficient facts to resolve this issue. While finding the use of nuclear weapons to be “potentially catastrophic” and “scarcely reconcilable” with the rules of discrimination and necessity, the Court concluded that it did not have “sufficient elements” to determine that all uses of nuclear weapons would be unlawful:

96. [T]he Court cannot lose sight of the fundamental right of every State to survival, and thus its right to resort to self-defense, in accordance with Article 51 of the Charter, when its survival is at stake.

Nor can it ignore the practice referred to as “policy of deterrence,” to which an appreciable section of the international community adhered for many years. The Court also notes the reservations which certain nuclear-weapon States have appended to the undertakings they have given, notably under the Protocols to the Treaties of Tlatelolco and Rarotonga, and also under declarations made by them in connection with the extension of the Treaty on the Non-Proliferation of Nuclear Weapons, not to resort to such weapons.

97. Accordingly, in view of the present state of international law viewed as a whole, as examined above by the Court, and of the elements of fact at its disposal, the Court is led to observe that it cannot reach a definitive conclusion as to the legality or illegality of the use of nuclear weapons by a State in an extreme circumstance of self-defense, in which its very survival would be at stake.²³⁸

The facts which the Court found to be missing ostensibly had to do with the likely effects of the use of low-yield tactical nuclear weapons and the risk of escalation. The Court first noted the view expressed by the United Kingdom in its written submission to the Court, and the United States in its oral argument:

91. ... The reality ... is that nuclear weapons might be used in a wide variety of circumstances with very different results in terms of likely civilian casualties. In some cases, such as the use of a low yield nuclear weapon against warships on the High Seas or troops in sparsely populated areas, it is possible to envisage a nuclear attack which caused comparatively few civilian casualties. It is by no means the case that every use of nuclear weapons against a military objective would inevitably cause very great collateral civilian casualties.²³⁹

The Court then noted the contrasting view of other States:

²³⁸ Nuclear Weapons Advisory Opinion ¶ 96, at 33 I.L.M. at 830.

Judge Weeramantry in his dissenting opinion in the WHO Advisory Opinion proceeding noted that it is the Court’s job to make findings as to disputed facts. Judge Weeramantry cited the Court’s observation in the Advisory Opinion on *Namibia* that “to enable a court to pronounce on legal questions, it must also be acquainted with, take into account and, if necessary, make findings as to the relevant factual issues.” WHO Advisory Opinion, 1996 ICJ 68, 161 (Weeramantry, J., dissenting) (citing I.C.J. Reports 1971 at 27).

Judge Weeramantry further noted the contentions made by Finland to the effect that:

[T]he legality of the use of nuclear weapons can only be determined in respect of specific circumstances, for there can be a large number of potential situations—*e.g.*, first use, counter use, different practices of targeting, different types of nuclear weapons—and [that] the Court cannot hypothesize about all these possibilities.

WHO Advisory Opinion, 1996 I.C.J. 68, 161 (citing Written Statement of Finland at 4).

²³⁹ Nuclear Weapons Advisory Opinion ¶ 91 at 31, 35 I.L.M. at 829 (citing United Kingdom, Written Statement ¶ 3.70 at 53, and United States of America, Oral Statement, CR 95/34 at 89–90).

92. ... [R]ecourse to nuclear weapons could never be compatible with the principles and rules of humanitarian law and is therefore prohibited. In the event of their use, nuclear weapons would in all circumstances be unable to draw any distinction between the civilian population and combatants, or between civilian objects and military objectives, and their effects, largely uncontrollable, could not be restricted, either in time or in space, to lawful military targets. Such weapons would kill and destroy in a necessarily indiscriminate manner, on account of the blast, heat and radiation occasioned by the nuclear explosion and the effects induced; and the number of casualties which would ensue would be enormous. The use of nuclear weapons would therefore be prohibited in any circumstance, notwithstanding the absence of any explicit conventional prohibition.²⁴⁰

While concluding that it was unable to resolve these polar factual positions, the Court noted that the proponents of legality had failed to substantiate their position as to the possibility of limited use, without escalation, of low level nuclear weapons or even of the potential utility of such use if it were possible:

95. ... [N]one of the States advocating the legality of the use of nuclear weapons under certain circumstances, including the “clean” use of smaller, low yield tactical nuclear weapons, has indicated what, supposing such limited use were feasible, would be the precise circumstances justifying such use; nor whether such limited use would not tend to escalate into the all-out use of high yield nuclear weapons. This being so, the Court does not consider that it has a sufficient basis for a determination of the validity of this view.²⁴¹

The Court declined to engage in risk analysis:

43. Certain States ... contend that the very nature of nuclear weapons, and the high probability of an escalation of nuclear exchanges, mean that there is an extremely strong risk of devastation. The risk factor is said to negate the possibility of the condition of proportionality being complied with. The Court does not find it necessary to embark upon the quantification of such risks; nor does it need to enquire into the question whether tactical nuclear weapons exist which are sufficiently precise to limit those risks: it suffices for the Court to note that the very nature of all nuclear weapons and the profound risks associated therewith are further considerations to be borne in mind by States believing they can exercise a nuclear response in self-defense in accordance with the requirements of proportionality.²⁴²

This issue of risk analysis would appear to be the heart of the matter. In a milieu in which the dominant policy of nuclear deterrence is inherently provocative, the question of the extent to which any State may subject the rest of the world, or any appreciable portion of it, to the risk of severe, even apocalyptic, effects would appear to be one that must be addressed if the law in this area is to be meaningful.

The applicability of risk analysis would seem to be recognized by the U.S. statement of the proportionality test to the ICJ:

²⁴⁰ *Id.* ¶ 92, at 32, 35 I.L.M. at 829.

²⁴¹ *Id.* ¶ 94 at 32.

²⁴² *Id.* ¶ 43, 35 I.L.M. at 822. *See also id.* ¶¶ 18, 32, 33, 36, 95, 97, at 18, 16, 17, 32, and 33, respectively.

Whether an attack with nuclear weapons would be disproportionate depends entirely on the circumstances, including the nature of the enemy threat, the importance of destroying the objective, the character, size and likely effects of the device, and the magnitude of the risk to civilians.²⁴³

As to the applicability of risk analysis to nuclear weapons, Robert McNamara, reacting to the potential willingness of the United States' military leaders to use nuclear weapons in Vietnam, objected that "even a low risk of a catastrophic event must be avoided."²⁴⁴

Henry Kissinger, speaking in Brussels in 1979, reportedly questioned whether the United States would ever initiate a nuclear strike against the Soviet Union based upon a Soviet attack on Western Europe, given the attendant risk factors:

Our European allies, he said, should not keep asking us to multiply strategic assurances that we cannot possibly mean or if we do mean, we would not execute because if we execute we risk the destruction of civilization.²⁴⁵

General George Lee Butler, who served as the Commander of the Strategic Air Command and hence as the Air Force general responsible for drafting the overall U.S. strategy for nuclear war, has reported how amazed he was "by how little high-level scrutiny [the U.S. nuclear war plan] had received over the years, and by how readily his military colleagues threw up their hands and rolled their eyes at the grim challenge of converting mathematical estimates of the destructiveness of nuclear arms and the resilience of Soviet structures into dry statistical formulas for nuclear war."²⁴⁶

"It was all Alice-in-Wonderland stuff," Butler says. The targeting data and other details of the war plan, which are written in an almost unfathomable million lines of computer software code, were typically reduced by military briefers to between 60 and 100 slides that could be presented in an hour or so to the handful of senior U.S. officials who were cleared to hear it:

"Generally, no one at the briefings wanted to ask questions because they didn't want to embarrass themselves. It was about as unsatisfactory as could be imagined for that subject matter. The truth is that the president only had a superficial understanding" of what would happen in a nuclear war, Butler says. "Congress knew even less because no lawmaker has ever had access to the war plan, and most academics could only make ill-informed guesses."²⁴⁷

There is a perception in Washington and in the defense establishment generally that the contingency plans for the use of nuclear weapons are so complex and specialized as essentially to be the domain of the military, and indeed of the small group within the military responsible for such matters, thereby largely excluding the President and other civilian leadership and even the

²⁴³ U.S. ICI Memorandum/GA App. at 23 (citing the Army's *THE LAW OF LAND WARFARE* at 5). See MOXLEY, *supra* note 1, Chapter 1, notes 75–108, Chapter 2, notes 88–91, and accompanying text.

