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CLUSTER BOMBS OVER KOSOVO: A VIOLATION OF INTERNATIONAL LAW?

Thomas Michael McDonnell*

The day after NATO jets had dropped cluster bombs near the village of Doganovic in Kosovo, several boys were looking after their livestock in a nearby field. The boys, including the five Kodza brothers, ages 3 to 15, apparently found a dud American-made cluster bomb and began to play with it. The soda-can size bomb with a small parachute attached then exploded, killing all five Kodza brothers: Edon, Fisnik, Osman, Burim, and Valjdet. Two other boys were seriously injured.¹

"I have been an orthopedist for 15 years now, working in a crisis region where we often have injuries, but neither I nor my colleagues have ever seen such horrific wounds as those caused by cluster bombs.... The limbs are so crushed that the only remaining option is amputation," statement made by Dr. Rade Grbic, a surgeon and director of the main hospital in Pristina, capital of Kosovo, after saving the lives of two ethnic Albanian boys wounded when the other boys played with the cluster bomb.²

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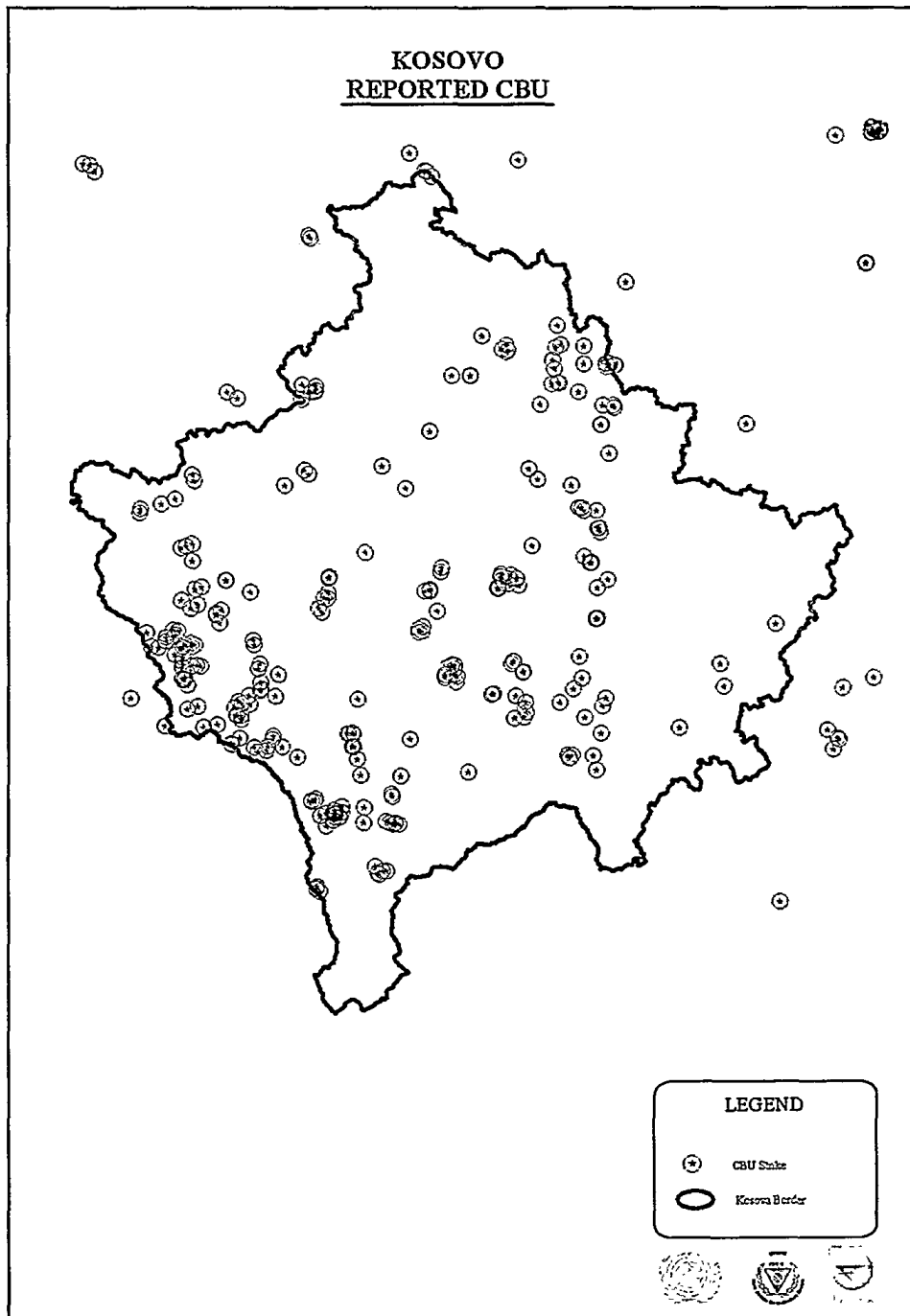
** The Kosovo Cluster Bomblet Threat Map on page 33 was produced by the United Nations Mine Action Coordination Centre and indicates the cluster bomblet threat before clearance efforts commenced. United Nations, *Kosovo Reported CBU Map*, available at <http://www.un.org/Depts/dpko/mine/macc/downloads/contamination/cbu.jpg> (last visited Mar. 21, 2002).

