



1999

The Principle of Discrimination in 21st Century Warfare

Michael N. Schmitt

Follow this and additional works at: <https://digitalcommons.law.yale.edu/yhrdlj>



Part of the [Human Rights Law Commons](#)

Recommended Citation

Michael N. Schmitt, *The Principle of Discrimination in 21st Century Warfare*, 2 *YALE HUM. RTS. & DEV. L.J.* (1999).

Available at: <https://digitalcommons.law.yale.edu/yhrdlj/vol2/iss1/3>

This Article is brought to you for free and open access by Yale Law School Legal Scholarship Repository. It has been accepted for inclusion in Yale Human Rights and Development Law Journal by an authorized editor of Yale Law School Legal Scholarship Repository. For more information, please contact julian.aiken@yale.edu.

The Principle of Discrimination in 21st Century Warfare

by Michael N. Schmitt*

I. INTRODUCTION

¶1 The premise that warfare is a constantly evolving phenomenon is axiomatic. In this century alone, consider the dramatic transmutations caused, for instance, by the machine gun, tank, airplane, radar, guided missile, and nuclear weapon. Change in the nature of warfare can also arise from major shifts in political-economic-societal structures, such as the rise of the nation-State or industrialization.¹ When the resultant shifts, whatever their cause, prove fundamental, a "revolution in military affairs" (RMA) occurs. Many argue that the global community is in the midst of an RMA today, a revolution generated by both technology and a dramatically altered geopolitical environment.²

* Professor of International Law, George C. Marshall European Center for Security Studies, Garmisch-Partenkirchen, Germany. Faculty, International Institute of Humanitarian Law, San Remo, Italy. The views, opinions, and conclusions in this article are those of the author and should not be construed as an official position of the United States Department of Defense, Marshall Center or any other organization. A version of this article was previously published in the Israel Yearbook on Human Rights as *Future War and the Principle of Distinction*.

1. Colin Gray has cited seven "historical transformations of warfare" since the fall of Rome: (1) fifth century cavalry, which "ushered in a long period of advantage for soldiers who could fight on horseback"; (2) the military revolution of the sixteenth and seventeenth centuries which "was led by the adoption of firearms for siege and open warfare"; (3) the "Nation in Arms," a "concept of popular warfare, increasingly armed and sustained by industrially and agriculturally modern states"; (5) mechanized warfare, signaled in 1916 by use of the tank in the Battle of the Somme and large scale aerial battles over Verdun; (6) nuclear warfare; and (7) information warfare. Colin S. Gray, *The Influence of Space Power upon History*, 15 COMP. STRATEGY 293, 297 (1996); see also Eliot A. Cohen, *A Revolution in Warfare*, FOREIGN AFF., Mar.-Apr. 1996, at 37 (discussing how technology has engineered a revolution in military affairs).

2. On the "revolution in military affairs," see SECRETARY OF DEFENSE, ANNUAL REPORT TO THE PRESIDENT AND THE CONGRESS ch. 13 (1998); Dennis M. Drew, *Technology and the American Way of War: Worshipping a False Idol?*, AIR FORCE J. LOGISTICS, Winter 1987, at 21; James R. Fitzsimonds, *The Coming Military Revolution: Opportunities and Risks*, PARAMETERS, Summer 1995, at 30; Dan Goure, *Is There a Military-Technical Revolution in America's Future?*, WASH. Q., Autumn 1993, at 175; Andrew F. Krepinevich, *Cavalry to Computer: The Pattern of Military Revolutions*, in STRATEGY AND FORCE PLANNING 430 (Naval War College Faculty eds., 2d. ed. 1995); Kenneth F. McKenzie, *Beyond Luddites and Magicians: Examining the MTR*, PARAMETERS, Summer 1995, at 15; Abhi Shelat, *An Empty Revolution: MTR Expectations Fall Short*, HARV.

¶2 RMAs encompass far more than simply strategic and tactical concerns. They often signal dramatic turns in the effects of warfare on civilians and their property. During the Second World War, as an example, each side directed aerial bombardment at their opponent's civilian population, usually with horrendous humanitarian consequences.³ It was only the RMA wrought by aircraft that made possible the targeting of civilians at such a distance and with such effect. Perhaps more consequential still in terms of placing civilians at risk was the RMA spawned by the advent of nuclear weaponry.⁴ At the height of the Cold War, entire populations were held hostage to the threat of counter-value targeting.⁵ Even though the risk of massive nuclear exchanges has dissipated, the continued threat they pose to the global populace has led the International Court of Justice to recently declare that the use of nuclear weapons is contrary to the principles of *humanitarian* law except, perhaps, in "extreme circumstances of self-defense, in which [the State's] very survival would be at stake."⁶

¶3 The protection of civilians and civilian objects during armed conflict is a core purpose of humanitarian law, a branch of international law also known as the law of armed conflict and the law of war. It applies in situations of armed conflict, whether that conflict occurs during a solely internal conflagration or crosses geopolitical borders. Although, humanitarian law has traditionally had its greatest impact in the latter case, there has been increasing normative attention paid to the case of internal armed conflict.⁷ Humanitarian law does not apply in situations not

INT'L REV., Summer 1994, at 52.

3. For instance, approximately one million German civilians were killed or wounded by bomber attacks. The attacks also destroyed one-fifth of German homes and rendered 7.5 million people homeless. See CHRISTOPHER C. HARMON, "ARE WE BEASTS?": CHURCHILL AND THE MORAL QUESTION OF WORLD WAR II "AREA BOMBING" 3 (1991).

4. For a discussion of the nuclear RMA, see Martin C. Libicki, *Information & Nuclear RMAs Compared*, NAT'L DEF. U. STRATEGIC F., No. 82 (July 1996) (visited Apr. 15, 1999) <<http://www.ndu.edu/inss/strforum/forum82.html>>.

5. Counter-value targeting is directed against cities and industrial areas; the premise is that one targets that which the opponent values most. Counter-force targeting, by contrast, is the targeting of the enemy's military, most commonly his strategic assets (such as an intercontinental missile force or strategic bomber bases).

6. Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons, ¶ 97, reprinted in 35 I.L.M. 809, 830 (July 8, 1996). The Court did not address the use of the weapons in belligerent reprisal, i.e. an unlawful act in response to a prior unlawful act, which is designed to force the opposing belligerent to desist in its unlawful conduct. On the case, see Richard A. Falk, *Nuclear Weapons, International Law and the World Court: A Historic Encounter*, 91 AM. J. INT'L L. 64 (1997); Robert F. Turner, *Nuclear Weapons and the World Court: The ICJ's Advisory Opinion and Its Significance for U.S. Strategic Doctrine*, in THE LAW OF MILITARY OPERATIONS 309 (Michael N. Schmitt ed., 1998); Michael N. Schmitt, *The International Court of Justice and the Use of Nuclear Weapons*, NAVAL WAR COLLEGE REV., Spring 1998, at 91.

7. Internal armed conflict is governed by Common Article III to the four 1949 Geneva Conventions and Protocol II Additional to the Geneva Conventions. See Geneva Convention for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field, Aug. 12, 1949, art. 3, 6 U.S.T. 3114, 75 U.N.T.S. 31; Geneva Convention for the Amelioration of the Condition of the Wounded, Sick and Shipwrecked Members of the Armed Forces at Sea, Aug. 12, 1949, art. 3, 6 U.S.T. 3217, 75 U.N.T.S. 85; Geneva Convention Relative to the Treatment of Prisoners of War, Aug. 12, 1949, art. 3, 6 U.S.T. 3316, 75 U.N.T.S. 135; Geneva

amounting to armed conflict, such as riots, strikes, demonstrations, isolated acts of violence, or traditional criminal activity, even if military forces are employed to address them. In such cases, domestic and international human rights law tempers the violence.⁸

¶4 There are two complementary components of humanitarian law, the *jus ad bellum*, which some view as a separate body of law altogether, and the *jus in bello*. The former sets forth the criteria for the use of force as an instrument of national policy, asking *when* a State may use force. The *jus in bello*, by contrast, addresses *how* force may be used in an armed conflict, regardless of the propriety of the decision to resort to it.

Two primary purposes underlie the *jus in bello*. The first is a desire to ratchet down the level of violence that occurs in armed conflict, a goal expressed most clearly in instruments that prohibit use of particular weapons⁹ or forbid the creation of unnecessary suffering.¹⁰ Restrictions responsive to this objective are usually framed in terms of limits on "methods or means" of warfare and over time have been labeled "Hague Law."¹¹ The second purpose of the *jus in bello* is to shield those who are not directly participating in the conflict from its effects. Classic examples are the limitations on targeting civilians and civilian objects, the protection of medical personnel and facilities, and norms regarding the treatment of prisoners of war. Restrictions emanating from this goal tend to be framed in terms of the protected person or object at issue and are colloquially known as "Geneva Law."

¶5 Because evolution in the conduct of warfare affects the individuals and objects which humanitarian law seeks to shelter, it is not surprising that law has proven responsive, both proactively and reactively, to warfare's changing nature.¹² In the last century alone, advances in

Convention Relative to the Protection of Civilian Persons in Time of War, Aug. 12, 1949, art. 3, 6 U.S.T. 3516, 75 U.N.T.S. 287 [hereinafter "Geneva Convention IV"]; Protocol Additional to the Geneva Conventions of August 12, 1949, and Relating to the Protection of Victims of Non-International Armed Conflicts, June 8, 1977, U.N. Doc. A/32/144, Annex II (1977), *reprinted in* 16 I.L.M. 1442 (1977).

8. There is "bleed over" because human rights law, particularly its non-derogable components, can apply during periods of armed conflict.

9. *See, e.g.*, Final Act of the United Nations Conference on Prohibitions or Restrictions of the Use of Certain Conventional Weapons, Oct. 10, 1980, 1342 U.N.T.S. 7, *reprinted in* 19 I.L.M. 1523 (1980).

10. Among the first formal expressions of the principle was the St. Petersburg Declaration of 1868, which provided that "the only legitimate object which states should endeavor to accomplish in war is to weaken the military force of the enemy," and that "this object would be exceeded by employment of arms which use aggravate the sufferings of disabled men, or render their death inevitable." Declaration of St. Petersburg, 1868, *reprinted in* Official Documents, 1 AM. J. INT'L L. 95 (Supp. 1907).

11. The designation "Geneva Law" refers to that portion of the law of armed conflict addressing protected classes of persons: civilians, prisoners of war, the sick or shipwrecked, and medical personnel. It is distinguished from "Hague Law," which governs methods and means of combat, occupation, and neutrality. For a discussion of the international instruments which fall into each category, and of those which display elements of both, see FREDERIC DEMULINEN, HANDBOOK ON THE LAW OF WAR FOR ARMED FORCES 3-4 (1987).

12. Proactive efforts seek to head off negative consequences before they occur. For instance, Protocol IV of the Conventional Weapons Convention prohibited the use of

humanitarian law have tracked major conflicts with great regularity. The Geneva Convention of 1906 and the Hague Conventions of 1907 followed closely on the heels of the 1905 Russo-Japanese War. World War I, in great part, served as the impetus for the 1925 Gas Protocol and the 1929 Geneva Convention. The enormous devastation of the Second World War led to humanitarian law's greatest leap forward in the form of the four 1949 Geneva Conventions, as well as the 1954 Cultural Property Convention. In the aftermath of World War II, bipolarity and wars of national liberation dominated inter-State conflict, while new technologies and sensibilities led to heightened concerns over the methods and means of warfare. The Additional Protocols to the Geneva Conventions, Environmental Modification Convention, Biological Weapons Convention, Conventional Weapons Convention, and Landmines Convention resulted.¹³ So too did numerous arms control treaties designed to limit the testing, possession, and spread of nuclear weapons, the unprecedented power of which had been so dramatically illustrated at Nagasaki and Hiroshima.¹⁴

¶6 The symbiosis between change, war, and law lends itself to reflection on normative futures. Through projections about the nature of future war, it is possible to draw tentative conclusions about those megatrends therein that might place existing law under greater stress, strengthen its impact, or move it in new directions. Of course, predictive endeavors in the soft sciences are tentative, and should cause some trepidation in those who embark on them.¹⁵ This is certainly true in the case of predicting the face of future war or, even more presumptuously,

permanently blinding lasers before they were fielded by any armed force. See Additional Protocol to the Convention on the Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May be Deemed to be Excessively Injurious or to Have Indiscriminate Effects, Protocol on Blinding Laser Weapons (Protocol IV), Oct. 13, 1995, 35 I.L.M. 1218 (1996). By contrast, most of humanitarian law is reactive; the best example is the establishment of the International Committee of the Red Cross (ICRC) following Henri Dunant's account of the bloody Battle of Solferino during the Italian War of Unification. See HENRI DUNANT, *SOUVENIR DE SOLFERINO* (1862).

13. Each of the aforementioned instruments may be found at the ICRC's website: www.icrc.org/unicc/ihl_eng.nsf/web?OpenNavigator. Except for the Landmines Convention, they are also reprinted in *THE LAWS OF ARMED CONFLICTS* (Dietrich Schindler & Jiri Toman eds., 1988), at 301, 53, 115, 325, 373, 745, 621, 163, 137, and 179, respectively.

14. See, e.g., Treaty Banning Nuclear Weapons Tests in the Atmosphere, in Outer Space and Under Water, Aug. 5, 1963, 14 U.S.T. 1313, 480 U.N.T.S. 43; Treaty for the Prohibition of Nuclear Weapons in Latin America (Treaty of Tlatelolco), Feb. 14, 1967, 634 U.N.T.S. 281, 6 I.L.M. 521 (1967); Treaty on the Non-Proliferation of Nuclear Weapons, July 1, 1968, 21 U.S.T. 483, 729 U.N.T.S. 161; Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and the Ocean Floor and in the Subsoil Thereof, Feb. 11, 1971, 23 U.S.T. 701, 10 I.L.M. 145 (1971).

15. The range of variables that will determine the future are vast. For instance, which States are likely to be core adversaries in the next century? What types of conflicts will predominate? How effective will the "revitalized" United Nations system be? Which political, religious, and ethnic forces will prove most powerful? Indeed, even technological predictions are suspect. See Herb Brody, *Great Expectations: Why Technological Predictions go Awry*, *TECH. REV.*, July 1991, at 39. For an extremely interesting effort to identify current trends relevant to the use of force, see Anthony D'Amato, *Megatrends in the Use of Force*, in *THE LAW OF ARMED CONFLICT: INTO THE NEXT MILLENNIUM 1* (Michael N. Schmitt & Leslie C. Green eds., 1998).

speculating on what future war portends for global prescriptive norms. Nevertheless, if we are to affect the vector that evolving law is to take, the effort must be made to grasp the future and proactively respond to it.