²⁴⁴ See ROBERT S. MCNAMARA, *IN RETROSPECT: THE TRAGEDY AND LESSONS OF VIETNAM* 160–61 (1995).

²⁴⁵ *Id.* at 344–45. See generally MOXLEY, *supra* note 1, Chapter 24.

²⁴⁶ R. Jeffrey Smith, *Ex-Commander of Nukes Wants to Scrap Them, A Believer No More*, *THE SACRAMENTO BEE*, Mar. 29, 1998, (quoting Gen. Butler). See MOXLEY, *supra* note 1, Chapter 27, notes 80–85 and accompanying text.

²⁴⁷ *Id.*

military leadership itself from significant and intelligent participation.²⁴⁸ Even more, there is the perception that the overall policy guidelines are so broad and the intricacies of the SIOP so arcane as to permit the military running the SIOP to do pretty much what they want without any significant oversight.²⁴⁹

William Arkin and Hans Kristensen stated in the *Bulletin of the Atomic Scientists*:

Meanwhile, the [Clinton Administration] had begun to echo a perennial Washington complaint that strategic planners had effectively excluded both civilian and other military policy-makers from the details of nuclear war plans, and that they read into the national guidance whatever they chose, allowing them to retain never-changing first-strike options. ...

But the problem went beyond a simple case of insubordination: The choreography of nuclear war-fighting was so complex that few outside STRATCOM's Omaha headquarters were in a position to challenge its claims about "required" readiness, synergy, or military capacity. And by staying firmly in control of all the analytic tools, STRATCOM [previously called "SAC"] could deflect any of Washington's changes.²⁵⁰

Notwithstanding the doctrine that only the President can authorize the use of nuclear weapons, there is evidence that this authority has at times been delegated to the military. Paul Bracken has reported:

In September 1957 a former commander of NORAD, General Earle E. Partridge stated in an interview that he had been given emergency authority to use certain nuclear weapons. Apparently the reason behind these measures was the fear that there might be no president surviving to send out the necessary orders if the United States absorbed the first blow in a nuclear war. In 1964, General Lauris Norstad, then a former commander of American forces in Europe, broadly hinted in an interview that he too was given such power by President Kennedy. In 1977, Daniel Ellsberg [who had served as a nuclear policy-maker] asserted that such predelegated authority had been given to the military by presidents Eisenhower, Kennedy and Johnson He stated that the authority had been given to the 'six or seven three-and four-star generals. These generals must have corresponded to the unified and specified commanders.'²⁵¹

Law as to Risk Creation

Legal systems throughout the world recognize civil and criminal liability for taking even minor risks of extremely severe effects, absent sufficient justification.²⁵² This is reflected in tort

²⁴⁸ See William M. Arkin & Hans Kristensen, *Dangerous Directions*, BULL. OF THE ATOMIC SCIENTISTS, vol. 54, no. 2, Mar. 1, 1998, at 30; MOXLEY, *supra* note 1, Chapter 27, note 80 and accompanying text.

²⁴⁹ Arkin & Kristensen, *supra* note 248.

²⁵⁰ *Id.* See MOXLEY, *supra* note 1, Chapter 17, notes 25–27 and accompanying text.

²⁵¹ PAUL BRACKEN, THE COMMAND AND CONTROL OF NUCLEAR FORCES 198 (1983). See MOXLEY, *supra* note 1, Chapter 22, note 6 and accompanying text.

²⁵² See MOXLEY, *supra* note 1, Chapters 6–11; Chapter 6, notes 8–10, 17–21, 26–44, Chapter 7, notes 6, 22–24, 28–96, Chapter 10, note 18, Chapter 11, note 24, and accompanying text; *United States v. Carroll Towing, Co.*, 159 F.2d 169, 173 (2d Cir. 1947); Herbert Wechsler & Jerome Michael, *A Rationale of the Law of Homicide*, 36 COLUM. L. REV. 701, 731 (1937) GLANVILLE L. WILLIAMS, CRIMINAL LAW, THE GENERAL PART § 21 at 53–54 (1953); Model Penal Code § 210.2(1)(b) (A.L.I. 1985).

law under principles such as the Hand formula²⁵³ and in criminal law by the imposition of culpability based on the reckless and grossly negligent taking of unjustified risks.²⁵⁴

The element of justification would appear to be inherently limited by the purposes of the law of armed conflict and the principle of interpreting law in light of its purposes.²⁵⁵ Destruction beyond the limits of the purposes of armed conflict cannot be the basis of legal justification.

The principles of sovereign equality and neutrality and legal restrictions on injuring third-parties would also appear to impose limitations on permissible justification: No one State can justify risking the destruction of other innocent States or of humankind even to save itself.²⁵⁶

Relation of Risk Factors to Mental State

As noted, the United States argued in its memorandum to the ICJ, “It seems to be assumed that any use of nuclear weapons would inevitably escalate into a massive strategic nuclear exchange, with the deliberate destruction of the population centers of the opposing sides.”²⁵⁷

U.S. lawyer McNeill in his oral argument stated:

The argument that international law prohibits, in all cases, the use of nuclear weapons appears to be premised on the incorrect assumption that every use of every type of nuclear weapons will necessarily share certain characteristics which contravene the law of armed conflict. Specifically, it appears to be assumed that any use of nuclear weapons would inevitably escalate into a massive strategic nuclear exchange, resulting automatically in the deliberate destruction of the population centers of the opposing sides.²⁵⁸

While the language quoted may have been focused upon the U.S. position that 100% unlawfulness is necessary for *per se* unlawfulness, the underlying point seems the same: that a high level of certainty is necessary before unlawfulness incepts. This seems inconsistent with rules of law recognized by the United States, whereby States are subject to war crimes culpability without regard to mental state, individuals are subject to culpability based not only on recklessness but also on gross negligence, and commanders are subject to culpability based on mere negligence or something approaching it.²⁵⁹

²⁵³ See MOXLEY, *supra* note 1, Chapter 6, notes 9–25 and accompanying text; United States v. Carroll Towing Co., 159 F.2d 169 (2d Cir. 1947).

²⁵⁴ See MOXLEY, *supra* note 1, Chapter 1, notes 285–296, Chapters 7–12, 14; Chapter 7, notes 4–11, 27–31, 49–96, Chapter 8, notes 6–53, Chapter 10, notes 2–11, and accompanying text.

²⁵⁵ See *id.* Chapter 29, notes 128–149 and accompanying text. See also *id.* Chapter 5.

²⁵⁶ See *id.* Chapter 29, notes 149–150, 170–204, and accompanying text. See also *id.* Chapters 10, 11.

²⁵⁷ U.S. ICJ Memorial/GA App. at 21. See MOXLEY, *supra* note 1, Chapter 2, notes 71–74, Chapter 29, notes 259–291, and accompanying text.

²⁵⁸ ICJ Hearing, November 15, 1995, at 85. See MOXLEY, *supra* note 1, Chapter 2, notes 71–87 and accompanying text.

²⁵⁹ See generally MOXLEY, *supra* note 1, Chapters 8, 29. See *id.* Chapter 1, notes 278–301, Chapter 8, notes 45–49, Chapter 29, notes 277–289, and accompanying text. See also THE AIR FORCE MANUAL ON INTERNATIONAL LAW, *supra* note 12, at 15-2, 15-3, 15-8 n.13 (citing SPAIGHT, AIR POWER AND WAR RIGHTS 57, 58 (1947)); THE AIR FORCE COMMANDER’S HANDBOOK, *supra* note 12, at 8-1; THE NAVAL/MARINE COMMANDER’S HANDBOOK, *supra* note 12 at 6-5, 6-5 n.12, 6-6 n.12 (citing United States v. Wilhelm List et al., 9 TWC 127 (1950)); THE LAW OF LAND WARFARE, *supra* note 11, at 178; CHERIF BASSIOUNI & PETER MANIKAS, THE LAW OF THE INTERNATIONAL CRIMINAL TRIBUNAL FOR THE FORMER YUGOSLAVIA 361, 362 (1996) (citing The High Command Case, 2 TRIALS OF WAR CRIMINALS BEFORE THE NUREMBERG MILITARY TRIBUNALS UNDER CONTROL COUNCIL LAW NO. 10 (1949) (aka United States v. Wilhelm von Leeb)).