1. *Five Boys Reportedly Killed by NATO Cluster Bomb* (BBC television broadcast, Apr. 26, 1999).

2. Paul Watson, *Crisis in Yugoslavia, Dispatch from Kosovo; Unexploded Weapons Pose Deadly Threat on Ground Arms: Cluster Bombs Turn Part of Province into a No-Man's Land*, L.A. TIMES, Apr. 28, 1999, at A1.

TABLE OF CONTENTS

Introduction	34
I. The Cluster Bomb	41
A. The Nature of Cluster Bombs	43
1. An Exponentially More Powerful Fragmentation Bomb	44
2. Deadly Duds	51
II. Air Warfare, Advanced Conventional Weapons, and International Law	60
A. History	60
B. Cluster Bombs: A Weapon Causing Unnecessary and Superfluous Suffering?	66
III. The Cluster Bomb, NATO's Air Campaign, and a Treaty Attempting to Protect Civilians from Modern Land and Air Warfare	74
A. The 1977 Additional Protocol I to the Geneva Conventions of 1949	74
B. Whether Knowingly Delivering "Dud" Cluster Bombs Violates Additional Protocol I	79
1. An Indiscriminate Weapon?	79
2. A Weapon Unduly Endangering the Environment and the Health of the Population?	87
C. NATO's Response to the Dud Cluster Bomb Question	90
D. Whether Using Cluster Bombs to Bombard Large Areas Violates Additional Protocol I	93
E. Additional Protocol I and NATO's Air Campaign	98
F. United States, a Signatory, but Not a Party to the Protocol—Is the U.S. Nonetheless Bound Under a Territoriality Theory or Under Customary International Law?	103
IV. Cluster Bombs, War Crimes, and Reparation	108
A. Prosecution Under Additional Protocol I	108
B. Prosecution Under the Rome Statute of the International Criminal Court	112
C. Prosecution Under the International Criminal Tribunal for the Former Yugoslavia	115
D. NATO's Obligation to Make Reparation	118
V. Conclusion	123
A. Responding to Criticism	123
B. The Cluster Bomb and Humanitarian Intervention	125



INTRODUCTION

As the United States continues to fight a war against private terror organizations, we and our coalition partners must avoid resorting to terror ourselves, lest our moral and legal standing be undermined. Both in Afghanistan and in Kosovo, the United States employed a weapon that violates the spirit if not the letter of humanitarian law. That weapon, the cluster bomb, unduly endangers and terrorizes civilians. Although focusing primarily on NATO's use of this weapon in Serbia and its Kosovo province, the thesis of this Article also applies to the United States' employing cluster bombs in our war in Afghanistan, a war to defeat and capture those responsible for the September 11 attacks.³

Under international law, the premeditated killing of thousands of defenseless civilians on that date constituted a war crime, if committed by state sponsored agents, and a crime against humanity, if committed by a terror organization.⁴ The simultaneous destruction of civilian airliners and buildings are likewise international crimes.⁵ Americans and concerned people all over the globe were justifiably outraged by these perpetrators using civilian planes as weapons of mass destruction.