¶7 This essay undertakes that task vis-à-vis what can fairly be characterized as the pith of humanitarian law, those prescriptive norms of the *jus in bello* mandating discrimination between civilians (and their property) and legitimate targets.¹⁶ It begins with an analysis of the current state of the principle of discrimination. Once this context has been set forth, the essay will turn to a description of projected aspects of warfare in the first half of the next century, which some characterize as an RMA, most likely to stress, strengthen, or impel change in the concept of discrimination. Specifically, suggestions will be offered on how possible changes may affect the existing normative milieu.¹⁷ Because most such aspects will be driven by changes in U.S. military strategies, tactics, and capabilities, this discussion will necessarily take on a U.S.-centric tenor.¹⁸ Receiving particular attention will be the expectation that States will not share equally in the revolution, as some are not financially or technologically capable of participating, and the particularly insidious normative dynamic this "have/have-not" dichotomy may create. Finally, to the extent possible in such a speculative undertaking, several tentative suggestions will be offered on how to soften the impact of any potentially negative trends.

II. THE PRINCIPLE OF DISCRIMINATION

¶8 The principle of discrimination is bifurcated.¹⁹ On the one hand, it limits the use of weapons that are by nature indiscriminate, that is, incapable of discriminating between lawful (combatants and military objectives) and unlawful (noncombatants and civilian objects) targets. Most often, the prohibition is expressed in terms of the ability to aim the weapon in question. For instance, a long-range missile with no, or only a rudimentary, guidance system would be objectionable because it is too indiscriminate. So too would biological weapons that spread contagious diseases, for such weapons are incapable of afflicting only combatants and difficult to control.²⁰

16. This principle most clearly expresses humanitarian law's balancing of State-centric interests in resorting to force against the more broadly based human interest in shielding non-participants from the effects of what is, at best, an unfortunate necessity.

17. For discussion of *implementation* in future conflict, see Louise Doswald-Beck, *Implementation of International Humanitarian Law in Future Wars*, in Schmitt & Green, *supra* note 15, at 39; and Howard Levie, *An Optimist Looks at the Law of War in the Twenty-First Century*, in *id.* at 311.

18. Though the RMA certainly will not be limited to the United States, most core participants are States traditionally aligned with the United States. For instance, a disproportionate share of the most technologically advanced militaries are NATO members.

19. For a comprehensive review of the principle, see generally ESBJÖRN ROSENBLAD, *INTERNATIONAL HUMANITARIAN LAW OF ARMED CONFLICT: SOME ASPECTS OF THE PRINCIPLE OF DISTINCTION AND RELATED PROBLEMS* (1979).

20. Protocol I Additional to the Geneva Conventions expresses the prohibition thusly:

¶9 By contrast, the second facet of the principle precludes indiscriminate use of weapons, regardless of their innate ability to discriminate.²¹ The SCUD missiles launched by the Iraqis in the 1990-91 Persian Gulf War aptly illustrate the difference. SCUDs are not inherently indiscriminate. For example, if employed in the vast expanses of the desert against troops, military equipment, or bases far removed from population centers, little danger of random destruction of protected persons or objects exists. However, Iraqi SCUD attacks against Israeli and Saudi cities (the issue of use against a non-belligerent State aside) clearly constituted indiscriminate use,²² for whatever the actual intent of the Iraqis may have been, the likelihood of harming lawful targets was far outweighed by that of striking protected persons or objects.

¶10 This latter aspect of discrimination itself consists of three components—distinction, proportionality, and minimizing collateral damage and incidental injury.²³ Each is found in customary law and codified in Additional Protocol I to the Geneva Conventions. Although certain countries, most notably the United States, have failed to ratify the Protocol, they generally concur that its core provisions on discrimination express customary principles of international law.²⁴

¶11 Distinction prohibits direct attacks on civilians or civilian objects. Article 48 of the Protocol expresses the basic rule that Parties to a conflict

Indiscriminate attacks are . . . (b) those which employ a method or means of combat which cannot be directed at a specific military objective; or (c) those which employ a method or means of combat the effects of which cannot be limited as required by this Protocol; and consequently, in each such case, are of a nature to strike military objectives and civilians or civilian objects without distinction.

Protocol Additional to the Geneva Conventions of August 12, 1949 and Relating to the Protection of Victims of International Armed Conflict, June 8, 1977, ¶ 4, art. 51.4(b-c), U.N. Doc. A/32/144, Annex I (1977), *reprinted in* 16 I.L.M. 1391, 1413 (1977) [hereinafter "Additional Protocol I"]. Unguided missiles exemplify the former, biological weapons the latter.

21. The provision cited in the previous footnote incorporates this prohibition as attacks which "are not directed at a specific military objective . . ." *Id.*, art. 51.4(a).

22. U.S. DEPARTMENT OF DEFENSE, REPORT TO CONGRESS ON THE CONDUCT OF THE PERSIAN GULF WAR (Title V Report to Congress) (1992), at 621-22, *reprinted in* 31 I.L.M. 612 (1992).

23. The typology of law of war principles varies. For instance, the U.S. Air Force employs the categories of military necessity, humanity, and chivalry, with proportionality as an element of necessity, whereas the U.S. Navy uses necessity, humanity and chivalry. In substantive effect, though, there is no real difference between the typologies. The law is the same; only the verbiage differs. Cf. DEPARTMENT OF THE AIR FORCE, INTERNATIONAL LAW—THE CONDUCT OF ARMED CONFLICT AND AIR OPERATIONS (AF Pamphlet 110-31, 1976), at 1-5—1-6, with U.S. NAVY/MARINE CORPS/COAST GUARD, THE COMMANDER'S HANDBOOK ON THE LAW OF NAVAL OPERATIONS (NWP 1-14M, MCWP 5-2.1, COMDT PUB P5800.7), 5.1 (1995). This article adopts the typology of discrimination set forth in Christopher Greenwood, *The Law of Weaponry at the Start of the New Millennium*, in Schmitt & Green, *supra* note 15, at 199-202.

24. Unofficial, but probative compilations of the United States' views on the Additional Protocol I by then State Department attorneys can be found in: Michael J. Matheson, *Session One: The United States Position on the Relation of Customary International Law to the 1977 Protocols Additional to the 1949 Geneva Conventions*, 2 AM. U. J. INT'L L. & POL. 419 (1987); Abraham D. Sofaer, *Agora: The U.S. Decision Not to Ratify Protocol I to the Geneva Conventions on the Protection of War Victims*, 82 AM. J. INT'L L. 784 (1988).

must "distinguish between the civilian population and combatants and between civilian objects and military objectives and accordingly direct their operations only against military objectives."²⁵ Military objectives are "those objects which by their nature, location, purpose or use make an effective contribution to military action and whose total or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage."²⁶

¶12 This seemingly straightforward principle often proves difficult to apply in practice.²⁷ The dilemma lies in the extent of nexus required between the object to be attacked and the military operation. In other words, the subjectivity inherent in the terms "effective" and "definite" invites disparate interpretation. Some entities, such as the International Committee of the Red Cross (ICRC), define the concepts narrowly. In the ICRC's *Commentary on the Protocol*, effective contribution includes objects "directly used by the armed forces" (e.g., weapons and equipment), locations of "special importance for military operations" (e.g., bridges), and objects intended for use or being used for military purposes.²⁸ The *Commentary* interprets the phrase "definite military advantage" to exclude those attacks offering only "potential or indeterminate advantages."²⁹ Civilians are legally protected from attack unless they take a "direct part in the hostilities."³⁰ The ICRC defines such participation as "acts of war which by their nature or purpose are likely to cause actual harm to the personnel and equipment of the enemy armed forces."³¹ Doubt as to the character of an object or individual is resolved in favor of finding civilian status.³²

¶13 Others take a less protective approach to the limitations.³³ The United States, for example, would include economic facilities that "indirectly but effectively support and sustain the enemy's war-fighting capability" within the ambit of appropriate targets.³⁴ Similarly, some have

25. Additional Protocol I, *supra* note 20, art. 48. The *Commentary on the Protocol*, citing the St. Petersburg Declaration, includes members of the armed forces in the term "military objectives." COMMENTARY ON THE ADDITIONAL PROTOCOLS OF 8 JUNE 1977 TO THE GENEVA CONVENTIONS OF 12 AUGUST 1949 [hereinafter "COMMENTARY"], at 635 (Yves Sandoz et. al. eds., 1987). The prohibition is also expressed in Article 51.2 ("The civilian population as such, as well as individual civilians, shall not be the object of attack.") and Article 52.2 ("Attacks shall be limited to strictly military objectives."). See Additional Protocol I, *supra* note 20, arts. 51.1, 51.2.

26. Additional Protocol I, *supra* note 20, art. 52.2. According to the *Commentary*, the term "object" encompasses combatants. See COMMENTARY, *supra* note 25, at 635.

27. The *Commentary* notes that "[t]he text of this paragraph certainly constitutes a valuable guide, but it will not always be easy to interpret, particularly for those who have to decide about an attack and on the means and methods to be used." See *id.*

28. *Id.* at 636 (emphasis added).

29. *Id.* (emphasis added).

30. Additional Protocol I, *supra* note 20, art. 51.3 (emphasis added).

31. COMMENTARY, *supra* note 25, at 619.

32. Additional Protocol I, *supra* note 20, arts. 50.1 (for civilians) and 52.3 (for civilian objects).

33. See, e.g., W. Hays, *Air War and the Law of War*, 32 AIR FORCE L. REV. 1, 113-145 (1990).

34. See U.S. NAVY/MARINE CORPS/COAST GUARD, *supra* note 23, at 8.1.1. This assertion is labeled a "statement of customary international law." The *Handbook* cites General Counsel, Dep't of Defense, Ltr. of Sept. 22, 1972, reprinted in 67 AM. J. INT'L L. 123 (1973), as the basis for

cited mission-essential civilians working at a base during hostilities, even though not directly engaging in acts of war, as legitimate targets.³⁵ Thus, while there is general agreement that the Protocol accurately states customary law principles, notable disagreement persists over exactly what those standards are.

¶14 The second component of the prohibition on indiscriminate use is the principle of proportionality, codified in Articles 51 and 57 of the Protocol.³⁶ Proportionality enjoins attacks which "may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated."³⁷ As with Article 48, terminological imprecision, specifically as to the phrase "concrete and direct," invites subjective interpretation and application.³⁸ The Commentary indicates that the "expression . . . was intended to show that the advantage concerned should be substantial and relatively close, and that advantages which are hardly perceptible and those which would only appear in the long term should be disregarded."³⁹

¶15 Proportionality differs from distinction in terms of *scienter*. Whereas the restriction to military objectives seeks to preclude attacks in which protected persons or object are themselves targets, or where the attack is made with culpable disregard for the civilian consequences, proportionality operates in scenarios in which incidental injury and collateral damage are the foreseeable, albeit undesired, result of attack on a legitimate target. This renders the discrimination decision matrix much more complex. With the first tier of discrimination analysis, the question is: "May I lawfully target an object or person?" With proportionality, an additional query must occur: "Even if I conclude that targeting the person or object is unlawful, may I nevertheless knowingly cause him or it injury or damage in my attack on a legitimate objective?"

¶16 When performing proportionality calculations, the actor must not

this characterization.

35. See Letter from DAJA-IA [Department of the Army, Judge Advocate, International Affairs] to Counselor for Defense Research and Engineering (Economics), Embassy of the Federal Republic of Germany (Jan. 22, 1988), cited in Parks, *supra* note 33, at 134 n.400.

36. Additional Protocol I, *supra* note 20. On the issue of proportionality generally, see William J. Fenrick, *The Role of Proportionality and Protocol I in Conventional Warfare*, 98 MIL. L. REV. 91 (1982), and Judith Gail Gardam, *Proportionality and Force in International Law*, 87 AM. J. INT'L L. 391 (1993).

37. Additional Protocol I, *supra* note 20, art. 51.5(b). A similar prohibition, in the context of precautions in attack, is found at *id.*, art. 57.2(a)(iii). Military advantage is evaluated in terms of the entire campaign/war, not simply the immediate advantage from which attacking forces benefit. On this point, see generally Stefan Oeter, *Methods and Means of Combat*, in THE HANDBOOK OF HUMANITARIAN LAW IN ARMED CONFLICTS 105 (Dieter Fleck ed., 1995).

38. Indeed, the ICRC *Commentary* notes that "the criticism [in the Diplomatic Conference and thereafter] was directed particularly at the imprecise wording and terminology. . . . Such criticisms are justified, at least to some extent. Putting these provisions [subparas. 4 and 5] into practice . . . will require complete good faith on the part of belligerents, as well as the desire to conform with the general principle of respect for the civilian population." COMMENTARY, *supra* note 25, at 625.

39. *Id.* at 684.

only struggle with issues of inclusiveness (what are the concrete and direct consequences?), but he must also conduct a difficult jurisprudential balancing test. Optimally, balancing tests compare like values. However, proportionality calculations are heterogeneous, because dissimilar value genres—military and humanitarian—are being weighed against each other. How, for example, does one objectively calculate the relative weight of an aircraft, tank, ship, or vantage point in terms of human casualties?

¶17 Further compounding the elusiveness of definitive proportionality calculations is the multiplicity of "valuation paradigms" that affect the weight accorded particular military or humanitarian occurrences.⁴⁰ Context often determines value. For example, destroying command, control, and communications (C³) facilities in circumstances in which the outcome of a conflict is uncertain is essential to operating within an opponent's decision loop. Destroying these assets as efforts are underway to negotiate termination of hostilities may, by contrast, prove counter-productive.

¶18 Valuation paradigms may also be experientially determined. On an immediate individual basis, of course, there is no distinction in the value placed on life by different societies. It would be absurd, for instance, to suggest that a Belgian valued the life of a loved one any more or less than a Somali. Yet, in some societies, death, poverty, and deprivation tragically are so widespread that their population can become desensitized to death in the more general sense. In much the same way that a doctor becomes less personally affected by death over time, or a criminal defense attorney learns to react somewhat impersonally to the crimes of her client, those who have the misfortune to live amongst death-filled circumstances may become inured to death when it is not personally relevant. This notion flies in the face of the objective valuation of life sought by humanitarian law, but represents an unfortunate reality that shades proportionality calculations. Among makers of proportionality calculations, therefore, the value attributed to the human suffering caused by a military operation may vary widely with social or cultural background.