In upholding the defendant's conviction in the *Yamashita* case, the U.S. Supreme Court ostensibly saw commander responsibility as a way of dealing with the risk of wanton acts by troops against protected persons:

The question then is whether the law of war imposes on an army commander a duty to take such appropriate measures as are within his power to control the troops under his command for the prevention of the specified acts which are violations of the law of war and which are likely to attend the occupation of hostile territory by an uncontrolled soldiery, and whether he may be charged with personal responsibility for his failure to take such measures when violations result. It is evident that the conduct of military operations by troops whose excesses are unrestrained by the orders of or efforts of their commanders would almost certainly result in violations which it is the purpose of the law of war to prevent.²⁶⁰

ICJ Judge Schwebel, at the time the U.S. judge on the ICJ and now the President of the Court addressed this issue. After finding unlawful the use of strategic nuclear weapons "in quantities against enemy cities and industries,"²⁶¹ Judge Schwebel found to be lawful the use of "tactical nuclear weapons against discrete military or naval targets so situated that substantial civilian casualties would not ensue."²⁶²

By way of example, he hypothesized the use of a nuclear depth-charge to destroy a nuclear submarine that has fired or is about to fire nuclear missiles, arguing that such use might be lawful since it would not cause substantial civilian casualties, would be proportionate in the sense that it would cause much less damage than the destroyed submarine would have caused, and would be more likely than a conventional depth-charge to achieve the military objective.²⁶³

Judge Schwebel identified as an intermediate case the use of nuclear weapons to destroy an enemy army situated in the desert, concluding that such a strike would in some instances be legal and in others illegal, depending on the circumstances and the application of such rules as those of discrimination and proportionality.²⁶⁴

As we saw, the ICJ in its decision referenced similar arguments the United States and Great Britain had made:

91. ... The reality ... is that nuclear weapons might be used in a wide variety of circumstances with very different results in terms of likely civilian casualties. In some cases, such as the use of a low yield nuclear weapon against warships on the High Seas or troops in sparsely populated areas, it is possible to envisage a nuclear attack which caused comparatively few civilian casualties. It is by no means the case that every use of nuclear weapons against a military objective would inevitably cause very great collateral civilian casualties.²⁶⁵

These examples, and the ones used by the United States and Great Britain before the ICJ, appear to assume one of two things:

²⁶⁰ In re *Yamashita*, 327 U.S. 1, 15 (1946). See MOXLEY, *supra* note 1, Chapter 8, notes 45–49 and accompanying text.

²⁶¹ Dissenting opinion of Judge Schwebel to the Nuclear Weapons Advisory Opinion at 7, 35 I.L.M. at 839.

²⁶² *Id.*

²⁶³ *See id.*

²⁶⁴ *See id.*

²⁶⁵ Nuclear Weapons Advisory Opinion ¶ 91 at 31, 35 I.L.M. at 829 (citing United Kingdom, Written Statement ¶ 3.70 at 53, and United States of America, Oral Statement, CR 95/34 at 89–90).

- that the submarine in the ocean and the army in the desert or other such remote targets would exist independently of the rest of the world, rather than being affiliated with a State that either itself or with its allies has nuclear, chemical or biological weapons that it is likely to use in response to nuclear attack, and that the State using the nuclear weapons has no other enemies that might find the attack provocative and retaliate; or
- that the potential escalation by the attacked State or other party is not relevant to the analysis.

Neither assumption seems reasonable. As the United States has recognized, the legality evaluation is to be made in light of all available facts as to potential risk factors.²⁶⁶ Although it may be possible that there could be a scenario where the submarine or the army in the desert and the related conflict existed independently of the rest of the world, such a prospect seems so remote as to preclude its constituting the basis, on any rational level, for the overall lawfulness of the use of nuclear weapons.

Interestingly, Judge Schwebel recognized the legal point that if a use of nuclear weapons could cause severe effects, it would be unlawful:

At one extreme is the use of strategic nuclear weapons in quantities against enemy cities and industries. This so-called “countervalue” use (as contrasted with “counterforce” uses directly only against enemy nuclear forces and installations) could cause an enormous number of deaths and injuries, running in some cases into the millions; and, in addition to those immediately affected by the heat and blast of those weapons, vast numbers could be affected, many fatally, by spreading radiation. Large-scale “exchanges” of such nuclear weaponry could destroy not only cities but countries and render continents, perhaps the whole of the earth, uninhabitable, if not at once then through longer-range effects of nuclear fallout. It cannot be accepted that the use of nuclear weapons on a scale which would—or *could*—result in the deaths of many millions in indiscriminate inferno and by far-reaching fallout, have profoundly pernicious effects in space and time, and render uninhabitable much or all of the earth, could be lawful.²⁶⁷

The question, of course, is what threshold of risk constitutes unlawfulness. While there is appeal to the U.S. argument that hypothetical surgical uses of a small number of tactical nuclear weapons against remote desert or ocean targets might not threaten impermissible effects, we believe that such hypotheticals are unrealistic and not a reasonable basis upon which to evaluate lawfulness. As recognized by the United States, the rules of necessity, proportionality and discrimination are rules of reason to be applied in light of all reasonably available facts.²⁶⁸

²⁶⁶ See MOXLEY, *supra* note 1, Chapter 1, notes 84–93, 109–120, 161, Chapter 5, notes 3–4, Chapter 6, notes 26–27, Chapter 29, notes 125–127, and accompanying text; THE AIR FORCE MANUAL ON INTERNATIONAL LAW *supra* note 12, at 1-8 to 1-9 (citing SPAIGHT, AIR POWER AND WAR RIGHTS 57, 58 (1947)); THE NAVAL/MARINE COMMANDER’S HANDBOOK, *supra* note 12, at 8-5 to 8-6; THE AIR FORCE COMMANDER’S HANDBOOK *supra* note 12, at 3-3, 6-1; THE LAW OF LAND WARFARE, *supra* note 11, at 23–24. See also Vienna Convention on the Law of Treaties Article 32, May 23, 1969, 1155 U.N.T.S. 331, 8 I.L.M. 679; J.L. BRIERLY, THE LAW OF NATIONS 67 (1963) (1928); XI INT’L ENCYCLOPEDIA OF COMPARATIVE LAW § 2-114 (1983).

²⁶⁷ Dissenting opinion of Judge Schwebel to the Nuclear Weapons Advisory Opinion at 7, 35 I.L.M. at 839 (emphasis added). See MOXLEY, *supra* note 1, Chapter 1, note 38 and accompanying text.

²⁶⁸ See MOXLEY, *supra* note 1, Chapter 1, notes 28–39, and accompanying text, The Naval/Marine Commander’s Handbook, *supra* note 12, at 5-7 n.7 (citing Final Protocol of the Brussels Conference of 27 August 1874, Schindler & Toman 26); The Air Force Manual on International Law, *supra* note 12, at 1-3 (quoting 1 Whiteman, Digest of

Accordingly, the legal analysis must be made in light of the facts likely to be present in the types of circumstances, if any, in which the United States might resort to these weapons.

We assume that, absent some political or military aberration or mistake (obviously themselves risk factors),²⁶⁹ the United States would not resort to use of nuclear weapons except in the most extreme of circumstances. Yet, as noted, such circumstances²⁷⁰ would by definition be volatile and highly pressured, with little time for rational or careful decision-making.²⁷¹

In any such circumstance in which these weapons might be used, whether intentionally or by mistake, we conclude that it is ineluctably the case that there would be risk of the occurrence of extreme effects causing unlawfulness, given the potential destructiveness of the weapons, the inherent uncontrollability of radiation,²⁷² and the overall potential for escalation, misperception, and loss of command and control?²⁷³

Mental State

This is particularly the case given the mental state required for unlawfulness. Both the State and individuals associated with it, generally its governmental, military and industrial leadership and in some instances working personnel, are subject to criminal liability for commission of war crimes. The State obviously can only act through individuals, and it is now

International Law 1-2), 1-5, 1-9 (citing Address by General George S. Brown, Chairman of the Joint Chiefs of Staff, DOD News Release No. 479-74 (10 Oct 1974)), 1-11, 1-13 nn.5-7 (quoting 1 Hackworth, Digest of International Law at 1, 7 vols. (1940-43)), 1-15 nn.30, 33. The Law of Land Warfare, *supra* note 11, at 3; *The Krupp Trial* (Trial of Alfred Felix Alwyn Krupp Von Bohlen und Halbach and Eleven Others), 10 LRTWC 139 (1949), *quoted in* The Naval/Marine Commander's Handbook at 5-6. *See generally* MOXLEY *supra* note 1, Chapter 5.