3. Because journalists were excluded by both sides from combat zones during the war in Afghanistan, reports about targeting, bombardments, and civilian casualties have been hard to verify, as of this writing. See Howard Kurtz, *War Coverage Takes a Negative Turn; Civilian Deaths, Military Errors Become Focus as Reporters Revisit Bombing Sites*, WASH. POST, Feb. 17, 2002, at A14. Although the Coalition attempted to limit civilian deaths, a Boston Globe investigation estimated that the Coalition caused at least 1,000 civilian casualties. See John Donnelly, *Civilian Toll in U.S. Raids Put at 1,000[;] Bombing Flaws, Manhunt Cited*, BOSTON GLOBE, Feb. 17, 2002, at A1; see also Dana Priest, *In War, Mud Huts and Hard Calls; As U.S. Teams Guided Pilots' Attacks, Civilian Presence Made Task Tougher*, WASH. POST, Feb. 20, 2002, at A01. But see Victor Davis Hanson, *Things Forgotten*, NAT'L REV., Feb. 19, 2002 (emphasizing the small number of civilian casualties caused by Coalition forces in the war in Afghanistan), available at LEXIS, News Library, National Review File. After September 11, Congress overwhelmingly passed a use of force resolution, authorizing the President to use "all necessary force" against any elements, foreign or domestic, "so long as he determines that they planned, authorized, committed or aided the September 11 attacks,...in order to prevent future attacks." Harold H. Koh, *Preserving American Values, The Challenge at Home and Abroad*, in THE AGE OF TERROR 145, 166 (Strobe Talbott & Nancy Chanda eds., 2002) (quoting S.J. Res. 23, 107th Cong. (2001)).

4. See Rome Statute of the International Criminal Court (ICC), July 17, 1998, arts. 7, 8, U.N. Doc. A/CONF.183/9, adopted by the U.N. Diplomatic Conference of Plenipotentiaries on the Establishment of an International Criminal Court, and by *Establishment of an International Criminal Court*, G.A. Res. 105, U.N. GAOR, 53d Sess., U.N. Doc. A/RES/53/105, available at <http://www.un.org/law/icc/statute/rome.htm> (last visited Mar. 19, 2001) [hereinafter Rome Statute].

5. See International Convention Against the Taking of Hostages, Dec. 17, 1979, 1316 U.N.T.S. 205, 245; Convention for the Suppression of Unlawful Acts Against the Safety of Civil Aviation (Sabotage), Jan. 26, 1973, art. 1, 24 U.S.T. 564.

Assuming that the Al Qaeda terror organization carried out these attacks,⁶ the United States is faced with a daunting military challenge, namely, fighting a largely unidentified enemy that operates stealthily around the world in possibly as many as sixty countries.⁷ Given the massive scale and the utter barbarity of the September 11 attacks, both the people and government of the United States naturally have demanded a forceful response. Under these circumstances, however, the United States and any other nation that together attempt to combat such an adversary run the risk of achieving a tactical success at the cost of a strategic failure. As Secretary of State Colin Powell said:

Respect for the *dignity and rights of the individual*, and the strengthening of democratic institutions lead to more stable nations and a more stable world where the seeds of terrorism cannot take root and cannot grow. The *rule of law*, anti-corruption efforts[,] and equal economic opportunity, give citizens confidence that they will be treated fairly, and receive justice.⁸

If, for example, the United States and other coalition countries kill significant numbers of innocent Muslim civilians or use indiscriminate weapons, we may be helping terrorism “take root” rather than weeding it out.