¶19 Conceptually determined valuation paradigms are yet a third complicating factor. As an example, there is growing recognition of the need to protect the environment during armed conflict. However, proportionality calculations made in the attempt to do so will be determined in great part by whether one values the environment in and of itself (intrinsic valuation), or in terms of what it offers humankind (anthropocentric valuation).⁴¹ Lastly, valuation paradigms may be temporally determined, that is, evolving over time. Again, using the environment as an example, fifty years ago there was hardly a whimper as

40. The issue of valuation paradigms in the context of environmental damage during armed conflict is explored more fully in Michael N. Schmitt, *War and the Environment: Fault Lines in the Prescriptive Landscape*, ARCHIV DES VÖLKERRECHTS, March 1999, at 25.

41. This theme is developed in Michael N. Schmitt, *Green War: An Assessment of the Environmental Law of International Armed Conflict*, 22 YALE J. INT'L L. 1 (1997).

war wrought horrendous environmental consequences. Today, military leaders and policy-makers increasingly evidence environmental consciousness by factoring environmental damage into their proportionality calculations.⁴²

¶20 The final component of discrimination is the requirement to select the method or means of attack likely to cause the least collateral damage or incidental injury, all other things being equal, relative to the military advantage obtained. Whereas the first two components of discrimination focused on whether a target could be struck, this requirement, codified in Article 57 of the Protocol,⁴³ disallows injury or damage that the attacker can reasonably avoid. Consider an attack on a command and control facility in a population center. Obviously, the center is a legitimate target. Additionally, though civilian casualties and damage are likely to result from a proposed attack by aircraft employing unguided bombs, the anticipated extent of the damage and injury is clearly outweighed by the military advantage that will inure to the attacker. However, if guided munitions would lessen the expected loss and damage without increasing the risk to the aircrew or decreasing the expected damage to the target, and the guided munitions are readily available, then the attacking force should employ them.

III. THE POSSIBLE IMPACT OF FUTURE WAR

¶21 As noted, predictive efforts are inherently replete with uncertainty. Yet, certain possible, or even likely, trends in military affairs can be identified based on technological advances, geopolitical events, and logical shifts in strategy and tactics. Together, they suggest the presence of an RMA for the new millennium. Moreover, they will surely influence the existing understanding of the principle of discrimination. What follows are predictions about the possible future changes in warfare and the context in which it occurs, together with their potential consequences for the principle of discrimination.⁴⁴

42. An excellent example of the military's concern with environmental damage was the 1995 international conference on the topic sponsored by the United States Naval War College. The proceedings of that conference are published in 69 U.S. NAVAL WAR COLLEGE INTERNATIONAL LAW STUDIES, PROTECTION OF THE ENVIRONMENT DURING ARMED CONFLICT (Richard Grunawalt et al. eds., 1996).

43. Additional Protocol I, *supra* note 20, art. 57.2(a)(ii) ("With respect to attacks, the following precautions shall be taken . . . take 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 . . .").

44. Much of the analysis offered herein draws on JOINT CHIEFS OF STAFF, CONCEPT FOR FUTURE JOINT OPERATIONS: EXPANDING JOINT VISION 2010 (1997). The principle of discrimination will evolve in the face of changes in the nature of warfare, for, much as water seeks a constant level, law inevitably endeavors to fill normative lacunae or dispense with contextually irrelevant or unresponsive standards.

A. Accentuation of Global Divisibility

¶22 There are significant forces at work that contain within them the potential for sharpening global division. In particular, the gap between the developed and lesser developed States may widen as advantaged States continue to leverage their comparative economic and technological advantages to control increasing shares of the global economy.⁴⁵ Their relative ability to do so will grow with the swelling importance of technologically intense sectors of the market, such as information management.⁴⁶

¶23 Today, economic strength translates into potential military strength to a degree that is perhaps unprecedented in history. Most notably, the military budgets of the United States and its closest allies dwarf those of most of the rest of the world. For instance, in 1997 the United States spent \$259 billion on defense, over a third of the world's total defense expenditures, and five times that of the number two defense spender, Japan. Indeed, U.S. defense expenditures exceed those of the next eight spenders combined. Perhaps more determinative with regard to future war is the fact that the United States spent seven times more money on defense-related research and development than its next closest competitor, France.⁴⁷ Such disparities have practical consequences.

¶24 As an example, consider aircraft carriers. In 1998, only nine States possessed these dominant naval warships.⁴⁸ The United States, with the largest economy, had twelve, more than the remainder of the world

45. Statistical trends in long-term development are set forth at WORLD BANK, *WORLD DEVELOPMENT INDICATORS 1998* (CD-Rom), tbl. 1.4. While the disparities in annual average percentage of growth are not huge, since the developed States start with a much larger economy, the percentages translate into significant differences in actual growth. A particular dilemma is that as the comparative disadvantages of the "have-nots" grow, these States are ever more aware of their status due to the spread of mass communications in lesser developed States. This awareness, and the inflated expectations that are likely to result therefrom, can be a source of instability. Interestingly, though the relative gap may widen, the number of "haves" may increase in the twenty-first century due to the diffusion of advanced technology. One possible danger of this situation is that more States will have the economic and technological wherewithal to develop indigenous weapons production capabilities, thereby exacerbating the problem of weapons proliferation. For a discussion of the proliferation threat, see OFFICE OF THE SECRETARY OF DEFENSE, *PROLIFERATION: THREAT AND RESPONSE* (1996).

46. For data illustrating differences in the distribution of the gross world product, see generally UNITED NATIONS, *TRENDS IN INTERNATIONAL DISTRIBUTION OF GROSS WORLD PRODUCT* (1993). Between 1960 and 1994, the per capita income disparity between the richest and poorest fifths of the world's nations grew from 30 to 1, to 78 to 1. The problem may continue to increase because many lesser-developed countries have a birth rate that outpaces their economic growth. See Steven Sinding, *Now We Can Be Serious about Population Politics*, *INT'L HERALD TRIB.*, Feb. 8, 1999, at 8.

47. See *ECONOMIST*, June 20, 1998, at 120, tbl. In 1997, the top 10 defense spenders were: United States, Japan, France, Germany, Britain, Russia, Italy, Saudi Arabia, South Korea, and Brazil.

48. United States, France, Italy, Spain, United Kingdom, Russia, India, Thailand, and Brazil. See generally THE INTERNATIONAL INSTITUTE FOR STRATEGIC STUDIES, *THE MILITARY BALANCE, 1997/98* (1997) [hereinafter *THE MILITARY BALANCE*].

combined.⁴⁹ Similarly, consider the United States Air Force's new Air Expeditionary Force (AEF) concept. The Air Force will build 10 deployable packages of 175 aircraft and 2,600 support troops. Each will be capable of deploying on short notice worldwide for missions ranging from combat to disaster relief.⁵⁰ Just one would be able to outfight the air forces of many nations.

¶25 Conclusions as to the future relationship between economic wherewithal and military strength must be carefully drawn. Most significant are issues of quantity versus quality. In the not too distant past, defense spending roughly tracked quantitative relationships between militaries. Thus, the more a country spent on defense, the larger its armed forces. This is changing. Although the United States spends a far greater amount on defense than any potential competitor, it has only the third largest military.⁵¹ The reason is simple: high technology weaponry is expensive, while personnel, particularly in lesser developed countries, are cheap. As an example, the cost estimate of the Army's Theater High Altitude Area Defense (THAAD) system, which is being developed to guard against missile attacks, is 14 billion dollars.⁵² To place this figure in context, the projected cost of this *single* U.S. system roughly equals or exceeds the defense budgets of China, which has the largest military in the world, and such technologically advanced States as Canada and Israel.⁵³

¶26 The gap between States in ability to field new military technologies must surely expand as technology costs rise in relative terms. Aircraft represent an excellent example. Tomorrow's main-line U.S. fighter will be the F-22 Raptor. Produced by Lockheed-Martin, the proposed package of 442 aircraft is expected to cost \$71.6 billion.⁵⁴ What the future may hold, then, is a trend towards efforts by developed States, faced with continuing demands to reduce the size of their militaries, to leverage their comparative economic and technological advantages by fielding high-tech weaponry in compensation for numerical weakness.

¶27 The United States has recognized these advantages in *Joint Vision 2010*, an official document that sets forth in broad terms how it intends to fight in the twenty-first century.⁵⁵ This publication describes the goal of

49. See *id.* at 20.

50. Described by Major General Dennis Gray, ANG (visited Apr. 15, 1999) <aflsa.jag.af.mil/GROUPS/NATIONAL_GUARD/ANG/AEFGGray.html>.

51. See THE MILITARY BALANCE, *supra* note 48, at 291-97, tbl. 53 (current as of 1996 and excluding reservists or paramilitary forces).

52. See Bradley Graham, *Anti Missile Systems' Costs Test U.S. Ability to Pay, General Says*, WASH. POST, Sept. 3, 1998, at 4.

53. Figures for national military expenditures are available on-line. See SIPRI Military Expenditure Database (visited Apr. 15, 1999)

<<http://www.sipri.se/projects/Milex/Introduction.html>>. The defense budget calculation for the Chinese military is based on the officially reported budget, but in fact, funds available to the Chinese military exceed this figure.

54. See U.S. Government Accounting Office, *Tactical Aircraft: Concurrency in Development and Production of F-22 Aircraft Should Be Reduced* (1995) (visited Apr. 27, 1999) <<http://frwebgate.access.gpo.gov/cgi/.txt&directory=diskb/wais/data/gao>>.

55. U.S. JOINT CHIEFS OF STAFF, JOINT VISION 2010 (1996) [hereinafter JOINT VISION 2010] (also available at <http://www.dtic.mil/doctrine/jv2010/jv2010.pdf>). Each military service in

"full spectrum dominance," i.e., the ability to dominate warfare in any environment and at any level of conflict, from military operations other than war to large scale international armed conflict.⁵⁶ To achieve this goal, the United States will take advantage of technological innovations and information superiority to out-maneuver, out-target, and out-defend the opponent. With its military partners, it will enjoy greater situational awareness of the battlefield and be capable of reacting to threats and opportunities thereon more quickly and more definitively than the enemy.⁵⁷

¶28 Warfare along these lines is asymmetrical in that the opposing sides approach the battlefield from very different perspectives, perspectives which are in great part the product of economic and military disparity between the "haves" and "have-nots" (or at least, "have-lesser").⁵⁸ The former group is illustrated by States such as the United States, Canada, most western European countries, Japan, and, in light of its military wherewithal and potential, possibly China; the latter group would include lesser and undeveloped States such as the bulk of those in Africa. If the gap between the "haves" and "have-nots" continues to widen, warfare will become increasingly asymmetrical as technologically advanced States play to their strengths to defeat numerically superior forces.⁵⁹ And, as demonstrated in the 1990-91 Persian Gulf War, the obverse is unlikely: asymmetry in the form of sheer numbers is unlikely to offset technological inferiority. Thus, technologically impaired forces must seek low-cost, low-tech methods of asymmetrical warfare. In terms of the principle of discrimination, the risks posed by asymmetry are dangerous.

¶29 Recall first that discrimination prohibits the use of indiscriminate weapons. Two categories of low-cost, low-tech weaponry, which could be used with great effect against better equipped forces, are chemicals and biologicals. The core reason chemicals and biologicals are prohibited is that they are inherently indiscriminate; their dissemination is subject to such unpredictable influences as weather or the travel patterns of those afflicted. Moreover, the capability to use them in a discriminatory fashion depends on the delivery system's complexity, the ability of the user State to develop non-persistent strains of toxins, and the scientific savvy of those employing them. Unfortunately, the "haves/have-nots" premise suggests

the United States has published a complementary service-specific vision: U.S. NAVY, FORWARD . . . FROM THE SEA (1994); U.S. ARMY, ARMY VISION 2010 (1996); U.S. AIR FORCE, GLOBAL ENGAGEMENT: A VISION FOR THE 21ST CENTURY (1996).

56. See the concept of "full spectrum dominance" is set forth in JOINT VISION 2010, *supra* note 51, esp. 20-23; CONCEPT FOR FUTURE JOINT OPERATIONS, *supra* note 40, esp. 50-51, 55, at 25-26.

57. See *id.* at 20-23; JOINT CHIEFS OF STAFF, *supra* note 44, at 50-51.

58. The United States specifically cites asymmetric challenges as one of four national security threat categories. The others are regional dangers, transnational dangers, and wild cards (unanticipated threats). See White House, *A National Security Strategy for a New Century* (1997) (visited Apr. 27, 1999) <<http://www.jya.com/nss.htm>>.

59. On the issue of leveraging technology to compensate for size, see generally Anthony H. Cordesman, *Compensating for Smaller Forces: Adjusting Ways and Means Through Technology*, 1992 U.S. ARMY WAR C. THIRD ANN. CONF. ON STRATEGY 1.

that those States least likely to possess such attributes are the very ones most likely to resort to this non-discriminatory form of warfare.

¶30 All of the potential adversaries and allies of the United States in the Middle East are developing chemical and/or biological warfare capability.⁶⁰ As a result of the 1993 Chemical Weapons Convention⁶¹ and the 1972 Biological Weapons Convention,⁶² most of the developed States against which they might be used have either destroyed or are destroying their chemical and biological weapons arsenals.⁶³ The consequent inability of developed States to respond in kind provides a significant incentive for lesser equipped militaries to resort to such weapons. Perhaps the only credible deterrent against their doing so (aside from any likelihood that the State employing them would nevertheless lose the conflict) is the threat of nuclear retaliation, a threat which proved effective during the Gulf War.⁶⁴ The dilemma is that the use of nuclear weapons is itself under normative attack, the most recent salvo being the 1996 Advisory Opinion of the International Court of Justice mentioned above.⁶⁵

¶31 Disparity also provides an incentive for "have-nots" to define the concept of military objective broadly. If they cannot hope to match their opponent on the battlefield, they must look elsewhere for targets. Since economic facilities undergird the "haves'" superiority, these facilities will become particularly attractive targets. For instance, the notion of attacking

60. The Institute for National Strategic Studies has noted the following capabilities in the Middle East: Algeria (infrastructure for the production of chemical weapons, base of experts for biological weapon production); Libya (production of chemical weapons, possible research on biological weapons); Egypt (production of chemical weapons, base of experts for biological weapon production); Syria (production of chemical weapons, possible production of biological weapons); Iraq (infrastructure for the production of chemical weapons if decision is made to produce, infrastructure for the production of biological weapons); Iran (production of chemical weapons, possible production of biological weapons); Jordan (base of experts for chemical weapons production, technical base for biological weapons production); Israel (possible production of chemical weapons, infrastructure for production of biological weapons if decision is made to produce). See INSTITUTE FOR NATIONAL STRATEGIC STUDIES, STRATEGIC ASSESSMENT 1996, at 202 (1996).

61. Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction, Jan. 13, 1993, U.N. Doc. CD/CW/WP.400/Rev. 1, reprinted in 32 I.L.M. 800 (1993) [hereinafter "Convention on Chemical Weapons"].

62. Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction, *opened for signature* Apr. 10, 1972, U.N. Doc. A/RES/2826, reprinted in 11 I.L.M. 309 (1972).

63. Among the developed States that have ratified, acceded, or succeeded to the Biological Weapons Convention as of August 1998 are France, Germany, Japan, Russia, United Kingdom, and United States. Iraq is not a party, though it is a signatory. Each of these is also a party to the Chemical Weapons Convention, while, again, Iraq is not.

64. Judge Schwebel of the International Court of Justice discusses this episode in his dissenting opinion in the *Nuclear Weapons Case*. See *Nuclear Weapons Case*, *supra* note 6, Dissenting Opinion of Judge Schwebel, at 11; see also INSTITUTE FOR NATIONAL STRATEGIC STUDIES, *supra* note 60, at 203. The problem of countering weapons of mass destruction has drawn attention in military circles. See, e.g., Robert W. Chandler, *Counterforce: Locating and Destroying Weapons of Mass Destruction* (Aug. 1998) (USAF Academy Institute for National Security Studies Occasional Paper 21).

65. See *Nuclear Weapons Case*, *supra* note 6.

financial entities, such as a stock market or financial system, readily surfaces in discussions of information warfare.⁶⁶ These are not military objectives under the present humanitarian law. However, nations out-classed on the battlefield certainly have an incentive for viewing them as such, regardless of the narrower approach advocated by entities such as the ICRC.

¶32 Much more frightening is the prospect that relative disadvantage will drive the "have-nots" to abandon the principle of discrimination altogether. If a State cannot hope to win on the battlefield, then perhaps it will elect to carry the battle beyond it. After all, this is precisely what terrorists do. The State-sponsored terrorism witnessed over the past decades is but a step away from State terrorism, a fact well-illustrated by the Iraqi plot to kill former President Bush in 1993. This propensity may even become prevalent in conventional warfare. Facing an overwhelmingly dominant force during the Gulf War, the Iraqis chose to target Israeli cities, classic forbidden targets even if Israel had been a belligerent, in an effort to splinter the coalition it faced. Despite the mandates of humanitarian law, the incentive to alter the cost-benefit calculations of an opponent by targeting its civilians and civilian property, thereby violating the principle of distinction, increases in proportion to one's own military disadvantage.

¶33 Disparity also aggravates the application of the proportionality principle by distorting its various valuation paradigms. In the first place, the mere fact that one faces significant disadvantages creates a context very different from that in which a more technologically sophisticated opponent operates. Because of the disadvantages, the calculation of military advantage likely to result from an operation will be greater, for the issue is not the objective value of a target, but rather the target's subjective value to the attacker. To an attacker facing impending defeat, the destruction of any of the enemy's capability is invaluable; to one certain of victory, there may be very little value added in the destruction of further targets, at least relative to the likelihood of civilian loss. Even the destruction of *valid* targets with negligible civilian loss when victory is at hand can draw international condemnation, as demonstrated by the criticism over the "Highway of Death" incident during the Gulf War.⁶⁷ Thus, military disadvantage may serve to "exaggerate" military advantage calculations at the expense of avoiding civilian harm.

¶34 Similarly, it is reasonable to conclude that two adversaries at clearly distinguishable stages of development may draw differing conclusions as to what value to assign to civilian objects, and possibly even civilians. Thus, though the opponents may actually be making a

66. On information warfare in an *ad bellum* context, see Michael N. Schmitt, *Computer Network Attack and the Use of Force in International Law: Thoughts on a Normative Framework*, 37 COLUM. J. TRANSNAT'L L. 885 (1999).

67. A concise legal analysis of this incident is offered by Professor Françoise Hampson in *Proportionality and Necessity in the Gulf Conflict*, PROC. 86TH ANNUAL MEETING AM. SOC'Y INT'L L. 45, 53-54 (1992).

calculation at the same time, from the perspective of their development as a modern State, they operate within divergent valuation paradigms. This phenomenon is evident, for example, in the increased casualty aversion of more developed countries compared to lesser-developed States.⁶⁸ Whether civilian or military casualties are involved, anecdotal evidence suggests that the more developed a country, the less fatalistic its populace. The greater the disparity, then, the further we move away from an objectively determinable proportionality balancing. Regrettably, this situation is self-catalytic: the wider the chasm between competing standards of balance, the greater the likelihood that the side that advances the higher standard will ratchet its calculations downward in response to an opponent's actions.

¶35 Beyond the dynamics of relative economic wherewithal and its military consequences, the global community is at risk of fragmentation from other forces. Of particular divisiveness is a growing tendency towards religious and ethnic discord.⁶⁹ During the Cold War, such discord was somewhat muted by the umbrella of bipolar competition. Today, however, ethnic and religious violence, both internal and international, has become widespread. Unfortunately, in the passion of morally or ethnically charged violence, humanitarian principles, particularly those requiring discrimination, may be discarded. From Nagoro-Karabakh and Sarajevo to Belfast and the remote villages of Rwanda, internecine conflict in the post Cold-War era has assumed a particularly brutal, and often indiscriminate, visage.

¶36 The unprecedented willingness of the international community to create war crimes tribunals in the cases of Yugoslavia and Rwanda and to move towards the creation of a permanent International Criminal Court demonstrates the alarm that these tragedies have finally begun to raise. Unfortunately, little reason exists to believe that war crimes will be relegated to the dust bin of history anytime in the near future.

B. A Blurring of the Lines Between Protected Persons and Objects and Valid Military Targets

¶37 As was noted in the previous section, the "haves/have-nots" dichotomy may encourage "have-not" States to blur the line between civilians and civilian objects on the one hand, and valid military objectives on the other. This is driven by the desire to compensate for weakness on

68. The clearest recent example of casualty aversion occurred following the October 1993 shoot-down of two U.S. Army helicopters that were involved in operations to capture the Somali military leader, General Aideed. Eighteen U.S. servicemen, along with hundreds of Somalis, perished in the incident. The uproar this incident caused in the United States led to the withdrawal of all U.S. troops by March 1994. See Gary Anderson, *UNOSOM II: Not Failure, Not Success*, in *BEYOND TRADITIONAL PEACEKEEPING* 267, 273 (Donald C.F. Daniel & Bradd C. Hayes eds., 1995).

69. Samuel Huntington has argued that future global discord will be based in culture rather than economics or ideology. See generally Samuel P. Huntington, *The Clash of Civilizations?*, *FOREIGN AFF.*, Summer 1993.

the purely military front. However, blurring may also result from a much more subtle phenomenon—the militarization of previously protected entities and individuals.

¶38 Widespread involvement of the citizenry in war can be traced back at least to the nineteenth century. The Napoleonic wars signaled the "popularization" of warfare beyond a select group of professional soldiers, and the Industrial Revolution made possible the arming and equipping of the mass armies first seen on a grand scale during these wars. Success in combat arguably became as dependent on the capability of a State to mobilize its economy to equip huge armies as on the professional acumen of its officer corps. In an unprecedented way, factories, factory workers, and certain other civilian facilities and individuals had a tangible effect on the course of a conflict. That being so, it is not surprising that by the Second World War, belligerents attacked them directly. The appropriateness, or lack thereof, of those attacks informs much of the current debate over the reach of the term "military objective" in Article 48 of Protocol I and, more generally, customary international law.

¶39 The concept of military objective will remain beleaguered as civilian activities are further militarized, and military activities are increasingly civilianized, especially in technologically advanced States. With regard to the former trend, it is becoming ever more difficult to determine when an object, and the facility that makes it, is military. Because the "full spectrum dominance" heralded by the United States necessitates operating within an opponent's decision loop, a capability relying largely on advanced information technology, this is especially true for developed States.⁷⁰ The problem is that the technology able to perform these functions differs little, if at all, from that used in the civilian community. How is one to distinguish, as an example, a computer chip manufacturer that sells its chips only to civilian end-users from one that has a number of military contracts?⁷¹ Obviously, such quandaries multiply the difficulty of discrimination.

¶40 Complicating matters is a push to lower costs by purchasing "off-the-shelf" products designed for civilian use, and then adapting them to

70. The concept of operating within an opponent's OODA (observe, orient, decide, act) loop implies being able to make decisions faster and better than an opponent so as to force him to react. Enjoying that capability in the twenty-first century will require advanced computer technology to manipulate and operate next-generation sensors and then quickly sort through the resulting data in search of that information relevant to a particular end-user (a commander, unit, or individual soldier).

71. Former Vice-Chairman of the U.S. Joint Chiefs of Staff, Admiral William Owens has highlighted this trend:

Today, the center of technological acceleration in each of these technologies [battlespace awareness, C³I, and precision use of force] lies generally in the commercial, non-defense sectors. Our ability to accelerate the fielding of systems, on which we will base our future military superiority, thus depends on our capacity to tap into developments taking place for the most part outside the existing Department of Defense laboratory and development infrastructure.

William A. Owens, *The Emerging System of Systems*, PROCEEDINGS, May 1995, at 36, 38.

military purposes. If military officers use Microsoft Word as their word processing software of choice, for example, does a Microsoft plant become a valid target? Along these same lines, the military increasingly utilizes civilian facilities and activities in order to minimize costs. Such arrangements range from sharing office space, runways, or port facilities, to using the Internet or pursuing partnerships with commercial space entities and consortiums.⁷² In the search for savings and efficiencies, such practices dilute the prescriptive effect of the belligerents' obligations to "avoid locating military objectives within or near densely populated areas" and to "take the other necessary precautions to protect the civilian population, individual civilians[,] and civilian objects under their control against the dangers resulting from military operations."⁷³ At the same time, there will be pressure from those who wish to target such entities and activities to lower the threshold for judging a target lawful.

¶41 Finally, there is an increased proclivity, again often for fiscal reasons, to contract out many activities which previously were performed by military personnel, and which are integral to the effective conduct of military operations. The U.S. military, for example, has at times contracted out aircraft maintenance, security, transportation of troops and supplies, housing, and even training in basic combat functions. When civilians perform support functions, the line between non-combatants and combatants inevitably blurs. Are civilians who perform these support functions targetable? If so, which functions rise to the requisite level of support to combat operations necessary to render them subject to attack? Even if one accepts the argument that such individuals are targetable, these activities place *all* civilians at greater risk because of the difficulty an attacking force will have in distinguishing civilian participants from civilian non-participants. In fact, this very concern drew objections to the Protocol I provisions relaxing the requirement that combatants distinguish themselves from the civilian population.⁷⁴

¶42 Clearly, if the trend towards militarizing civilian activities and

72. The U.S. Space Command is actively seeking partnerships with commercial entities and consortiums, sometimes multinational in nature, as well as with civilian governmental agencies involved in space operations, such as NASA. Indeed, "Global Partnership" is one of Space Command's four operational concepts. U.S. SPACE COMMAND, VISION for 2010 (1997). On the legal issues involved with such activities, see generally Peter Jankowitsch, *Legal Aspects of Military Space Activities*, in *SPACE LAW: DEVELOPMENT AND SCOPE* 143 (Nandasiri Jasentuliyana ed., 1992); and Richard A. Morgan, *Military Use of Commercial Satellites: A New Look at the Outer Space Treaty and "Peaceful Purposes"*, 60 J. AIR L. & COMM. 237 (1994). The implications of this practice are momentous. If a country uses civilian airliners for military purposes during a war, to what extent do the carrier's aircraft, maintenance facilities, and control centers become lawful targets? What about the regional air traffic control system? Are commercial satellites that provide positioning data to military, commercial, and private aircraft and ships targetable? What about those that provide weather data to both military planners and emergency response organizations? Does the military's use of the Internet make it a target?

73. Additional Protocol I, *supra* note 20, art. 58 (b-c).

74. These objections have come from the United States, among others. See 1 U.S. AIR FORCE, OFFICE OF THE JUDGE ADVOCATE GENERAL, OPERATIONS LAW DEPLOYMENT DESKBOOK, tab 12, ¶ 1.7.6.1 (objecting to the provision).

civilianizing military ones continues, the consequences for the principle of discrimination are grave. There will be measurable pressure to interpret the universe of targetable objects and individuals more liberally than today simply because each side will seek to deny its opponent potential advantage. Any such calls for relaxing the criteria for valid targets should be, as discussed *infra*, resisted. Moreover, as a practical matter the difficulty of determining who and what is, in fact, supporting the military effort will complicate discrimination. Today, the Internet, stock markets, economic infrastructure, and other primarily civilian entities do not constitute lawful targets, regardless of who the attacker is. The tie to direct and concrete military advantage is simply too attenuated. Yet, as integration expands it will prove ever more difficult to determine with any precision the relationship of a potential target to the military effort. Nevertheless, humanitarian principles dictate that any consequent urge to simplify legal criteria by relaxing them should be opposed.

C. From Battlefield to "Battlespace"

¶43 In battles past, combat was generally linear. Opposing forces faced each other across fairly distinct, geographically articulable lines. Objects susceptible to being struck, either directly or collaterally, tended to be those closest to the forward edge of the battle area. Civilians were usually absent from the battlefield, either because the battle occurred in relatively unpopulated areas or because they had fled prior to its onset.

¶44 In the twentieth century, this linearity has diminished severely. Blitzkrieg warfare as practiced by the mechanized German Army in 1939-40, for instance, was based on maneuver so fluid that the forward edges of battle areas became transitory. Similarly, strategic bombing did away with linearity altogether in the aerial realm. The result of this revolution in speed and reach was that civilians found themselves at growing risk. In many cases, it became difficult to escape the onslaught of combat by simply fleeing the battlefield, because the battlefield moved too quickly and too unpredictably. Furthermore, the ability to apply force beyond the immediate area of military operations rendered the heretofore *de facto* enforcer of the principle of discrimination—distance—impotent. The novel technologies meant that new, yet still valid, military target sets far beyond the battlefield could be struck, but because they were often located near civilians and civilian objects, the likelihood of collateral damage and incidental injury increased.

¶45 In twenty-first century warfare, this tendency will be exacerbated many-fold, as "battlespaces," virtual and non-linear loci of combat, replace battlefields. Future wars will involve technologically advanced militaries applying carefully synchronized force from an array of precision platforms against targets identified and located by advanced sensors.⁷⁵ The question

75. See generally DOMINANT BATTLESPACE KNOWLEDGE (Stuart E. Johnson & Martin C. Libicki eds., 1995).

for civilians will be less one of *where* combat is occurring as *when*, for there will be few sanctuaries from its effects.