²⁶⁹ *See* MOXLEY, *supra* note 1, Chapter 22, notes 32-37 and accompanying text. *See also id.* Chapter 22, notes 38-40 and accompanying text; SHAUN GREGORY, THE HIDDEN COST OF DETERRENCE: NUCLEAR WEAPONS ACCIDENTS (1990).

²⁷⁰ We have written this report from the perspective of the United States. The question arises, to what extent is this a limitation? Could the use of nuclear weapons be unlawful for the United States, but lawful for some other State?

We think not. Such rules of law as those of proportionality, necessity, and discrimination are equally applicable to all States. While our focus, in developing the facts and law based on statements by the United States, heightens the extent to which such matters have been "admitted" by the United States, these matters are not controversial. The U.S. admissions are not esoteric or idiosyncratic, but rather essentially acknowledge the incontrovertible.

While it is true, in terms of the legal issue of the implications of bringing upon oneself the need to use extreme force, that the United States, as such a wealthy country, might be regarded as particularly culpable in bringing upon itself a dependency upon nuclear weapons, as it did during the Cold War, nonetheless, the prohibitions of the applicable rules of law override even severe military necessity. *See* MOXLEY, *supra* note 1, Introduction before Part I; Chapter 29, notes 128-136, 205-209, and accompanying text.

²⁷¹ *See id.* Chapter 17, note 33, Chapter 29, notes 48-54, and accompanying text.

²⁷² *See id.* Chapter 29, notes 41-124 and accompanying text.

²⁷³ *See id.* Chapters 15, 25, 26; Chapter 2, notes 63-87, Chapter 15, notes 1-14, 33-43, 58-89, 99, 102-108, Chapter 16, notes 32-38, and accompanying text; NATO HANDBOOK ON THE MEDICAL ASPECTS OF NBC DEFENSIVE OPERATIONS, Part I, Chap. 1, §102(a) (A MedP-6(B) 1996), adopted as Army Field Manual 8-9, Navy Medical Publication 5059, Air Force Joint Manual 44-151; INTERNATIONAL PHYSICIANS FOR THE PREVENTION OF NUCLEAR WAR, BRIEFING BOOK ON NUCLEAR WAR (1992); Carl Sagan, *Nuclear War and Climatic Catastrophe: Some Policy Implications*, 62 FOREIGN AFF. 257, 273 (Winter 1983/1984); U.S. Congress, Office of Technology Assessment, *The Effects of Nuclear War* 16-17 NTIS order no. PB-296946 (Washington, DC: U.S. Government Printing Office, May 1979). *See also* MOXLEY, *supra* note 1, Chapters 7-9, on weighing risks and the legal relevance of risks.

The escalation risk is particularly extreme, as has been recognized by the civilian and military leadership of the United States and by defense experts throughout the nuclear era. *See* MOXLEY, *supra* note 1, Chapters 24, 25.

well-established that, for purposes of the law of armed conflict, such individuals—every bit as much as States and indeed even more so—are subject to potential liability for war crimes.

Indeed, as the Nuremberg proceedings exemplified, individuals, not States, are potentially put in prison or executed.²⁷⁴ States can, and historically have been, subject to damages and reparations, but, in contemporary international law, the focus of war crimes trials is on the responsible individuals.²⁷⁵

The United States has recognized a very broad range of potential criminal liability of individuals for war crimes, including not only for activity of an intentional nature, but also for reckless, grossly negligent, and even negligent conduct. Specifically, the United States has recognized that States are subject to war crimes culpability without regard to mental state, individuals are subject to culpability based not only on recklessness but also on gross negligence, and commanders are subject to culpability based on mere negligence or something approaching it.²⁷⁶

Thus, *The Air Force Manual on International Law* goes on to state that *mens rea* or a guilty mind, at the level of purposeful behavior or intention or at least gross negligence, is required for individual, as opposed to State, criminal responsibility.²⁷⁷ The manual quotes Spaight's statement of the rule:

In international law, as in municipal law intention to break the law—*mens rea* or negligence so gross as to be the equivalent of criminal intent is the essence of the offense. A bombing pilot cannot be arraigned for an error of judgment ... it must be one which he or his superiors either knew to be wrong, or which was, *in se*, so palpably and unmistakably a wrongful act that only gross negligence or deliberate blindness could explain their being unaware of its wrongness.²⁷⁸

As to commander liability, a commander is responsible to maintain and prevent violations of the law of war by subordinates and can be liable based on such violations.

²⁷⁴ See MOXLEY, *supra* note 1, at Chapter 8, note 3 and accompanying text. See generally *id.* Chapter 8; IAN BROWNIE, *INTERNATIONAL LAW AND THE USE OF FORCE BY STATES* 150–171 (1963), Matthew Lippman, *Crimes Against Humanity*, 17 B.C. THIRD WORLD L.J. 171 (1997) (International Law and Human Rights Edition); Mark Allan Gray, *The International Crime of Ecocide*, 26 CAL. W. INT'L L.J. 215, 265 (1996), citing Geof Gilbert, *The Criminal Responsibility of States*, 39 INT'L & COMP. L.Q. 345, 357, 366 (1990), and Report of the Commission to the General Assembly on the work of its forty-sixth session, U.N. GAOR, 49th Sess., Supp. No. 10, U.N. Doc. A/49/10 (1994), at 348–49.

²⁷⁵ See MOXLEY, *supra* note 1, at Chapter 8, notes 1–7, 40, and accompanying text. See generally *id.* Chapter 8; IAN BROWNIE, *INTERNATIONAL LAW AND THE USE OF FORCE BY STATES* 133–149 (1963); TELFORD TAYLOR, *NUREMBERG AND VIETNAM: AN AMERICAN TRAGEDY* 82–88 (Quadrangle 1970).

²⁷⁶ See generally MOXLEY, *supra* note 1, Chapters 8, 29. See *id.* Chapter 1, notes 278–301, Chapter 8, notes 45–49, Chapter 29, notes 277–289, and accompanying text. See also THE AIR FORCE MANUAL ON INTERNATIONAL LAW, *supra* note 12, at 15-2, 15-3, 15-8 n.13 (citing SPAIGHT, AIR POWER AND WAR RIGHTS 57, 58 (1947)); THE AIR FORCE COMMANDER'S HANDBOOK, *supra* note 12, at 8-1; THE NAVAL/MARINE COMMANDER'S HANDBOOK, *supra* note 12, at 6-5, 6-5 n.12, 6-6 n.12 (citing United States v. Wilhelm List et al., 9 TWC 127 (1950)); THE LAW OF LAND WARFARE, *supra* note 11, at 178; CHERIF BASSIOUNI & PETER MANIKAS, THE LAW OF THE INTERNATIONAL CRIMINAL TRIBUNAL FOR THE FORMER YUGOSLAVIA 361, 362 (1996) (citing The High Command Case, 2 TRIALS OF WAR CRIMINALS BEFORE THE NUREMBERG MILITARY TRIBUNALS UNDER CONTROL COUNCIL LAW NO. 10 (1949) (aka United States v. Wilhelm von Leeb)).

²⁷⁷ THE AIR FORCE MANUAL ON INTERNATIONAL LAW, *supra* note 12, at 15-3; 15-8 n.13 (citing SPAIGHT, AIR POWER AND WAR RIGHTS 57, 58 (1947)).

²⁷⁸ *Id.* at 15-8 n.13.