Only if the United States strictly adheres to the “rule of law,” to take, among other things, all reasonable steps to avoid civilian casualties and the destruction of civilian objects, will the military response aid in ending rather than inflaming terrorist movements.⁹ I argue here that our employing the cluster bomb in the former Yugoslavia and in Afghanistan will undercut respect for international humanitarian law and for the United States as a country that prides itself on its respect for the rule of law. Using such a weapon in Afghanistan and in other

6. See *Scenes of Rejoicing and Words of Strategy from Bin Laden and His Allies*, N.Y. TIMES, Dec. 14, 2001, at B4 (Osama Bin Laden implying on videotape that Al Qaeda planned the “martyrdom operation” to crash the airliners into the World Trade Center).

7. See Dan Balz & Bob Woodward, *America’s Chaotic Road to War: Bush’s Global Strategy Began to Take Shape in First Frantic Hours After Attack*, WASH. POST, Jan. 27, 2002, at A01.

8. Secretary of State Colin Powell, Remarks to the 9th OSCE Ministerial Council (Dec. 4, 2001), available at http://www.osce.org/events/mc/romania2001/documents/files/mc_1007631148_o.pdf (last visited Apr. 5, 2002) (emphasis added).

9. Violating other rules of humanitarian law, such as killing or mistreating Taliban or Al Qaeda prisoners of war, may provoke additional acts of terror. See Geneva Convention III Relative to the Treatment of Prisoners of War, Aug. 12, 1949, art. 13, 6 U.S.T. 3316, 75 U.N.T.S. 135 (“Any unlawful act or omission by the Detaining Power causing death or seriously endangering the health of a prisoner of war in its custody is prohibited, and will be regarded as a serious breach....”) (entered into force Oct. 21, 1950); Carlotta Gall, *A Nation Challenged: Prisoners, Witnesses Say Many Taliban Died in Custody*, N.Y. TIMES, Dec. 11, 2001, at A1 (reporting that dozens of Taliban prisoners of war were asphyxiated while being transported in shipping containers).

Muslim countries may thus foster rage and resentment that may help fuel rather than dampen terrorism.¹⁰

NATO's Intervention in Kosovo

Shortly after the North Atlantic Treaty Organization¹¹ began its bombing campaign of Serbia and Kosovo on March 24, 1999, the Milosevic regime, reminiscent of Nazi Germany, intensified the ethnic cleansing of Kosovo, forcibly removing about one-third of the Albanian-Kosovar population from their homes, killing hundreds, raping scores of Albanian-Kosovar women, pillaging and destroying Albanian-Kosovar homes, property, and cultural landmarks.¹² Although