¶46 Notions of battlespace further complicate application of the principle of discrimination. After all, the humanitarian effect of the ability to strike anywhere and anytime necessarily increases the extent to which civilians and civilian objects are intermingled with military objectives. This intermingling results not from the presence of more civilians and civilian objects in the target area, but rather from the fact that valid targets which could not feasibly be struck in the past now become vulnerable. To the extent that the universe of strikeable targets multiplies, so too does the potential for collateral damage and incidental injuries. This actuality, *sans plus*, does not complicate the making of proportionality calculations, but it does dramatically increase the frequency with which the most difficult ones (those involving intermingling) will have to be made. It will also require greater attention to the attacker's obligation to chose that method or means of warfare least likely to cause collateral damage or incidental injury, while still achieving military objectives.

D. The Advent of Precision Engagement

¶47 In the next century, the operational concept of "precision engagement" will underlie military tactics and strategy. Set forth in *Joint Vision 2010*,⁷⁶ precision engagement "will consist of a system of systems that enables military forces to locate the objective or target, provide responsive command and control, generate the desired effect, assess [the] level of success, and retain the flexibility to re-engage with precision when required."⁷⁷

Thus, precision takes on new meaning. Rather than being the ability to strike a designated target; it becomes a qualitatively improved holistic combat methodology.⁷⁸ Two capabilities are key to achieving precision engagement: information dominance, particularly surveillance and reconnaissance, and the ability to apply just the right amount and kind of force to accomplish the objective. Information dominance implies the transparency of an opponent's actions and intentions, and the concealment of one's own. Improved and new technologies will enable quantum leaps in intelligence gathering, surveillance, and reconnaissance.⁷⁹ For example,

76. Precision engagement is one of four key concepts in the enabling of *full spectrum dominance*, as articulated in *Joint Vision 2010*. The others are *dominant maneuver*, "the multidimensional application of information, engagement, and mobility capabilities to position and employ widely dispersed joint air, land, sea, and space forces"; *full dimension protection*, which will use information technology to better protect U.S. forces; and *focused logistics*, the "fusion of information, logistics, and transportation technologies to provide rapid crisis response, to track and shift assets even while en route, and to deliver tailored logistics packages and sustainment directly at the strategic, operational, and tactical levels of operations." JOINT VISION 2010, *supra* note 55, at 20, 23, 24.

77. *Id.* at 21.

78. See generally JOINT CHIEFS OF STAFF, *supra* note 44, at 51.

79. Space satellites serve as an apt example. By the early twenty-first century,

micromachining offers fantastic new possibilities, many of which involve the production of tiny sensors that an adversary may detect only with great difficulty.⁸⁰ Technology also will promote greater transparency of an enemy even at the level of an individual soldier.⁸¹

¶48 Data gathering technologies are supplemented by systems that make possible the effective use of that data. Given the capabilities of sensor assets, the mountain of information that will be available to the decision-maker will, in most cases, be unmanageable in its unprocessed form. Therefore, new data processing systems employing artificial intelligence are being developed to rapidly fuse, sort, evaluate and disseminate information in user-friendly form.⁸² Analogous decision-

reconnaissance satellites will offer 24-hour worldwide coverage, with improvable resolution of two to three meters. Even more astonishing, in future wars, satellites may be capable of detecting normal conversations on earth with sound sensor technologies. See Jeffrey E. Thieret et al., *Hit 'Em Where it Hurts: Strategic Attack in 2025*, in 3 AIR UNIVERSITY, 2025, WHITE PAPERS 173, 187 (1996). Consider this possible future scenario from one U.S. Air Force study:

In the year 2025, sensor collection provides enough data for a virtual 3-D model of the [target] to include its composition, internal structure, baseline characteristics, and tendencies... Sensors determine the building's exact dimensions and floor plan. They then highlight soft spots. Sensors distinguish between rooms containing biological agents, test equipment, sleeping quarters, and even the snack bar. Target acquisition sensors also construct a baseline, or living archive, of data concerning routine activity and environmental conditions. Examples include the average number of people who enter and exit each day, the number of vehicles in the parking lot, and the level of noise generated by the facility.

Id. at 185-86. Using this information, targeters can determine where to strike the building, with what, and when the building can best be attacked without causing extensive civilian casualties.

80. For instance, some futurists envision minuscule "robots" with optical and communications capabilities, which would be disguised as insects for use in jungles where present day sensors are often ineffective. See Pat Cooper, *U.S. Develops Army of Tiny Robots*, DEF. NEWS, Nov. 11-17, 1996, at 4. Future sensors may be the size of dust mites and seedable by unmanned aerial vehicles, and could be sucked into the air conditioning system of facilities to be monitored. See *id.* Sensors' "senses" would not necessarily be limited to sight and hearing. Certain ones might be sensitive to particular chemical make-ups, thus allowing the identification of chemical weapons or metal objects like armor or aircraft. See Thieret et al., *supra* note 74, at 187-88.

81. Most notably for the not-too-distant future, the proposed Land Warrior Modular Fighting System will equip soldiers with a helmet-mounted computerized display tied to an improved weapon, thermal sensor for night vision, and an image enhancer. The system will allow the soldier to "see around corners" and transmit data up the chain of command. There are even suggestions that soldiers will have access to eye-sized real time picture map displays to enhance situational awareness. See Art Pine, *Revolutionary High-Tech Military Isn't Ready for the World's Battlefields*, PROVIDENCE J., Jan. 5, 1997, at D3; Barbara A. Jezior, *The Revolutionized Warfighter Circa 2025* (1997) (unpublished manuscript on file with the Naval War College Library); see also *Infantry System Turns Soldier into High-Tech Urban Warrior*, NAT'L DEF., Apr. 1997, at 24.

82. An excellent example being developed for the U.S. Navy by Johns Hopkins University is the Force Threat Evaluation and Weapon Assignment System. It will collate data from radar systems aboard the ships of an entire battle group and then fuse it to generate a three-dimensional graphic display of the threat environment for the battle manager. The system will even evaluate threats and suggest which to engage and when. See Douglas Waller, *Onward Cyber Soldiers*, TIME, Aug. 21, 1995, at 38, 41.

making enhancement systems will be available at the operational (theater) and strategic levels as well. The real-time nature of these "C⁴ISR"⁸³ technologies will for the first time make planning as events unfold possible. In terms of operations tempo, this is a quantum leap over the present practice of planning in advance of execution or in response to enemy action.

¶49 Complementing the revolution in information systems are equally impressive advances in weapons capabilities. Inaccurately hailed as the first "smart" war,⁸⁴ the 1991 Persian Gulf War popularized the capabilities of precision guided munitions. Though the accuracy and effectiveness of smart weapons in that war may have been exaggerated through coverage in the popular media, the weapons of future wars will be more than smart—they will be "brilliant." Inertial navigation technologies, the incorporation of global positioning data, and other improvements in guidance systems will permit weapons to regularly strike within centimeters of the desired point of impact.⁸⁵ Accuracy will be further enhanced by improvements in the overall "weapon system," which consists of the weapon, launcher, and other external components that make the attack possible.⁸⁶ Not only will technology allow better target identification

83. Command, control, communications, computers, intelligence, surveillance, and reconnaissance.

84. Despite impressive film footage of precision guided munitions (PGMs) being employed during the conflict, the Gulf War was actually dominated by conventionally delivered munitions. Only eight percent of the weapons used were precision guided. A General Accounting Office study of 20 major targets found that Coalition forces used at least two laser-guided weapons against each. Twenty percent of the targets were struck with at least six weapons, while 15 percent were hit by eight or more. The need to strike targets repeatedly is persuasive evidence that such weapons were no panacea. See Tony Capaccio, *GAO Questions U.S. Air Power Impact on Gulf War*, DEF. WK., June 30, 1997, at 1; see also Barton Geldman, *U.S. Bombs Missed 70% of the Time; "Smart" Munitions Far More Accurate*, WASH. POST, Mar. 16, 1991, at A-1. Since the Gulf War, the United States has invested heavily in precision weaponry. For example, the two U.S. carriers deployed to the Persian Gulf in February 1998 carried with them more smart weapons than all six of the carriers deployed during the war. See Bradley Graham, *New Weapons Give Navy Top Air Role This Time*, WASH. POST, Feb. 12, 1998, at A-1, 25.

85. Inertial navigation is dead reckoning performed automatically by a device that continuously integrates acceleration and direction from a know point of departure in order to ascertain location. Its advantage is that it is completely passive and self-contained; therefore, its users are not subject to electronic signal monitoring or electronic countermeasures. Some warheads will actually count walls penetrated to ensure that the warhead explodes within the desired room. This capability is particularly useful in strikes against biological or chemical facilities in which the goal is to destroy toxins without releasing them into the atmosphere. See William Matthews, *New Bombs Penetrate, Incinerate*, AIR FORCE TIMES, Feb. 16, 1998, at 6. To place this degree of accuracy in historical perspective, during World War II, one-half of all bombs dropped landed over one mile from their intended target. See *All Things Considered* (National Public Radio broadcast, Feb. 13, 1998).

86. For instance, combat aircraft today use information provided by on-board sensors or verbal communications with other aircraft, such as the Airborne Warning and Control System (AWACS), or ground controllers. In the not-too-distant future, by contrast, fighters and bombers will have direct access to data gathered by space- and ground-based sensors, unmanned reconnaissance aerial vehicles, and aircraft other than specialized platforms like the AWACS. See USAF SCIENTIFIC ADVISORY BOARD, *NEW WORLD VISTAS: AIR AND SPACE POWER FOR THE 21ST CENTURY* 11 (summary vol. 1995). On the ground, the U.S. Army may

and accuracy, but those weapons that strike the target will be more effective in achieving the desired level of destruction or damage.⁸⁷

¶150 Non-lethal weapons technologies will also provide fighting forces with a means more precisely tailored to achieve a desired effect.⁸⁸ In many "military operations other than war" situations, for example, the use of deadly force may be counterproductive. The prevailing scenario involves crowd control in circumstances where troops are trying to stabilize civil unrest. New non-lethal technologies on the drawing board may offer field commanders less irreversible ways to handle such situations than using traditional armed force.⁸⁹

¶151 In a perfect universe, these advances in information acquisition/dissemination and weapons accuracy/suitability would result in an impressive concentration of precision firepower that could be brought to bear in a transparent and well-understood battlespace against easily identifiable targets. Despite its impressiveness, however, technology contains within it the potential to thicken the Clausewitzian fog of war rather than clear it.⁹⁰ To begin with, new stealth technologies may defeat

field a "brilliant" anti-armor submunition that will be fired by the Army Tactical Missile System. The munitions will use acoustic and infrared sensors to identify a formation of vehicles, single one out for attack, and destroy it. See Owens, *supra* note 71, at 37.

87. Today, a weapon usually destroys through penetration of the target and explosion. This approach will predominate in the next century, but be much improved. Microtechnology will allow weapons to be much smaller, thereby permitting more of them to be carried aboard delivery platforms. See Thieret et al., *supra* note 79, at 189. Consider hardened targets. Today they are best attacked with at least a two-thousand pound guided bomb unit; in the future they may be attacked with a 250 pound weapon just as effectively. Moreover, microexplosive technology will make it possible for minute quantities of explosive to destroy a target, further facilitating miniaturization and limiting the collateral damage and incidental injury produced by larger explosions. See USAF SCIENTIFIC ADVISORY BOARD, *supra* note 86, at 9-10.

88. The term non-lethal is somewhat controversial because death is possible in the case of many such weapons; it is simply less likely. Therefore, these weapons are increasingly being labeled "less-lethal" rather than non-lethal. On non-lethal weapons, see generally James C. Duncan, *A Primer on the Employment of Non-Lethal Weapons*, 45 NAVAL L. REV. 1 (1998); James W. Cook III et al., *Non-Lethal Weapons: Technologies, Legalities, and Potential Policies*, AIRPOWER J., Special Ed. 1995, at 77; James C. Duncan, *A Primer on the Employment of Non-Lethal Weapons*, XLV NAVAL LAW REVIEW 1 (1998).

89. Consider acoustic and microwave weapons. The former generate sound frequencies that cause pain and nausea, while the latter cause discomfort or seizure by raising the target's body temperature. See Douglas Pasternak, *Wonder Weapons*, U.S. NEWS & WORLD REP., July 7, 1997, at 38. Other technologies being considered include sleep agents, "slick-ums," which coat surfaces with an anti-traction substance that renders them difficult to walk or drive on, and "stick-ums," a sticky foam that can immobilize individuals without killing them. See Greg R. Schneider, *Nonlethal Weapons: Considerations for Decision Makers 9-10*, 27 (Jan. 1997) (Arms Control, Disarmament, and International Security Occasional Paper, University of Illinois at Urbana-Champaign). Other potential non-lethals that some have suggested for use against enemy equipment include electro-magnetic pulse weapons that produce radio-frequency wavelengths damaging to electrical equipment, *see id.* at 14, super-caustics and embrittling agents that can be sprayed from aircraft or delivered by shells to corrode or weaken surfaces such as bridges, optical lenses, tires, etc., *see id.* at 20-22, microbes that eat rubber, silicon, electronics, and oil, *see Jezior, supra* note 81, at 16, and "super-glue," an air-dispensable substance that fouls equipment and weapons, *see Schneider, supra*, at 9-10.

90. The Naval War College's Mackubin Owens has questioned the current "obsession" with technology. According to Owens, there is a
recrudescence of a McNamara-like worship of technology in some part of

transparency.⁹¹ At a more basic level, information dominance may yield little more than information overload, a situation in which so much information is provided that the decision-maker becomes stressed and confused and begins to make worse decisions than he otherwise would have.⁹²

¶52 Perhaps most potentially troublesome is the fact that every information dependency becomes an information vulnerability.⁹³ This fact has fostered the growth of a relatively new form of combat, information warfare. In information warfare, the enemy's information systems are targeted to deny or distort the information on which he relies. One technique, computer network attack, presents a particular problem for high-tech militaries which depend on computers for everything from deployment planning and intelligence dissemination to transmitting air tasking orders.⁹⁴ Militaries that train in an information rich environment may be crippled by the disabling of their computer systems. More troubling is the prospect that the information on which they depend could be altered. Using this tactic, the attacker can essentially take control of its opponent's deliberative processes. A frightening variant of this scenario is one in which the victim is made to target its own forces or even civilians

the Pentagon, a worship that ignores the principal lesson of military history: as long as war involves humans, no technology can completely eliminate friction, ambiguity and uncertainty, thereby ensuring that a military organization will function at 100 percent efficiency. . . . The question is, who is more relevant in the real world: Clausewitz, who observed that "everything is simple, but the simplest thing is difficult. The difficulties accumulate and the end by producing a kind of friction that is inconceivable unless one has experienced war"; or those who reject him, explicitly or implicitly, assuming that technology will render friction in war obsolete?