The Air Force Manual on International Law states that “[c]ommand responsibility for acts committed by subordinates arises when the specific wrongful acts in question are knowingly ordered or encouraged.”²⁷⁹ The manual states that the commander is also responsible “if he has actual knowledge, or should have had knowledge” that his subordinates “have or are about to commit criminal violations, and he culpably fails to take reasonably necessary steps to ensure compliance with the law and punish violators thereof.”²⁸⁰

The Naval/Marine Commander’s Handbook quotes the United States Military Tribunal’s decision in *The Hostages Case* for the proposition that the commander is charged with available information even if not personally aware of same:

Want of knowledge of the contents of reports made to him [*i.e.*, to the commander general] is not a defense. Reports to commanding generals are made for their special benefit. Any failure to acquaint themselves with the contents of such reports, or a failure to require additional reports where inadequacy appears on their face, constitutes a dereliction of duty which he cannot use in his behalf.²⁸¹

The handbook states that the responsibility of a commanding officer “may be based solely upon inaction” and that it is “not always necessary to establish that a superior knew, or must be presumed to have known of the offense committed by his subordinates.”²⁸² “While a commander may delegate some or all of his authority, he cannot delegate responsibility for the conduct of the forces he commands.”²⁸³

In upholding the defendant’s conviction in the *Yamashita* case, the U.S. Supreme Court ostensibly saw commander responsibility as a way of dealing with the risk of wanton acts by troops against protected persons:

The question then is whether the law of war imposes on an army commander a duty to take such appropriate measures as are within his power to control the troops under his command for the prevention of the specified acts which are violations of the law of war and which are likely to attend the occupation of hostile territory by an uncontrolled soldiery, and whether he may be charged with personal responsibility for his failure to take such measures when violations result. It is evident that the conduct of military operations by troops whose excesses are unrestrained by the orders of or efforts of their commanders would almost certainly result in violations which it is the purpose of the law of war to prevent.²⁸⁴

It is also clear that the law of armed conflict generally recognizes recklessness and other mental states less than strict intentionality as a basis for war crimes liability.²⁸⁵ The Geneva conventions extensively provide for criminal culpability for violations committed willfully,²⁸⁶ a

²⁷⁹ *Id.* at 15-3. See also *id.* at 15-9 n.23 (citations omitted).

²⁸⁰ *Id.* 10, at 15-2 to 15-3. See also THE LAW OF LAND WARFARE, *supra* note 11, at 178.

²⁸¹ THE NAVAL/MARINE COMMANDER’S HANDBOOK, *supra* note 12, at 6-5 (quoting United States v. Wilhelm List et al., 9 TWC 127 (1950)).

²⁸² *Id.* at 6-6 n.12.

²⁸³ *Id.* at 6-5.

²⁸⁴ In re Yamashita, 327 U.S. 1, 15 (1946).

²⁸⁵ See MOXLEY, *supra* note 1, at Chapter 8 notes 6–15 and accompanying text. See generally *id.* Chapter 8.

²⁸⁶ See *id.* at Chapter 8, notes 8–14 and accompanying text; THE AIR FORCE MANUAL ON INTERNATIONAL LAW, *supra* note 12, at 15-1 to 15-2; 15-8 n.12 (quoting Geneva Convention for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field, adopted Aug. 12, 1949, 75 U.N.T.S. 31; Geneva Convention for

state of mind broadly recognized as encompassing recklessness.²⁸⁷ The law of armed conflict similarly recognizes criminal culpability for acts of wantonness and of wanton destruction, acts also not reaching the level of strict intentionality.²⁸⁸

Similarly, in imposing war crimes culpability for “an attack which may be expected to cause” certain impermissible effects, as prescribed, for example, in Protocol I to the Geneva Conventions, Article 51(5), or for acts that are “intended, or may be expected, to cause” certain impermissible effects, as prescribed, in Protocol I, Article 35(3), the law again recognizes potential culpability for war crimes committed with a mental element of less than strict intentionality.²⁸⁹

So also, as discussed above, the law of armed conflict recognizes an extremely scope of potential commander culpability for war crimes based on what the commander “knew or should have known.”²⁹⁰

While the ICJ in the Nuclear Weapons Advisory Opinions did not focus on the question of the general *mens rea* requirements under the law of armed conflict, a number of the judges made the point that information as to the potential effects of nuclear weapons is so widely known and available as to provide a basis for war crimes based on the use of such weapons.

Judge Weeramantry in his dissenting opinion stated:

“By-products” or “collateral damage”] are known to be the necessary consequences of the use of the weapon. The author of the act causing these consequences cannot in any coherent legal system avoid legal responsibility for causing them, any less than a man careering in a motor vehicle at a hundred and fifty kilometers per hour through a

the Amelioration of the Condition of Wounded, Sick, and Shipwrecked Members of Armed Forces at Sea, adopted Aug. 12, 1949, 75 U.N.T.S. 85, and other Geneva Conventions).

²⁸⁷ See MOXLEY, *supra* note 1, at Chapter 8, notes 6–18 and accompanying text. See generally *id.* Chapter 8. See also GLANVILLE WILLIAMS, CRIMINAL LAW, THE GENERAL PART § 22, 59–62 (1953); ICRC Commentary to Article 85 of Protocol I (para. 3474), *quoted in* Amnesty International—Report—IOR 40/10/98 May 1998 United Nations (UN), The International Criminal Court Making the Right Choices—Part V Recommendations to the Diplomatic Conference, <<http://www.amnesty.org/ailib/aipub/1998/IOI/14001098.htm>>; Commentary on Protocol Additional (No. I) to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts (Protocol I), concluded at Geneva 8 June 1997, Part V: Execution of the conventions and of this protocol: Section II—Repression of breaches of the conventions and of this protocol, Art. 85—Repression of breaches of this Protocol, <<http://www.icrc.org/ihl.nsf>>.

²⁸⁸ See Art. 3(b), International Criminal Tribunal for the Former Yugoslavia, Statute of the International Tribunal (Adopted 25 May 1993) (as amended 13 May 1998) <<http://www.un.org/icty/basic/statut/statute.htm>>; Jordan J. Paust, *International Law Association—American Branch: Committee on a Permanent International Criminal Court: The Preparatory Committee’s “Definition of Crimes”—War Crimes*, 8 CRIM. L.F. 431, 438–441 (1997) (emphasis removed) (citing, *inter alia*, U.N. Doc. A/CONF. 95/15 (1980), reprinted in 19 I.L.M. 1523; Report of the Secretary-General pursuant to Paragraph 2 of Security Council Resolution 808 (1993), U.N. Doc. S/25704 & Add. I (1993), Annex, arts. 2(d), 3(b); Prosecutor v. Karadzic, Case No. IT-95-5-I (Int’l Trib. for Former Yugo., Indictment, July 24, 1995), PP27, 41, 44; Report of the International Law Commission on Its Second Session, 5 June–29 July 1950, 5 U.N. GAOR, Supp. No. 12, at 11–14, P99, U.N. Doc. A/1316 (1950); 11 TRIALS OF WAR CRIMINALS 757 (1948); Report of Justice Robert H. Jackson to the President of the United States, released June 7, 1945, reprinted in PAUST ET AL. INTERNATIONAL CRIMINAL LAW at 1027; Instructions for the Government of Armies of the United States in the Field, General Orders No. 100, Apr. 24, 1863, arts. 16, 44, [Lieber Code]; Responsibilities Commission of the Paris Peace Conference, List of War Crimes (1919); Geneva Convention for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field, adopted Aug. 12, 1949, art. 50, 75 U.N.T.S. 31; Geneva Convention for the Amelioration of the Condition of Wounded, Sick, and Shipwrecked Members of Armed Forces at Sea, adopted Aug. 12, 1949, art. 51, 75 U.N.T.S. 85).

²⁸⁹ Paust, *supra* note 288, at 438–441 (emphasis omitted) (citations omitted).

²⁹⁰ *Id.* (citing, *inter alia*, 11 TRIALS OF WAR CRIMINALS 757 (1948)).

crowded market street can avoid responsibility for the resulting deaths on the ground that he did not intend to kill the particular person who died.²⁹¹

Judge Weeramantry added, “The plethora of literature on the consequences of the nuclear weapon is so much part of common universal knowledge today that no disclaimer of such knowledge would be credible.”²⁹²

To the argument that the rule of moderation—the prohibition of the use of arms “calculated to cause unnecessary suffering”—requires specific intent, Judge Weeramantry cited the “well-known legal principle that the doer of an act must be taken to have intended its natural and foreseeable consequences.”²⁹³ He also stated that reading into the law a requirement of specific intent would not “take into account the spirit and underlying rationale of the provision—a method of interpretation particularly inappropriate to the construction of a humanitarian instrument.”²⁹⁴

Making a point that, as we saw above,²⁹⁵ is confirmed by the United States’ military manuals, Judge Weeramantry added that nuclear weapons “are indeed deployed ‘in part with a view of utilizing the destructive effects of radiation and fall-out.’”²⁹⁶

As noted above, Judge Weeramantry reached a similar conclusion with respect to the rights of neutrals: “The launching of a nuclear weapon is a deliberate act. Damage to neutrals is a natural, foreseeable and, indeed, inevitable consequence.”²⁹⁷

Judge Weeramantry also emphasized the element of intent contained in the policy of deterrence: “Deterrence needs to carry the conviction to other parties that there is a real intention to use those weapons ... it leaves the world of make-believe and enters the field of seriously-intended military threats.”²⁹⁸

Judge Weeramantry concluded that the policy of deterrence provides the element of intent:

[D]eterrence becomes ... stockpiling with intent to use. If one intends to use them, all the consequences arise which attach to intention in law, whether domestic or international. One intends to cause the damage or devastation that will result. The intention to cause damage or devastation which results in total destruction of one’s enemy, or which might indeed wipe it out completely, clearly goes beyond the purposes of war.²⁹⁹

The challenging aspect of the evaluation of the lawfulness of the use of nuclear weapons is the fact that—unlike the legal determinations made at Nuremberg or in war crime trials generally—with nuclear weapons it is obviously not a prudently available strategy to wait until after the weapons are used to make the evaluation. While war crimes charges seem to have

²⁹¹ Dissenting opinion of Judge Weeramantry at 43, 35 I.L.M at 901.