10. See Koh, *supra* note 3, at 161.

11. North Atlantic Treaty, Apr. 4, 1949, 63 Stat. 2241, 34 U.N.T.S. 244 (entered into force Aug. 24, 1949).

12. See Charles Babington, *West to Bolster Balkans*, WASH. POST, July 31, 1999, at A15 (reporting that "almost 800,000" Kosovar Albanians fled the "Serb-led campaign of expulsion and terror that coincided with NATO's seventy-eight day bombing campaign"); Human Rights Watch, *Federal Republic of Yugoslavia; Kosovo: Human Rights Watch, Rape as a Weapon of "Ethnic Cleansing,"* ¶ 1 (2000) (also estimating that 800,000 ethnic Albanians were forced out of Kosovo), available at <http://www.hrw.org/reports/2000/fry/index.htm#TopOfPage>, Gender-based Violence Against Kosovar Albanian Women, Attacks in Flight (last visited Apr. 5, 2002) [hereinafter Human Rights Watch, *Rape as a Weapon*]. Apparently, the rapes were carried out by men belonging to paramilitary groups, by police, and by FRY soldiers. See Human Rights Watch, *Rape as a Weapon*, *supra*; see also Indictment of Slobodan Milosevic et al., ¶¶ 40, 90–100 (I.C.T.Y. 1999) (No. IT-99-37-I) (stating that over 740,000 Kosovo Albanians were expelled from Kosovo and charging Milosevic and his cohorts with war crimes and crimes against humanity), available at <http://www/un.org/icty/indictment/english/mil-ii990524e.htm>; Andrew Herscher & Andras Riedmayer, *Architectural Heritage in Kosovo: A Post-War Report* (Sept. 21, 2000), available at <http://palimpsest.stanford.edu/byform/mailling-lists/cdl/2000/1124.html> (last modified Jan. 13, 2001). Some commentators criticized NATO for failing to negotiate in good faith with Slobodan Milosevic. These commentators criticize NATO for giving Milosevic, before March 24, 1999, at Rambouillet, a "take it or leave it deal," which no leader could accept. See, e.g., HENRY KISSINGER, DOES AMERICA NEED A FOREIGN POLICY? 262 (2001); Noam Chomsky, *Kosovo Peace Accord*, Z MAG., July 1999, at 1, 7 (quoting Appendix B to the proposed Rambouillet agreement, "NATO personnel shall enjoy, together with their vehicles, vessels, aircraft, and equipment, free and unrestricted passage and unimpeded access throughout the [Federal Republic of Yugoslavia (FRY)] including associated airspace and territorial waters"). One prominent international law scholar concludes that NATO's ultimatum to Milosevic constituted a failure to attempt to solve the crisis diplomatically, "cast[ing] a dark shadow across the NATO initiative." Richard A. Falk, *Kosovo, World Order, and the Future of International Law*, 93 AM. J. INT'L L. 847, 855 (1999). Others point out that the alleged human rights abuses committed by Milosevic then did not rise to the level of gross or massive such as to justify the intervention. See, e.g., Jonathan I. Charney, *Anticipatory Humanitarian Intervention in Kosovo*, 32 VAND. J. TRANSNAT'L L. 1231, 1246 (1999) ("The extent of the human rights violations in Kosovo prior to the withdrawal of the OSCE's observer force was not massive and widespread."); Raju G.C. Thomas, *NATO and International Law*, JURIST, ¶ 27 (Apr. 26, 1999) (noting that prior to NATO's attack, the deaths of 2000 on all sides—one-third Serbian and two-thirds Albanian—and the "internal displacement of 300,000 people in Kosovo did not constitute genocide," justifying the intervention), available at

hardly on the scale of the Nazis (an estimated 10,500 Albanian-Kosovars were killed and well over a hundred Albanian-Kosovar women were raped¹³), that a European government¹⁴ could openly engage in such conduct outraged the West and hardened NATO's resolve.

Since Slobodan Milosevic's summary surrender to the Hague, the return of a democratically minded president to Yugoslavia, and the violent attacks by some Albanian-Kosovars against Serbian civilians, against Serb churches, and

<http://jurist.law.pitt.edu/thomas.htm>. But see, e.g., Julie Mertus, *Reconsidering the Legality of Humanitarian Intervention: Lessons from Kosovo*, 41 WM. & MARY L. REV. 1743, 1748 (2000) (arguing that the FRY's human rights violations in Kosovo had met this threshold, noting, among other things, that in 1998 because of FRY actions, approximately 300,000 Albanian-Kosovars fled their villages and hid in the hills); W. Michael Reisman, *Kosovo Antinomies*, 93 AM. J. INT'L L. 860, 861 (1999) (noting that "[f]ortunately, an event on the scale of the holocaust has not become the *minimum* requirement for the exercise of international concern"), available at <http://asil.org/kosovo.htm> (last visited Apr. 5, 2002) (emphasis in original); accord Antonio Cassese, *Ex iniuria ius oritur: Are We Moving Towards International Legitimation of Forcible Humanitarian Countermeasures in the World Community?*, 10 EUR. J. INT'L L. 23, 24 (1999).