Mackubin T. Owens, *Planning for Future Conflict: Strategy vs. "Fad,"* STRATEGIC REV., Summer 1996, at 5, 6. For a fascinating account of how a combatant might fight against a technologically superior military, see generally Charles J. Dunlap, Jr., *How We Lost the High-Tech War of 2007: A Warning from the Future*, WKLY. STANDARD, Jan. 29, 1996, at 22.

91. As an example, the removal of the pilot and cockpit in "uninhabited combat aerial vehicles" may allow novel design features that reduce the radar cross section by a factor of two. See USAF SCIENTIFIC ADVISORY BOARD, *supra* note 86, at 8.

92. See R.L. DiNardo & Daniel J. Hughes, *Some Cautionary Thoughts on Information Warfare*, AIRPOWER J., Winter 1995, at 69, 75.

93. See, e.g., Neil Munro, *Our Electronic Achilles' Heel*, WASH. POST WKLY. ED., Aug. 14-20, 1995, at 24.

94. The U.S. military has over 2.1 million computers and 10,000 local area networks. See Thomas E. Ricks, *Information-Warfare Defense is Urged*, WALL ST. J., Jan. 6, 1997, at 1; B2. Computer network attack can take many forms, most commonly through introduction of a "virus." For example, "logic bombs" can be transmitted to a computer where they sit idle until activated by a specific event or at a set time. They might be used, for example, to attack such targets as air defense or air traffic control systems. Other techniques include flooding a system with so much data it cannot process it, or the use of "sniffer" programs to gather access codes allowing entry into target systems. In many instances, the attacks may occur without the knowledge of the victim. On the threat posed by information warfare from the U.S. perspective, see OFFICE OF THE UNDER SECRETARY OF DEFENSE FOR ACQUISITION AND TECHNOLOGY, REPORT OF THE DEFENSE SCIENCE BOARD TASK FORCE ON INFORMATION WARFARE DEFENSE, Nov. 1996, at app. B (Threat Assessment).

and civilian targets.⁹⁵

¶53 Despite countervailing trends, the various aspects of precision engagement generally bode very well for implementation of the principle of discrimination. The Gulf War may serve as a preview of things to come. Although only eight percent of the munitions employed in that conflict were precision guided,⁹⁶ and despite isolated claims to the contrary, the use of advanced information systems, delivery techniques, and improved weaponry led to a dramatic decrease in the extent of civilian casualties and damage to civilian objects relative to the scope and intensity of the campaign.⁹⁷ Technology made these results possible.⁹⁸ When compared to urban air attacks of past wars, the Desert Storm bombing effort was astonishingly discriminate

¶54 In the future, discrimination capabilities certainly will improve. Collateral damage and incidental injury generally result from the interplay of three factors: uncertainty as to what is being hit, inability to precisely meter the amount of force applied, and the lack of absolute certainty that the target can be hit. The technologies described above will dramatically diminish the effect of each of these limiting factors. Simply put, in the conflict of tomorrow, technologically advanced forces will be able to strike what they want with near one hundred percent accuracy using techniques in which significant collateral damage and incidental injury will be the exception, not the rule.⁹⁹

95. Reports of a war game held at National Defense University several years ago portray one hypothetical future war scenario. Set in the year 2000, it involved an OPEC meeting that goes awry when Saudi Arabia opposes Iranian demands for an oil production cutback in order to drive prices up. Iran mobilizes and conducts several attacks on Saudi warships. It also begins to conduct information warfare operations to destabilize the Saudi regime and keep the United States and United Kingdom out of the fray. A Saudi refinery is destroyed when computer malfunctions in its control mechanisms cause a fire, a "logic bomb" placed in the computer system running U.S. railways causes a passenger train to derail, computer "worms" begin to corrupt the U.S. military's classified deployment database, and a "sniffer" disrupts fund transfers in the Bank of England. See Steve Lohr, *Ready, Aim, Zap*, N.Y. TIMES, Sept. 30, 1996, at D1. The civilian consequences of these and similar operations are self-evident.

96. See discussion *supra* note 84.

97. For criticism of the coalition's actions during the 1991 Gulf War, see generally HUMAN RIGHTS WATCH, *NEEDLESS DEATHS IN THE GULF WAR* (1991); and Roger Normand & Chris Jochnick, *The Legitimization of Violence: A Critical Analysis of the Gulf War*, 35 HARV. J. INT'L L. 387 (1994). The proceedings of a panel chaired by Professor Oscar Schacter at the 1992 meeting of the American Society of International Law offer a more balanced approach. Panelists included Professors Frits Kalshoven, Françoise Hampson, Yoram Dinstein, Ruth Wedgwood, and Colonel Fred Green. See *Implementing Limitations on the Use of Force: The Doctrine of Proportionality and Necessity*, PROC. 86TH ANNUAL MEETING AM. SOC'Y INT'L L. 39 (1992). The United States' position on the subject is set forth in U.S. DEP'T OF DEFENSE, *supra* note 22, at 611-17.

98. For instance, in the first night's attacks against central Baghdad, only highly precise F-117 Nighthawk aircraft and Tomahawk land attack missile (TLAM) cruise missiles were employed in order to minimize collateral damage and incidental injury. While almost forty-eight key targets in and near Baghdad were struck in the first twenty-four hours of the campaign, direct civilian casualties were minimal. See U.S. DEP'T OF DEFENSE, *supra* note 22, at 116-18, 177-78.

99. Expectations will shift accordingly. For instance, speaking of his decision to order

¶55 Should this prognosis become reality, understanding of how to apply the rule of proportionality may shift subtly, but meaningfully. If first-tier collateral damage and incidental injury (i.e., damage and injury directly caused by the kinetic force of the attack) become rarer, it is probable that humanitarian attention will increasingly dwell on subsequent-tier, or reverberating, effects. As an illustration, since electrical grids will be attackable with highly surgical strikes, proportionality analysis in future war may well center on derivative consequences, such as unintended but foreseeable denial of power to medical facilities.¹⁰⁰ Given the increase of dual-use technologies and facilities, described above, the risk of subsequent-tier damage and injury may actually increase because of the greater interconnectivity of valid target sets with civilian activities. This is especially true with regard to information warfare. Imagine, for instance, information warfare attacks on railroad switching computers, air traffic control systems, or telephone exchanges. The civilian fallout would be monumental and severe. Of course, reverberating effects were theoretically always calculated when assessing proportionality. However, it is only now that the means exist to limit dramatically direct collateral damage and incidental injury that we are being sensitized to reverberation.¹⁰¹ Improved capabilities inevitably lead to heightened humanitarian expectations.

¶56 The one exception to the advent of precision engagement is non-lethal weapons. As conceived of today, technologies such as acoustic or microwave weapons are fairly indiscriminate; as "area" weapons, they are difficult to direct with any precision. Of course, their discriminatory capabilities can be expected to improve in the future. Additionally, as in other cases, the issue is discriminatory *use* rather than discriminatory *capability*. The real danger is that non-lethals will be used in situations or locations, such as urban settings, that do not permit sufficient discrimination. However, their use might still be both appropriate and proportionate because the lesser lethality of such weapons will compensate for their increased coverage. In other words, proportionality may be measured less in terms of scope than in terms of severity.

¶57 Paradoxically, precision engagement capabilities have the potential to make discrimination *more* difficult to achieve. Three possibilities are particularly threatening. The first is that the ability to easily identify and

attacks in August 1998 against a suspected secret chemical plant in Sudan, President Clinton stated that "I didn't want some person who was a nobody to me, but who may have a family to feed and a life to live, and probably had no earthly idea what else was going on there, to die needlessly." Tim Weiner & Steven L. Myers, *Flaws in U.S. Account Raise Questions on Strike in Sudan*, N.Y. TIMES, Aug. 29, 1998, at A-1. Thus, highly precise cruise missiles were used to strike the plant at a time when it would not be filled with employees.

100. On these attacks, see James W. Crawford, *The Law of Noncombatant Immunity and the Targeting of National Electrical Power Systems*, FLETCHER F. WORLD AFF., Summer/Fall 1997, at 101.

101. The limited criticism of the Gulf War air campaign that has been voiced evidences this growing sensitization, for it was predominately based on allegations that coalition attacks did not pay adequate attention to subsequent-tier effects.

target military assets may encourage the practice of placing them in the vicinity of civilians and civilian objects so as to cause attackers to hesitate lest they cause disproportionate damage or injury. Although the use of civilians or other protected persons as shields violates Geneva Convention IV and Protocol I and constitutes a Grave Breach,¹⁰² attackers remain obligated to perform proportionality calculations.¹⁰³ This fact makes civilian shields appealing when an opponent might otherwise target your assets with great impunity. Saddam Hussein used this tactic with unfortunate regularity. Recall the Iraqi placement of foreign and Kuwaiti hostages at military sites, the dispersal of helicopters to residential areas, placement of surface-to-air missiles in a school located in Kuwait City, basing of fighter aircraft next to the Temple of Ur, and the decision not to evacuate Baghdad despite having practiced just such a civil defense operation.¹⁰⁴ As technologies improve even further, and in light of the fact that "have" States will disproportionately possess them, condemnable practices may recur.¹⁰⁵

¶58 Second, and equally troubling, is the prospect that because proportionality valuation paradigms are conceptually determined, there is a risk that the "haves" will face pressure to readjust their proportionality balance calculations to account for the other side's malfeasance. This pressure would result from treating humanitarian law as if it were designed to ensure a fair fight rather than protect non-participants from the effect of hostilities, a dangerous trend from the humanitarian perspective.

¶59 Finally, when facing an adversary that enjoys the capability to render one's actions transparent, the incentives to engage in perfidy and the disincentives to distinguish oneself from the civilian population swell. The blurring of the line between combatants and non-combatants was discussed earlier. Here, the blurring is intentional, almost a form of camouflage. Although these practices are unlawful,¹⁰⁶ the same decisional dynamics set forth above regarding placement will be at play, both as to the attacker and the target forces. In fact, Protocol I has recognized this reality to some extent in its relaxation of the requirement that combatants

102. See Geneva IV, *supra* note 7, arts. 29, 149; Additional Protocol I, *supra* note 20, arts. 75.2(c), 85.2.

103. See Additional Protocol I, *supra* note 20, art. 51.7-8.

104. See U.S. DEP'T OF DEFENSE, *supra* note 22, at 607-08, 613-15.

105. And, in fact, have. Since the Gulf War, Iraqi citizens have occupied potential targets on multiple occasions to shield the targets against threatened air attacks by the multinational forces still patrolling Iraqi skies. The ability of the Iraqi Air Force or air defense to deter such attacks is minimal; thus, the resort to civilian shields.

106. Perfidious acts are those "inviting the confidence of an adversary to lead him to believe that he is entitled to, or is obliged to accord, protection under rules of international law applicable in armed conflict, with intent to betray that confidence." Protocol I, *supra* note 20, art. 37. Typical examples involve misuse of the Red Cross, Red Crescent, or the surrender flag. Such practices are also proscribed by the Annexed Regulations to Hague IV. See Hague Convention IV Respecting the Laws and Customs of War on Land, with Annexed Regulations, Oct. 18, 1907, art. 23(F), *reprinted in* Schindler & Toman, *supra* note 13, at 63, 83. The combatant/noncombatant distinction is found in varying formats in Hague Convention IV, *id.*, art. 1; Geneva IV, *supra* note 7, art. 4A(2); and Additional Protocol I, *supra* note 20, art. 44.

distinguish themselves. Aware that they will not do so when it would be suicidal, Protocol I now provides that when "owing to the nature of the hostilities an armed combatant cannot distinguish himself," he need only carry his arms openly during the engagement and be visible to his opponent while deploying in preparation for the launching of the attack.¹⁰⁷ Similar pressures to relax standards may well surface in the future as distinguishing oneself becomes ever more foolhardy, at least from the perspective of those facing technologically advanced foes.

E. Disparate Cognitive Approaches

¶60 The inherent complexity of the principle of discrimination should by now be apparent. At the most basic level, targeting civilians and civilian objects is prohibited. Additionally, there are certain situations in which all reasonable actors would agree on the proportionality balance. No one would suggest, for example, that capturing a single low-ranking soldier would justify the death of hundreds of civilians. Similarly, the military advantage of destroying a command and control center would seldom be outweighed by damage to an uninhabited building. The complexity emerges when one moves from these extremes along the proportionality continuum toward the center. It is here that dissimilar valuation paradigms clash. Despite the resulting dissonance, however, at this point parties may still agree that they should all be judged by objective standards; they simply disagree as to what those standards should be.

¶61 Normative relativism began to slip into humanitarian law with the Protocol I, Article 57 prohibition of avoidable damage and injury. Beyond an objective level of requisite discrimination, different States will be subject to different standards based upon their capabilities. There is little serious question that some degree of subjective application is merited. The quandary lies in translating this subjectivity into affirmative actions. Must a State use precision guided munitions if it possesses them?¹⁰⁸ Assuming it does, what are the requirements for their use? May it hold them in reserve until the course of the battle becomes clear? To what extent does a State's ability to replenish its supply of such munitions bear on the appropriate rate of employment? Do States have to acquire them if they have the economic wherewithal to do so? Or consider non-lethals. When must a State use non-lethals if conventional weaponry is likely to have more

107. See Additional Protocol I, *supra* note 20, art. 44.3. As noted *supra* note 24, the United States opposes this provision. According to the Rapporteur, the Additional Protocol I provision exception "recognized that situations could occur in occupied territory and in wars of national liberation in which a guerrilla fighter could not distinguish himself throughout his military operations and still retain any chance of success." XV Official Records of the Diplomatic Conference on the Reaffirmation and Development of International Humanitarian Law Applicable in Armed Conflicts, Geneva, 1974-1977, at 453, CDDH/407/Rev. 1, ¶ 19.

108. For an argument that it need not, see Danielle L. Infeld, *Precision-Guided Munitions Demonstrated their Pinpoint Accuracy in Desert Storm; But is a Country Obligated to Use Precision Technology to Minimize Collateral Civilian Injury and Damage?*, 26 GEO. WASH. J. INT'L L. & ECON. 109 (1992).

definitive effect? Must a State arm its military with non-lethals if it has the economic resources to do so?