²⁹² *Id.* at 43, 35 I.L.M at 901

²⁹³ *Id.* at 48, 35 I.L.M at 904.

²⁹⁴ See MOXLEY, *supra* note 1, at Chapter 3, note 313 and accompanying text.

²⁹⁵ See *id.* at Chapter 29, notes 38–40, Chapter 30 notes 14–22, and accompanying text.

²⁹⁶ Dissenting opinion of Judge Weeramantry at 48, 35 I.L.M at 904 (citing Ian Brownlie, *Some Legal Aspects of the Use of Nuclear Weapons*, 14 INT’L & COMP. L. Q. 445 (1965)). See also MICHAEL WALZER, *JUST AND UNJUST WARS, A MORAL ARGUMENT WITH HISTORICAL ILLUSTRATIONS* 273–283 (New York 1968); DOCTRINE FOR JOINT NUCLEAR OPERATIONS, *supra* note 78, at I-2.

²⁹⁷ Dissenting opinion of Judge Weeramantry at 50, 35 I.L.M. at 905.

²⁹⁸ *Id.* at 78, 35 I.L.M. at 919 (citations omitted).

²⁹⁹ *Id.*

rarely been brought based on risk taking that did not result in illicit effects, nuclear weapons pose a threat that requires full and effective advance evaluation and compliance if the applicable law is to be given effect.³⁰⁰

That is perhaps the best way to conceptualize the nuclear threat: that the rules of the law of war applicable to nuclear weapons will be frustrated—in effect nullified—if they are not applied in advance. The eggs of Armageddon could not be unscrambled.

We believe that the issues relating to mental state have generally been overlooked in the analysis.

Prerequisites for a *Per Se* Rule

The question also arises as to what level or extent of unlawfulness must be present for a *per se* rule to arise. The United States contended,³⁰¹ in a position that the ICJ ostensibly accepted *sub silentio*,³⁰² that 100% illegality—the unlawfulness of all uses of nuclear weapons—would be necessary before a rule of *per se* illegality could arise. To the extent one concludes, as we have, that all or “virtually all” uses of nuclear weapons would be unlawful, either because the resultant effects, particularly radiation and escalation, would be uncontrollable, or because any such use would be likely to precipitate impermissible effects, or would involve the risk of precipitating extreme impermissible effects, the issue of whether unlawfulness in 100% or virtually 100% of cases is required is not reached.

If one concludes, however, that the U.S. position—that some uses could potentially be lawful—has merit, one reaches the question of the prerequisites for a *per se* rule.

The ICJ ostensibly assumed that the use of nuclear weapons could be held *per se* unlawful only if all uses would be unlawful in all circumstances. This appears, for example, from the Court’s conclusions that it does not have sufficient facts to determine that nuclear weapons would be unlawful “in any circumstance,”³⁰³ that the proportionality principle may not in itself exclude the use of nuclear weapons in self-defense “in all circumstances,”³⁰⁴ and that, for the threat to use nuclear weapons implicit in the policy of deterrence to be unlawful, it would have to be the case that such use would “necessarily violate the principles of necessity and proportionality.”³⁰⁵ However, the Court’s approach may have been affected by the wording of the question referred to it by the General Assembly: “Is the threat or use of nuclear weapons in any circumstance permitted under international law?”³⁰⁶

³⁰⁰ The need for prudence in planning in this area goes also to the need for adequate procurement of conventional weapons, so the United States will not find itself in a position of needing to use nuclear weapons. See MOXLEY, *supra* note 1, at Chapter 1, notes 91–101, Chapter 17, notes 29–36, 45–50, Chapter 18, note 5, and accompanying text.

³⁰¹ See *id.* Chapter 1, notes 314–320, Chapter 2, note 26, and accompanying text; THE AIR FORCE MANUAL ON INTERNATIONAL LAW, *supra* note 12, at 6-3; THE NAVAL/MARINE COMMANDER’S HANDBOOK, *supra* note 12, at 10-2; ICJ Hearing, November 15, 1995, at 90.

³⁰² See MOXLEY, *supra* note 1, Chapter 3, notes 237–245 and accompanying text; Nuclear Weapons Advisory Opinion ¶¶ 42, 48, 95, at 32, 35 I.L.M. at 822, 823, 829; dissenting opinion of Judge Higgins at 5, 35 I.L.M. 809, 937; dissenting opinion of Judge Weeramantry at 70, 35 I.L.M. at 915.

³⁰³ Nuclear Weapons Advisory Opinion ¶ 95, at 32, 35 I.L.M. at 829. See MOXLEY, *supra* note 1, Chapter 3, notes 9, 30, 43, 237, 245, 249, and accompanying text.

³⁰⁴ Nuclear Weapons Advisory Opinion ¶ 42, at 18, 35 I.L.M. at 822. See MOXLEY, *supra* note 1, Chapter 3, notes 30, 62, 237–242, 303 and accompanying text.

³⁰⁵ Nuclear Weapons Advisory Opinion ¶ 48, at 19, 35 I.L.M. at 823.

³⁰⁶ *Id.* ¶ 1, at 4, 35 I.L.M. at 811 (question presented to the Court by U.N. General Assembly resolution 49/75 K, adopted on December 15, 1994).

Judge Higgins in her dissenting opinion assumed that 100% certainty must be present for there to be *per se* illegality: “I do not ... exclude the possibility that such a weapon could be unlawful by reference to the humanitarian law, if its use could never comply with its requirements—no matter what specific type within that class of weapon was being used and no matter where it might be used.”³⁰⁷

This issue deserves more attention. There are numerous bases for inferring that, under widely accepted principles of law, a *per se* rule can arise under circumstances of less than 100% applicability,³⁰⁸ and that this is particularly appropriate where unlawfulness would exist in the vast majority of cases and the potential benefits of avoiding the repercussions of unlawful uses exceed the benefits of using such weapons in instances of putative lawfulness.³⁰⁹ A number of the judges of the ICJ, in their individual opinions, addressed the issue. Judge Shahabuddeen stated, “[I]n judging of the admissibility of a particular means of warfare, it is necessary, in my opinion, to consider what the means can do in the ordinary course of warfare, even if it may not do it in all circumstances.”³¹⁰

Judge Weeramantry, addressing the issue from the perspective of nuclear decision-making, concluded that nuclear weapons should be declared illegal in all circumstances, with the proviso that if such use would be lawful “in some circumstances, however improbable, those circumstances need to be specified.”³¹¹ Judge Weeramantry stated:

A factor to be taken into account in determining the legality of the use of nuclear weapons, having regard to their enormous potential for global devastation, is the process of decision-making in regard to the use of nuclear weapons.

A decision to use nuclear weapons would tend to be taken, if taken at all, in circumstances which do not admit of fine legal evaluations. It will, in all probability, be taken at a time when passions run high, time is short and the facts are unclear. It will not be a carefully measured decision taken after a detailed and detached evaluation of all relevant circumstances of fact. It would be taken under extreme pressure and stress. Legal matters requiring considered evaluation may have to be determined within minutes, perhaps even by military rather than legally trained personnel, when they are in fact so complex as to have engaged this Court’s attention for months. The fate of humanity cannot fairly be made to depend on such a decision.

³⁰⁷ Dissenting opinion of Judge Higgins at 5, 35 I.L.M. 809, 937. See also dissenting opinion of Judge Schwebel at 5, 8, and 13, 35 I.L.M. at 836, 840, and 842. See MOXLEY, *supra* note 1, Chapter 3, notes 237–243 and accompanying text.

³⁰⁸ See MOXLEY, *supra* note 1, Chapter 4, notes 3–13 and accompanying text. See, e.g., International Encyclopedia of Comparative Law, § 2-114 (Andre Tunc ed., Vol. XI, Part I) (1983); B.S. MARKENSINIS, A COMPARATIVE INTRODUCTION TO THE GERMAN LAW OF TORTS 700–705 (3rd ed. 1994); Christopher H. Schroeder, *Rights Against Risks*, 86 COLUM. L. REV. 495, 500–506, 523–524 (April 1986) (citing R. SARTORIUS, INDIVIDUAL CONDUCT AND SOCIAL NORMS 59–68, 530–532 (1975)); Frank H. Easterbrook, *Vertical Arrangements and The Rule of Reason*, 53 ANTITRUST L.J. 135, 157 (1984); *Continental T.V. Inc. v. GTE Sylvania Inc.*, 457 U.S. 322, 344, 102 S.Ct. 2466 (1982).

³⁰⁹ See Christopher H. Schroeder, *Rights Against Risks*, at 503–506 (citing R. SARTORIUS, INDIVIDUAL CONDUCT AND SOCIAL NORMS 59–68 (1975)) (“In general prophylaxis is a plausible strategy whenever; (1) most, but not all, acts belonging to the class are wrong, and (2) attempts to pick right acts in the class from wrong ones are unreliable.”). This article originally appeared at 86 COLUM. L. REV. 495 (1986). Reprinted with permission. See also MOXLEY, *supra* note 1, Chapter 4, notes 3–5, 10, 25–31, 37–39, and accompanying text.

³¹⁰ Dissenting opinion of Judge Shahabuddeen at 17, 35 I.L.M. at 869.

³¹¹ Dissenting opinion of Judge Weeramantry at 70, 35 I.L.M. at 915.

Studies have indeed been made of the process of nuclear decision-making and they identify four characteristics of a nuclear crisis. These characteristics are:

1. The shortage of time for making crucial decisions. This is the fundamental aspect of all crises.
2. The high stakes involved and, in particular, the expectation of severe loss to the national interest.
3. The high uncertainty resulting from the inadequacy of clear information, *e.g.*, what is going on?, What is the intent of the enemy?; and
4. The leaders are often constrained by political considerations, restricting their options.³¹²

Judge Weeramantry further concluded that, even if there were a nuclear weapon that totally eliminated the dissemination of radiation and was not a weapon of mass destruction, the Court, because of the technical difficulties involved, would not be able “to define those nuclear weapons which are lawful and those which are unlawful,” and accordingly that the Court must “speak of legality in general terms.”³¹³

Even using the U.S. formulation of requiring 100% unanimity, there is room for “sub-classes” of *per se* unlawfulness. Based on the Court’s decision, there is a basis for concluding that the use of strategic nuclear weapons and the wide scale use of tactical nuclear weapons or their use in urban areas, would be *per se* unlawful.³¹⁴ As far as equipment is concerned, this would ostensibly render unlawful the use of something on the order of 80% of the nuclear weapons in the United States’ active arsenal. As far as circumstances are concerned, this would ostensibly render unlawful a very large portion of the instances in which the United States might use such weapons.

To the objection that such piecemeal illegalization would be incomplete or unworkable, the answer is that we already have something analogous in practice and that, in any event, social and political evolution, like chance in catastrophe theory,³¹⁵ work in sequential steps as well as jumps. Incrementalism in the right direction is not necessarily bad, and can be infinitely better than nothing, particularly if it is the most that is available at a particular point in time.

As to the workability of partial limitations, the United States has already undertaken numerous such limitations. In addition to the pledge not to use nuclear weapons against non-nuclear adversaries,³¹⁶ the United States has agreed not to use nuclear weapons, subject to certain conditions:

- in Latin America, pursuant to the Treaty of Tlatelolco of February 14, 1967;³¹⁷
- in the South Pacific, pursuant to the Treaty of Rarotonga of August 6, 1985;³¹⁸

³¹² *Id.* (citing Conn Nugent, *How a Nuclear War Might Begin*, in PROCEEDINGS OF THE SIXTH WORLD CONGRESS OF THE INTERNATIONAL PHYSICIANS FOR THE PREVENTION OF NUCLEAR WAR 117).

³¹³ *Id.* at 84, 35 I.L.M. at 922.

It is unclear whether Judge Koroma in his dissenting opinion, in concluding that the use of nuclear weapons would be unlawful “in any circumstance,” was assuming that *per se* illegality required every possible use be unlawful. See dissenting opinion of Judge Koroma at 1, 35 I.L.M. at 925.

³¹⁴ See MOXLEY, *supra* note 1, Chapter 3, notes 10–11 and accompanying text. See, *e.g.*, Nuclear Weapons Advisory Opinion ¶¶ 95, 105. E., at 36, 35 I.L.M. at 829, 835.

³¹⁵ See MOXLEY, *supra* note 1, Chapter 22, notes 46–59 and accompanying text.

³¹⁶ See *id.* Chapter 30 note 75 and accompanying text.

³¹⁷ See Nuclear Weapons Advisory Opinion ¶ 59(a), at 22, 35 I.L.M. at 824. Other nuclear States imposed further limitations on their ratification of the Protocol. See MOXLEY, *supra* note 1, Chapter 3, notes 127–133 and accompanying text.

- in Southeast Asia, pursuant to the Southeast Asia Nuclear-Weapon-Free Zone Convention of December 15, 1995;³¹⁹
- in Africa, pursuant to the nuclear weapons free zone convention signed on April 1, 1996,³²⁰ and
- in the Antarctic, pursuant to the Antarctic Treaty of 1959.³²¹

So also, the United States, in its appearance before the ICJ in the Nuclear Weapons Advisory case, strongly reassured the Court that the U.S. doctrine of nuclear deterrence is purely of a defensive nature, such that the United States would never use such other weapons other than in a defensive mode.³²²

It could be said that this issue as to the prerequisites for a *per se* rule is semantic, since many *per se* rules are themselves generally subject to exceptions and qualifications.³²³ Nonetheless, on the assumption that law matters, it seems clear that, were the United States to recognize the *per se* unlawfulness of the use of nuclear weapons, in whole or in part, even if there were qualifications and footnotes to the recognition, a powerful step would have been taken.

Unlawfulness of Second Use

The question arises, Does the above analysis, whether viewed from the perspective of general unlawfulness under the rules discussed above or the limitations on lawful reprisal, apply to second as well as first uses of nuclear weapons?

Obviously, if our conclusion is correct that the use of nuclear weapons is *per se* unlawful, second use, absent justification as a reprisal, would be as unlawful as first use. Even if the U.S. position is correct that a limited use of low-yield nuclear weapons in a remote area could be lawful, it would appear that the second use would nonetheless be unlawful because of the heightened risks attendant such further use.

Specifically, even assuming the first use could be conducted in such a limited fashion as not to threaten impermissible effects, the second use—constituting the fact of a mutual willingness to engage in nuclear war and the heightened likelihood of precipitating major escalation—would involve the risk of such severe and uncontrollable effects as to trigger unlawfulness under the analysis set forth above.

Moreover, thinking about the matter in such artificial bites—the lawfulness of the first versus that of the second use—is artificial since the whole process of strike and counter-strike is interrelated, and the unlawfulness of the second use implies the unlawfulness of the first use. Presumably, one of the very reasons the first use would have been unlawful would be that it foreseeably would have set in motion a chain of events potentially leading to the second use. Since the rules of necessity, proportionality, and discrimination are rules of reason, they must, as noted, be applied in light of all the reasonably available facts, making it inappropriate to evaluate the lawfulness of any particular use based on just that use without reference to the totality of the inter-related possible uses and risks.

³¹⁸ See Nuclear Weapons Advisory Opinion ¶ 59(b), at 22–23, 35 I.L.M. at 824–25.

³¹⁹ See *id.* ¶ 63, at 25, 35 I.L.M. at 826.

³²⁰ See *id.*

³²¹ See *id.* ¶ 60, at 24, 35 I.L.M. at 825.

³²² See ICJ Hearing, November 15, 1995, at 86. See also MOXLEY, *supra* note 1, Chapter 2, notes 130–135 and accompanying text.