¶62 The major premises advanced in this essay spotlight these issues. Assuming the "haves/have-nots" dichotomy holds, the "haves" will suffer most from the blurring of the line between civilians/civilian objects and military objectives because they are the ones taking greatest advantage of the economies and efficiencies offered by an advanced civilian economy. Moreover, they will dominate the battlespace through the precision engagement made possible by systems only they can afford. Given these realities, their approach to the issue of normative relativism in discrimination should logically be to advocate raising the *objective* level of, requisite discrimination, while holding firm against enhanced *subjective* obligations. If a technologically-advanced military can easily defeat an opponent on the battlefield, would it not seek to keep the fight there by legally immunizing areas beyond it from attack? While an expansive view of the term "military objective" made much sense when facing a huge Soviet military-industrial complex across the Fulda gap, in the unipolar setting of the twenty-first century, advanced States likely will play to their advantages by taking a narrower view. Of course, the flip side of this equation is that technologically-advanced States logically will object to expanding *subjective* obligations because those obligations will fall most heavily on their shoulders.

¶63 By contrast, the technologically-impaired States' cognitive approach toward prescriptive evolution likely will oppose expanding the objective understanding of discrimination, for doing so might deprive them of the only targets and strategies likely to hold any promise for success. In many cases, their only hope is not to prevail in combat, but rather to raise the costs for their opponents to an unacceptable level. The fewer targets the States with lesser technology are permitted to strike, the less opportunity they will have to impose costs on their advantaged opponents. By the same token, the more limits placed upon their opponents, the greater the advantage to these States. Normative relativism will drive up costs, both monetarily and in terms of efforts expended, for their opponents, and will limit damage and injury to their own people and facilities. Therefore, it will most often operate to their benefit.

IV. ASSESSING THE PROSPECTS FOR THE FUTURE

¶64 It is essential when assessing the future prospects for humanitarian law to maintain focus on the foundational purposes of this body of law. The goal is not to manipulate prescriptive norms to one's advantage, a particularly insidious form of *realpolitik*, nor is it to ensure a "fair fight" on the battlefield by ensuring that neither side enjoys advantages unavailable to the other. Instead, the purpose is *humanitarian*, to place a human face on a particularly inhuman activity.

¶65 Humanitarian law accomplishes this objective in two ways. First, it strives to limit the level of violence by restricting certain methods and

means of warfare, thereby benefiting both participants and non-participants in the conflict. Recognizing that States will hesitate to forego effective techniques and instruments for achieving military objectives, humanitarian law operates at the margins by limiting only the most egregious alternatives (e.g., chemical and biological weapons). Second, it seeks to shield non-participants (primarily civilians) from the conflict by extending certain protections and immunities to them. Discrimination norms represent the archetypal example of this effort. For instance, the proportionality principle recognizes the unfortunate, yet inevitable existence of organized violence in inter-State relations, but attempts to narrow the scope of such violence to the destruction and physical suffering necessary to achieve valid military objectives.

¶66 Assuming, arguendo, the validity of the analysis proffered in this essay thus far, the future seems to bode ill for the principle of discrimination. The major positive trend lies in the area of precision engagement; however, the technology necessary to conduct operations of this complexity is unlikely to be widespread, at least for the foreseeable future. More important, the disparity between the "haves" and "have-nots" reflected in the predictions set forth herein may actually do violence to the principle, for the "have-nots" may well seek that plane of conflict on which they can viably, and asymmetrically, face their high-tech opponents. Other trends either provide disincentives to rigorous application of the principle or encourage its violation. Several simply obfuscate the application of discrimination, even for those who might seek to conduct themselves in accordance with its principles.

¶67 Are the assumptions and motivations underlying the threats to the principle valid, and what approach should States take toward potential deterioration in the principle's normative impact? Optimally, any attempt to arrest or prevent negative trends should reflect commitment to the purposes informing humanitarian law. Yet, the very concept of the State, and related principles such as sovereignty and territoriality, resonates with self-interest, rather than selflessness. States need not operate from within a zero-sum paradigm in making policy choices, but ultimately, most States are rational actors making rational, cost-benefit decisions. Humanitarian law, by forbidding certain actions, limits the options legally available to the State to advance its own interests.

¶68 At first glance, then, neither the "haves" nor the "have-nots" appear to have a logical reason for assuming further humanitarian obligations—each seeks "fairness" (or advantage) and unless the burdens fall with equal weight on all parties, that criterion is breached. The "have-nots" fear that more stringent *objective* standards may deprive them of potential tactics against an enemy that is better placed to operate in the face of these normative constraints on acceptable targets. Arguably, the goal of the "have-not" States should be to relax objective standards so as to take advantage of asymmetrical possibilities. The "haves," on the other hand, view the possibility of *subjective* standards as unfairly biased in a world of theoretical sovereign equality. Why should they be held to a higher

standard than other States?

¶69 From a humanitarian standpoint, the appropriate perspective is one that aspires to raise (or at least preserve) *both* the objective and subjective bars, for doing so will foster protection of non-participants. Whether such aspirations are realistic ultimately depends on the cost-benefit calculations made by rational States. Before rejecting this possibility out of hand, it must be recognized that *all* humanitarian law limits the conduct of States in armed conflict. The very existence of this body of law, and the fact that in most conflicts, most military forces comply with it, is testament to the fact that States are willing to accept some legal limits, even when limitations may deny them immediate advantages. They do so for a number of reasons. Abiding by humanitarian law encourages reciprocal adherence by the other side, and compliance avoids the risks of negative domestic and international reaction. As illustrated by the political and public fallout from the My Lai atrocities during the Vietnam War, such reaction may directly affect the course of an armed conflict. Moreover, adherence to humanitarian norms facilitates war termination and restoration of the peace.¹⁰⁹ While States conduct a cost-benefit analysis in determining whether or not to abide by a prescriptive norm, the calculation is far more complex than simply quantifying immediate and direct benefits of compliance.

¶70 Thus, State practice belies the validity of any broad assertion that efforts to enhance humanitarian law are futile because they would limit State prerogatives in combat. The question then becomes whether, given the disparate cognitive perspective of States, the specific humanitarian law principle of discrimination can be strengthened, or at least withstand efforts to weaken its requirements. That, assuming the accuracy of the rational actor characterization, depends on whether States see that it is in their interest to maintain or fortify the principle. Although States are driven by altruistic motivations at times, self-interest tempers even the policies of those States that harbor the worthiest of intentions.

¶71 To assess the prospect, it is first necessary to understand the dynamics, vis-à-vis discrimination, of objective and subjective standards. Recall that discrimination has three components: proportionality, distinction, and minimizing collateral damage. It is theoretically possible to raise the objective demands of discrimination with regard to the first two. The third, by contrast, is inherently contextual and subjective because it requires selecting the most discriminatory option *available to the actor*, all other things being equal.

¶72 To begin with, and despite the inherently subjective contextual,

109. The difficulties of returning to normalcy in the States formed from the former Yugoslavia and the continuing mistrust and isolation of Iraq are in no small part the product of war crimes committed during those conflicts. For obvious reasons, negotiating and implementing agreements made with a foe that committed such breaches is difficult at best. By contrast, consider the ease with which Argentina and the United Kingdom returned to relative normalcy following the Falklands/Malvinas war, in which compliance with humanitarian law was widespread.

experiential, and temporal valuation paradigms discussed earlier, in a sense there is an objective proportionality standard because at some distinct point along the continuum of proportionality, an attack becomes disproportionate. The standard could be heightened through adverbial supplementation, as in "military advantage must greatly outweigh" or "significantly outweigh" collateral damage and incidental injury. In an era of precision weaponry, one could argue that doing so would be reasonable.

¶73 The principle of distinction could also be enhanced objectively by expanding the universe of forbidden targets. This might be accomplished either by clarifying the generalized standard, as in expressly resolving the differences over the necessary nexus with military operations before civilians or non-military objects may be attacked in favor of immunity, or by creating additional prohibitions on certain targets, as was done in Protocol I with respect to dams, dikes, and nuclear electrical power generating stations.

¶74 Although some "haves" have resisted similar efforts (the United States, for example, opposes the limit on striking targets likely to release dangerous forces), as noted above, the "have-nots" are more likely to oppose raising objective standards because they then would be deprived of potential targets beyond the battlefield. The "have-nots" may well seek relaxation of the standards so as to secure greater opportunities to fight asymmetrically. From their perspective, the present objective standards disproportionately aid the "haves."

¶75 Of course, from a strictly humanitarian point of view, the issue of which side benefits from an enhanced norm is irrelevant so long as non-participants and their property are shielded from the conflict to a greater degree. That said, only humanitarian approaches that take the existence of inter-State competition into account can succeed. Can the humanitarian and political/military impulses be reconciled?

¶76 They can. Although it is not immediately self-evident, any approach that endeavors to lower the objective bar is short-sighted because the gains are minimal or non-existent. In fact, nearly universal agreement exists among military experts that harm to civilians or civilian property during an international armed conflict is usually counterproductive.¹¹⁰ It strengthens civilian and military resolve, in part by exacerbating negative images of the enemy. There is no evidence, for instance, that either the bombing of civilian targets by both sides or the use of indiscriminate weapons such as the V-2 during the Second World War yielded tangible returns.¹¹¹ Additionally, it may decrease domestic support for the conflict

110. As Adam Roberts has noted, "[t]here is a need to place more emphasis on the idea that this body of law is intensely practical—that it represents, at least in part, a set of professional military standards and bargains among States; that its origins are as much military as diplomatic; and that its implementation can have consequences which are for the most part compatible with the interests of those applying it." Adam Roberts, *Implementation of the Laws of War in Late-Twentieth-Century Conflicts*, in Schmitt & Green, *supra* note 15, at 359, 381.

111. On this issue, and aerial warfare generally, see the excellent article by Hays Parks, *The Protection of Civilians from Air Warfare*, 1997 ISRAEL Y.B. HUM. RTS. 65, 77-84.

(as in My Lai) and engender unfavorable international opinion (as did, for example, Iraqi hostage taking and environmental terrorism).

¶77 In fairness, it can be asserted that the counterproductive nature of attacks on civilians and civilian objects is "have" specific. The strategic calculus for a "have-not" State facing a "have" is arguably different, for the potential gains of attacking civilian institutions or individuals are greater. As demonstrated in Vietnam, developed nations have displayed a strong reluctance to continue military action if the conflict imposes a large burden on their civilian population, is taking place in a distant venue, and does not resonate strongly with the average citizen.

¶78 Recent history, however, suggests the futility of "have-not" attacks on civilians or civilian objects. The classic example (although not in the context of international armed conflict) of "have-nots" targeting "have" civilians in order to raise costs and force a change in policy is terrorism. Yet, terrorism usually results in abhorrence and a hardening of will by the target state.¹¹² Terrorism may draw the attention of the international community to an issue, but there is minimal evidence that it affects either the victim State or its population in a way useful to the terrorist. While it is true that in Vietnam and other such conflicts, public pressure in the United States to withdraw resulted from a sense that the population was bearing unnecessary burdens, the difference is that there the United States itself, and the policies it pursued, was seen as the cause of the hardship, rather than the enemy. Thus it is not the extent of the burden, but rather its perceived source, that is determinative. To the extent that "have-nots" attack "have" civilians, they will be correctly viewed as culpable, thereby causing any cost-benefit calculations on the part of the "haves" to be skewed accordingly.

¶79 A good example is an information warfare attack on a stock market. For obvious reasons, the more developed a State's economy, the greater impact a successful attack against its stock market (or one in which it is involved) would have. Seemingly, then, a stock market would present an attractive target to a "have-not" State frustrated on the battlefield. However, consider the cost-benefit calculus. The attack will have minimal immediate effect on the war-making capability of the target State. In fact, because it is primarily the civilian population and civilian infrastructure that will suffer, public opinion likely will turn against the source of their suffering, the attacker. Moreover, given globalization of the world's economies, an attack on any one stock market will have measurable reverberating effects internationally. This will hardly advance the "have-not" cause from the perspective of non-participants in the conflict (or even that of some supporters of the "have-not" effort). Clearly, in such a case, the costs far-outweigh the benefits (such as emboldening public opinion at home through a daring blow at one's enemy) of such an operation.

¶80 The harder question involves targeting objects or individuals with

112. Consider, for example, the U.S. response to the La Belle Disco bombing in Berlin in 1986, the crystallization of British attitudes towards the Northern Ireland issue following IRA bombings, or Israeli reaction to the Intifada.

shared civilian/military character, for by definition their destruction does yield some degree of military advantage. If "have-nots" gain nothing by lowering the objective bar to authorize attacks on civilians and civilian objects, might they nevertheless suffer if it is raised to protect targets which lie on the civilian-military margin? In many cases, they may not, for the prohibition that protects their enemy also protects them, and as a disadvantaged State they are unlikely to enjoy a redundancy of assets or productive capability equal to that of their opponent. Moreover, to the extent that such targets are less than obviously military in nature, their destruction will result in proportionally diminished returns with respect to the potential for prevailing in the conflict. For example, even assuming that Iraq set Kuwaiti oil wells ablaze and released oil into the Persian Gulf in order to foil coalition air and amphibious operations, the net effect on coalition combat operations was minimal. Thus, the "have-nots" should not exaggerate the benefits asymmetrical operations will yield them in the long term.

¶81 "Have-nots" must realize that the key is not the availability of targets to strike, but rather the net gain derived from their destruction. Arguably, there is little benefit to relaxing objective distinction standards, and probably less to fear in strengthening them than might appear at first glance. In fairness, these premises ring less true with regard to proportionality. Augmentation of the proportionality requirements might well limit "have-not" options, particularly given their relative disadvantage in the realm of precision weaponry. Nevertheless, the loss would be offset to some degree by the fact that as the weaker party to a conflict, military advantage calculations for a given operation are generally greater. Moreover, the international political capital acquired through avoidance of incidental injury and collateral damage is not insignificant. Simply put, despite the threat to objective discrimination standards present and future trends pose, upon deeper reflection neither "have" nor "have-not" States have much net incentive to dispense with or negatively adjust them.

¶82 Any "have" concern regarding the imposition of more stringent subjective discrimination requirements is similarly overstated. It is simply beyond credulity to suggest that the acceptability of striking a particular type of target or causing a certain amount of collateral damage or incidental injury might one day depend on the characteristics of the attacking State. On what basis would such distinctions be made: GNP? Population? Size of military? Technological prowess of the military? Of course, it is theoretically possible to assert that a powerful State should not be able to strike at the variety of targets its disadvantaged opponents can or that it should cause less collateral damage or incidental injury in pursuit of its military objectives. But even if one accepted such an equalizing approach despite its incongruency with existing humanitarian law purposes, given the complexity of their differences, there is no practical way to draw the necessary distinctions between States. Proportionality already accounts for contextual considerations in calculating military advantage; this is the best that can be expected in imposing "subjective"

discrimination standards.