³²³ See MOXLEY, *supra* note 1, Chapter 4; Chapter 4, notes 3–5, 10–13, 16–30, 41–42, and accompanying text. See also *id.* Chapter 30 note 151 and accompanying text.

And, of course, just as the legality of the first use must be evaluated in light of its likelihood of precipitating the second use and other potential effects, the second use must be evaluated in light of the full range of *its* potential effects.

Nor could a second use be justified under the law of reprisal. The United States recognizes as a requirement for lawful reprisal that the strike be limited to that necessary to force the adversary to cease its unlawful actions.³²⁴ If our factual conclusions are correct, a second use would not be susceptible of being so limited.

First of all, the effects of the second use would be uncontrollable, pursuant to the discussion set forth above. Uncontrollable actions by definition cannot be limited and could not be constrained within the requirements for lawful reprisal. Similarly, if our factual conclusions as to the capabilities of modern high tech conventional weapons are well-founded, the legitimate objective of reprisal could be achieved through conventional weapons.

Look at the potential effects of the second use: the sheer destructiveness of the nuclear weapon(s) used; the electromagnetic effects; the radiation effects; the risks of hitting the wrong target; the risks of precipitating escalation to higher levels of nuclear warfare; the risks of precipitating the enemy's or even one's own further preemptive strikes; the long-term effects of radioactive fallout; the risks of precipitating chemical or biological weapons use. Any one of these effects would likely exceed the level of action necessary to convince the other side to constrain itself to lawful warfare and be so provocative as to have the opposite effect of precipitating total violence. Taken together, these effects would appear to be of a radically different nature and order than that contemplated by the law of reprisal.³²⁵

The very premise of the attempted justification of the second use as a reprisal (the assumption that the first strike was unlawful for failure to comply with such rules as those of necessity, proportionality, discrimination, civilian immunity and neutrality) portends the unlawfulness of the second use. Just as the likely effects of the first use were impermissibly excessive and far-reaching, so too would be the likely effects of the second use.

The point we have made throughout—that under applicable law the evaluation of the lawfulness of the use of nuclear weapons must be made in light of the types of circumstances that would likely be present in situations in which nuclear weapons might intentionally be resorted to—again becomes important. While one can hypothesize anything, including the most remote of possibilities, and doing so is a central part of the lawyer's analytic approach, it is unlikely in the extreme that the United States or any nuclear power, having sustained a nuclear hit, would even try to limit its nuclear response, if it made one, to a level of force necessary to compel the adversary to comply with law.

While one can conjure up reprisals comparable to the limited strikes at remote sea or desert targets that were the basis of the U.S. defense of nuclear weapons before the ICJ, such legalistic exercises are unrealistic in the real world context of the types of circumstances in which these weapons might be used and their potential effects, and cannot reasonably serve as the basis for the evaluation of lawfulness.

³²⁴ See discussion of the application of the law of reprisal to nuclear weapons in MOXLEY, *supra* note 1, Chapter 29, notes 227–242 and accompanying text.

³²⁵ For the same reasons, a second use would likely fail to meet the requirement of proportionality recognized by the United States as an element of lawful reprisal. See *id.* Chapter 29, notes 228–233 and accompanying text. The risks of a second strike, particularly the radiation effects in time and space, are inherently disproportionate to the likelihood that the strike would cause the enemy to revert to lawful conducting of the war and the benefit of that likelihood.

The probabilities are overwhelming that the second use would be designed to punish the enemy and, not incidentally, in the case of a substantial nuclear adversary, to use one's own nuclear assets before they could be preemptively struck by the adversary, and to attempt to preemptively strike the adversary's nuclear assets (many of which would likely be "co-located" with civilian targets) before they could be used. Even assuming adequate command and control, crucial decisions would have to be made within a very short time and would likely be dictated largely by existing war plans contemplating nuclear weapons use. The notion of a second strike as limited to the legitimate objectives of reprisal seems oxymoronic.

In addition, the United States, while it disputes the applicability to nuclear weapons of the limitations upon reprisals imposed by Protocol I,³²⁶ recognizes that the law of armed conflict, including that as to reprisals, is subject to the limitations inherent in the purposes of the law of armed conflict, such as preserving civilization and the possibility of the restoration of the peace, purposes that would likely be exceeded by the use of nuclear weapons.

Even if it were assumed that certain second uses of nuclear weapons, although otherwise unlawful, might be legitimized as reprisals, such legitimization—like the lawfulness of the limited use of a small number low-yield nuclear weapons in remote areas asserted by the United States before the ICJ—would only affect a small portion of the potential uses for nuclear weapons contemplated by U.S. policy and planning. It would leave unaffected the unlawfulness of the vast bulk of potential uses and virtually the totality of *likely* possible uses, including first uses against conventional, chemical and biological weapons targets, second uses intended to defeat and destroy the enemy, disproportionate second uses, and other high-megatonnage nuclear strikes with likely extreme effects.

The purported justification of the lawfulness of nuclear weapons based on the putative lawfulness of a second strike as a reprisal would also be artificial in light of the fact that the United States, as a matter of policy, assertedly has generally not resorted to reprisals, based on their propensity to be excessive and counter-productive.³²⁷ Even aside from the obvious potential for escalation as a result of a nuclear strike, the United States has particularly recognized that reprisals present "the potential for escalation"³²⁸ and that "it is generally in our national interest to follow the law even if the enemy does not."³²⁹

Need for a Convention

We have considered whether a sufficient conclusion of our analysis would be to recommend the enactment of a multi-national convention declaring the unlawfulness of the use or threatened use of nuclear weapons, such as the conventions that have been developed declaring the unlawfulness of the use and, over time, the possession of chemical and biological weapons.³³⁰ We are in favor of such a convention and think it is high time that the United States

³²⁶ See *id.* Chapter 1, notes 274–277 and accompanying text; Chapter 2, notes 127–129 and accompanying text. See also Chapter 3, notes 246–249 and accompanying text.

³²⁷ See discussion at *Id.* Chapter 29, notes 234–242 and accompanying text.

³²⁸ THE AIR FORCE COMMANDER'S HANDBOOK, *supra* note 12, at 8-1.

³²⁹ *Id.*

³³⁰ See Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons, concluded April 10, 1972, entered into force March 26, 1975, 1015 U.N.T.S. 583, T.I.A.S. 8062 (prohibiting the possession of bacteriological and toxic weapons and reinforcing the prohibition of their use); and the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction, January 13,

and other nuclear nations entered into such a convention.³³¹ We are also in favor of the United States' fulfillment of its obligations under Article VI the Treaty on the Non-Proliferation of Nuclear Weapons "to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control."³³² But our conclusion goes further: We have concluded that the use and threatened use of nuclear weapons are already unlawful under principles of international law recognized by the United States and essentially indisputable facts.

Conclusion

The conclusion that the use of nuclear weapons would be unlawful based on uncontrollability is compelling. The U.S. acknowledgement in its military manuals of the unlawfulness—under the discrimination, necessity, and proportionality principles—of the use of weapons that cannot be controlled is unequivocal and the rules themselves are clear to the same effect. Similarly, the facts as to the uncontrollable nature of the effects of nuclear weapons, including particularly the radiation effects, seem beyond reasonable dispute.

The conclusion is also compelling that the use of nuclear weapons is unlawful based on the overall risk factors, particularly in light of established law as to the potential for unlawfulness based on *mens rea* elements of less than strict intentionality, the overriding purposes of the law of armed conflict, and the necessity for making the legality evaluation in advance of actual use of nuclear weapons.

Accordingly, we believe that the use and threat of use of nuclear weapons in any circumstance are contrary to international law.

We therefore urge that the United States recognize the unlawfulness of the use and threat of use of nuclear weapons.

1993, entered into force April 29, 1997 31 I.L.M. 800, 2 Weston Il.C.39 (prohibiting all use of chemical weapons and requiring the destruction of existing stocks over an agreed schedule).

³³¹ A draft convention to outlaw nuclear weapons has been proposed by International Physicians for the Prevention of Nuclear War, International Network of Engineers and Scientists Against Proliferation, and International Association of Lawyers against Nuclear Arms, *as set forth in* "Security and Survival, The Case for a Nuclear Weapons Convention" (1999).

³³² *See* Treaty on the Non-Proliferation of Nuclear Weapons, Mar. 5. 1970, 21 U.S.T. 483, 729 U.N.T.S. 161, *reprinted in* 7 I.L.M. 811.