¶83 An exception lies in application of the third component of discrimination, that requiring selection of the option causing the least collateral damage or incidental injury, all other things being equal. As noted, this standard is already subjective in a sense, for there is no equity clause in humanitarian law that allows a State chose a more destructive option if its opponent could do no better in conducting the same option. The real question is whether a State should be obligated to *create* options for itself by, for example, acquiring and fielding more precise, less destructive weaponry. No such obligation exists under current humanitarian law; one takes fielded militaries as one finds them.

¶84 Arguably, States should be willing to expend reasonable resources to acquire weaponry necessary to limit collateral damage and incidental injury. Since the goal is not equality between opposing sides, reasonableness should not be measured in terms of an opponent's efforts, but rather by a subjective standard based on one's own valid competing demands (such as well-being of the population). Further, "reasonableness" does not require the unreasonable; thus, "have" States should not fear the substantive effect of such a requirement. The problem resides, as it so often does, in the practicalities. By what standard should one measure reasonableness? How might a State evaluate the relative weight of a return on investment in primary education or elder care against collateral damage or incidental injury avoided due to employment of a precision munition? How would disparate valuation paradigms be addressed? Normative relativity in the fielding of military weaponry is a noble aspiration, but perhaps the issue is best left to the moral realm.

¶85 To summarize, while it is true that the principle of discrimination is at great risk from current and future trends in war and warfare, all is not lost. It is possible for States to be committed to the humanitarian ends of this body of law without severely disadvantaging themselves. Commitment depends on a State's ability to avoid opportunistic and reflexive reaction to change, and instead take a longer, more holistic, view of the principle of discrimination and how compliance or deviation therefrom will affect the State's *overall* objectives. There is little real long-term advantage to anyone in lowering the objective bar of discrimination, and the costs of raising it are in all probability less than most would initially anticipate. Unfortunately, although imposing heightened subjective standards on those capable of achieving them would also advance humanitarian results, the effort would pose great practical difficulties. Nevertheless, maximizing one's ability to avoid collateral damage and incidental injury represents an aspirational norm to which responsible and humane States should aspire.

V. FOSTERING HUMANITARIAN ENDS IN FUTURE WAR

¶86 While the purpose of this essay is to identify possible future fault lines in the application of the principle of discrimination, rather than to

suggest *lex ferenda* or new normative schema, several generalized thoughts on the subject can be offered to spark reflection and discourse. First and foremost, before the global community can hope to stop backsliding from current respect for humanitarian law norms, international implementation mechanisms must be improved. In other words, potential malfeasors have to believe that their violations of humanitarian law will come at a cost. If future war may increase the allure of violations, their cost must be raised to at least a corresponding degree. This requires international criminalization of undesirable conduct, impartial and credible fora in which to try offenders, comprehensive jurisdiction over offenses, and the means physically to bring offenders to trial.¹¹³

¶187 An International Criminal Court (ICC) holds the greatest promise for altering the cost-benefit analysis of potential violators. Though most responsible States agree on the need for such a judicial body, some of them maintain that the Court's Statute, adopted in July 1998, is dysfunctional. The objections are both substantive and procedural, and they have led the seminal player in the process, the United States, to reject the Statute.¹¹⁴ While this is not the place to debate the merits of the ICC Statute, there can be little doubt that the notion of a permanent tribunal to try war criminals is, *in abstracto*, a very positive one. There can also be little doubt that for such a tribunal to be maximally effective, U.S. participation is essential. This is especially true in light of the "haves/have-nots" dichotomy. Since the United States is the "have" State most likely to be involved in an asymmetrical conflict in which its opponents revert to tactics and strategies that challenge the principle of discrimination, its inclusion in the Court's implementation efforts is key. Without it, the Court is destined to be little more than a "permanent *ad hoc*" tribunal in the mold of those for the former Yugoslavia and Rwanda — useful, but limited in both reach and effect.

¶188 Strengthening the role of international organizations and coalitions of States in enforcing humanitarian standards may also serve to enhance implementation, and thereby create disincentives for normative regression. Inclusivity of enforcement efforts is a positive feature. To begin with, as a general rule, the more States that are engaged in an enforcement action, the greater the sanction available against the miscreant and the greater the deterrent effect. Of course, certain notable failures, such as UNOSOM or UNPROFOR,¹¹⁵ argue against broad international enforcement actions.

113. On jurisdiction, see Yoram Dinstein, *The Universality Principle and War Crimes*, in Schmitt & Green, *supra* note 15, at 17. On war crimes generally, see Theodor Meron, *War Crimes Law for the Late Twenty-First Century*, *in id.* at 325.

114. For a discussion of the U.S. rationale for opposition by the Ambassador who led the US Delegation, see David J. Scheffer, *The United States and the International Criminal Court*, 93 AM. J. INT'L L. 12 (1999). On the ICC more generally, see Mahnouch H. Arsanjani, *The Rome Statute of the International Criminal Court*, 93 AM. J. INT'L L. 22 (1999); Ved P. Nanda, *The Establishment of a Permanent International Criminal Court*, 20 HUM. RTS. Q. 413 (1998); and American Society of International Law, *Bibliography on International Criminal Court* (visited Apr. 15, 1999) <<http://www.asil.org/crmctbib.htm>>.

115. United Nations Operation in Somalia (I & II) and United Nations Protection Force. These operations are discussed in UNITED NATIONS, *THE BLUE HELMETS: A REVIEW OF UNITED NATIONS PEACE-KEEPING* 285-318, 511-42 (3d ed., 1996).

Nevertheless, while it may sometimes be militarily more sensible to send in forces with focused national identity who have trained and operated together in the past, it should not be forgotten that the mere existence of an international implementation effort, aside from the success thereof, has normative valence. Therefore, the greater the inclusivity of response to a violation of humanitarian principles, the less likely it is to be seen as prescriptively precedential. At least *from this vantage point*, UN or regional organization efforts to induce compliance should be favored over unilateral or limited multilateral operations.

¶89 Inclusivity is valuable beyond implementation. As noted above, disparity in military strength creates much of the potential dissonance surrounding the principle of discrimination. Standing alone, a State's relative military weakness vis-à-vis an opponent may drive it to extremes to which it would not otherwise resort. Inclusivity in the form of collective security regimes helps remedy this dynamic in two ways. First, it narrows the universe of likely opponents, particularly because security regimes tend to be regional in nature and one's natural enemies are often on one's borders. Intra-alliance conflict is simply far less likely to happen than extra-alliance hostilities. That Greece and Turkey have not gone to war against each other in the past fifty years is testament, for example, to the stabilizing influence of NATO membership. Moreover, alliance membership compensates for weaknesses of individual members. For example, knowledge that the United States can provide strategic and tactical airlift capability to its allies allows them to divert resources they would otherwise devote to acquiring mobility capability to technologies such as precision weaponry. In other words, alliance structures offer members synergy through task-based divisions of labor. This improves the military prowess of the membership as a whole, thereby helping alleviate any concerns members may harbor about raising the objective standards of humanitarian law, especially its discrimination component. Thus, to the extent politically and militarily feasible, and when the aims of the alliance are apolitical, alliance expansion, such as that underway in NATO, tends to be useful from the humanitarian perspective.

¶90 Arms control efforts also foster reassurance. To address the incentives described earlier with respect to the use of indiscriminate weapons, such efforts should concentrate on the weaponry to which States would likely resort if facing defeat at the hands of overwhelmingly superior foes.¹¹⁶ Nuclear, biological, and chemical (NBC) weapons are the most prominent examples. Consider the situation in Iraq. As empirically demonstrated in 1991, Saddam Hussein's chances of prevailing over a western coalition are minimal in the foreseeable future. However, his possession of NBC weapons would demonstrably alter the equation in his

116. One interesting proposal is that when the sales of arms "to relatively poor nations are unavoidable, international law should require the sellers to actually subsidize the price of sophisticated weaponry that can be used with greater likelihood of distinguishing between combatants and noncombatants." R. George Wright, *Noncombatant Immunity: A Case Study in the Relation Between International Law and Morality*, 67 NOTRE DAME L. REV. 335, 337 (1991).

favor. Therefore, the value of the UNSCOM effort to seek out and destroy Iraqi NBC capabilities extended beyond keeping Saddam Hussein too weak to viably threaten his neighbors; the indiscriminate nature of the weapons infused the effort with humanitarian import.¹¹⁷ An identical purpose underpins the need to support the inspection and verification efforts of the Organization for the Prohibition of Chemical Weapons¹¹⁸ in implementing the 1993 Chemical Weapons Treaty.

¶91 That said, arms control is not necessarily good in and of itself. It must emphasize those weapons which pose the greatest risks *in the context in which they operate*. The effort to have the International Court of Justice declare the use of nuclear weapons a violation of international law is an excellent example of this premise.¹¹⁹ Clearly, most uses of these weapons would be unlawful as either directly indiscriminate (as in counter-value targeting) or as violative of the principle of proportionality. However, when properly limited, they retain some utility. Reconsider Saddam Hussein's threats to use chemical and biological weapons in the Gulf War. But for possession of nuclear weapons, how could the coalition effectively have deterred his resort to them? Indeed, had he used them early in the war against Turkish, Arab, or Israeli population centers, the conflict might have taken a very different course. Would the fragile coalition have held together if Israel had entered the fray?¹²⁰ Would the Turkish government have permitted attacks on Iraq from Turkish bases in Operation Proven Force if the cities of Southeast Turkey had been placed at risk? Might the Arab States have been willing to accept the annexation of Kuwait into Iraq to stave off severe civilian casualties? These queries are not meant to suggest that the nuclear powers should retain their nuclear arsenal. Instead, the point is simpler—one must be careful what one wishes for. Banning or limiting weapons does not inevitably lead to either the protection of the civilian population or a ratcheting down of combat intensity. Each case must be evaluated in the global context in which it occurs.

117. United Nations Special Commission (UNSCOM).

118. Convention on Chemical Weapons, *supra* note 61, art VII. The OPCW maintains an informational website. See Organization for the Prohibition of Chemical Weapons, *The Chemical Weapons Convention Home Page* (visited Apr. 15, 1999) <<http://www.opcw.nl/pts.home.htm>>.

119. See generally Schmitt, *supra* note 6.

120. This point does illustrate one possible "valid" motivation for a "have-not" State to strike directly at enemy civilians or civilian objects. In the case of a coalition force consisting of "strange bedfellows," potential cracks in the coalition may be exploited by taking this tact. Saddam Hussein certainly tried this with his Scud attacks on Israeli population centers, and with some effect. Much of the U.S. air effort was redirected to finding mobile Scud launchers in the hope that they could be destroyed, thereby foreclosing the need for the Israelis to enter the fray. The immediate military benefit, however, of destroying the Scuds was minimal. Instead, it was a "political" operation, for had the Israelis attacked Iraqi forces, it was not certain that the coalition, which included opponents of Israel such as Syria, would have held together. That said, the circumstances under which such a scenario might recur are fairly unlikely, and certainly not sufficient alone to justify a "have-not" State in opting out of a more stringent humanitarian regime because of fear that it might lose a valuable option open to it when facing superior forces in the future.

¶92 Finally, discrimination can be fostered not only by controlling weapons, but also by limiting the universe of legal targets. For instance, there has been much debate over the past decade regarding whether the environment should be protected during armed conflict by a convention specifically addressing the topic. Similarly, as information operations increasingly dominate future war, calls for protecting civilians from their effects through the codification of use restrictions should be anticipated. As with arms control, the prospect that future war will strain the principle of discrimination constitutes ample reason to redouble efforts to codify (with high degrees of inclusivity) limits on what can be attacked in armed conflict. However, and again as with arms control, such limits are not inherently beneficial. To safeguard the environment at the expense of human protection does a disservice to the principle of discrimination. Similarly, to absolutely restrict strikes on particular information targets makes little sense if the only alternative to neutralizing their military value is conventional strikes against related facilities that, albeit proportional, cause greater civilian suffering. The point is that although codification can advance valid humanitarian ends, and should be pursued when it has that potential, any such effort must be evaluated in the greater scheme of things.

VI. CONCLUDING THOUGHTS

¶93 It is important to emphasize that the notional future posited in this essay is simply that — notional. However, it is a future that many see as plausible, even probable.¹²¹ Tomorrow's war may potentially place the principle of discrimination, which lies at the core of humanitarian law, under great stress. Sadly, it may lead some to adopt positions that challenge the very foundations of humanitarian law. One commentator has even suggested that

[i]nternational law in its present form shows more concern with antiquated concepts of chivalry among combatants than with the modern reality of mass destruction. The rules of war do not adequately reflect the reality of warfare between a third-world country and a superpower. Compliance with the rules of war is a prescription for disaster. This lesson was learned a long time ago in places such as Vietnam and Afghanistan. To assert that massive aerial bombardment—with its inevitable civilian casualties—complies with the international laws of warfare, but the reciprocal efforts by a third-world country to put civilian populations at risk violate international law reveals one's own political interests. One

121. As noted earlier, the future described is particularly dependent on official U.S. publications such as *Joint Vision 2010*, *supra* note 55; *National Security Strategy for a New Century*, *supra* note 58; *National Military Strategy*, *supra* note 58; and *Concept for Future Joint Operations*, *supra* note 44.

cannot take this position and realistically expect the international system to gain the respect of countries that are more likely to be the victims than the allies of great powers. . . . The international law that governs the conduct of war is ultimately a system designed to protect the self-interests of the more powerful states. Rules that do not treat all lives equally cannot, in the long run, support the international system.¹²²

¶94 The author has lost sight of the prize. Humanitarian law is designed to limit the reach and intensity of armed conflict, not to protect the interests of the "haves." Quite to the contrary, the major instruments of humanitarian law resulted from concern over the tragic humanitarian consequences of conflict between powerful States. The dilemma is that current trends may seem to require deviation from humanitarian norms if weaker States are viably to compete in international armed conflict. One would certainly hope that those who share humanitarian commitment would not advocate sacrificing the all-too-limited protection non-participants in armed conflict enjoy, merely to render war more equitable. They must not forget that war is a political decision for which the average citizen bears the burden, but not the responsibility.

¶95 The challenge for the future is to approach this dilemma with an appropriate cognitive perspective, one that comprehends and works towards the humanitarianism that underlies humanitarian law. Doing so will require a normative sophistication that all too often escapes both those focused on minutiae while insensitive to the ultimate aim of the law, and those who fail to grasp the fact that the idealism law represents must eventually play itself out in a real world. In order to continue to advance the aims of discrimination, it will be necessary to see both the forest *and* the trees. Whether the global community will have the maturity to master this challenge remains to be seen.

122. Paul W. Kahn, *Lessons for International Law from the Gulf War*, 45 STAN. L. REV. 425, 437 (1993). Note that to some extent his analysis mixes, compares, and contrasts *ad bellum* and *in bello* issues. This detracts from the persuasiveness of the argument.