13. See CENT. & E. EUR. LAW INITIATIVE ET AL., POLITICAL KILLINGS IN KOSOVA/KOSOVO, Mar.-June 1999, at 1 (2000) (statisticians estimate that 10,500 Kosovar Albanians were killed between March 20, 1999 and June 12, 1999), available at http://hrdata.aaas.org/kosovo/pk/p1_2 (last visited Apr. 2, 2002); Human Rights Watch, *Rape as a Weapon*, *supra* note 12, ¶ 4 (finding ninety-six cases of sexual assault by Yugoslav soldiers, Serbian police, or paramilitaries during the period of the NATO bombing and concluding that the actual number is "probably much higher"), available at <http://www.hrw.org/reports/2000/fry/index.htm#TopOfPage>, Gender-based Violence Against Kosovar Albanian Women, Rape and Other Forms of Sexual Violence as Weapons of Systematic "Ethnic Cleansing." But see Amended Indictment, Prosecutor v. Slobodan Milosevic, ¶ 24 (I.C.T.Y. 2001) (No. IT-99-37-I) (charging Slobodan Milosevic and his co-defendants for the murders of approximately 926 Albanian-Kosovars, including 300 who were allegedly missing; these murders were allegedly directly committed by Serbian and Yugoslav army, police, and paramilitary forces in Kosovo from January 1, 1999 through June 20, 1999), available at <http://www.un.org/icty/milosevic/mil-amindt.htm>.

14. Turkish authorities have engaged in major human rights abuses. See Amnesty Int'l, *Annual Report: Turkey*, ¶¶ 11-18 (1999), available at <http://www.amnesty.org/ailib/aireport/ar99/eur44.html> (last visited Apr. 5, 2002); Amnesty Int'l, 1996 U.N. Commission on Human Rights: *Amnesty International Calls on the Commission to Take Action on Human Rights Violations in China, Colombia, Indonesia and East Timor, Nigeria and Turkey*, ¶¶ 13-15 (1996) (noting the widespread practice of torture and disappearances in Turkey), available at <http://web.amnesty.org/802568F7005C4453/0/94BDDF5A5681D1802569000068A2A8?Open> (last visited Apr. 5, 2002); Human Rights Watch, *Europe and Central Asia Overview*, ¶¶ 30-31 (1999) (noting Turkish authorities denying Kurds basic cultural and political rights, subjecting Kurdish parties to police raids, and torturing suspects in custody), available at <http://www.hrw.org/wr2k/Eca.htm#TopOfPage> (last visited Apr. 5, 2002). Turkey may not be considered part of Western Europe in this sense. One could argue that the republics comprising the former Yugoslavia are not part of Europe either, but at the point where Asia and Europe meet. See ROBERT D. KAPLAN, *BALKAN GHOSTS* 7 (1994). Nonetheless, the proximity of the Yugoslavia crisis to Western Europe probably played a role in NATO's decision to intervene.

against the government of Macedonia,¹⁵ the black and white clarity of the war against Milosevic turned a bit gray. Yet Milosevic's campaign of killing, raping, and banishing Albanian-Kosovars justifiably received nearly universal condemnation.¹⁶ Many in the human rights community applauded NATO's intervention. Czech President Vaclav Havel, for example, stated that NATO "acted out of respect for human rights" and "in the name of principles and values."¹⁷

Unlike Russia in Chechnya¹⁸ or the United States in Vietnam,¹⁹ NATO commanders generally made a concerted effort to limit civilian casualties during

15. See Michael Evans, *NATO Bombs Still Killing Kosovans*, TIMES (London), Aug. 16, 1999, at 14, available at <http://www.Sunday-times.co.uk/news/pages/tim/99/08/16/timfgneur01005.html?999> (last visited Apr. 5, 2002); Carlotta Gall, *NATO Soldiers Fire on Kosovo Albanians*, N.Y. TIMES, Mar. 8, 2001, at A3 (reporting that NATO soldiers fired on Albanian gunmen to "stem the flow of arms and men to Albanian guerrillas in Macedonia"); *Macedonian Troops and Rebels Keep Battling*, N.Y. TIMES, May 27, 2001, at A4; Marlise Simons & Carlotta Gall, *Milosevic Is Given to U.N. for Trial in War-Crime Case*, N.Y. TIMES, June 29, 2001, at A1. But see Carlotta Gall, *A Dark Secret Comes to Light in Serbia*, N.Y. TIMES, June 1, 2001, at A10 (reporting that on April 9, 1999, a professional diver checked on a truck sunk in the Danube, which later was found to contain the bodies of eighty-six people, including children, presumably Albanian-Kosovars, killed as part of the ethnic cleansing campaign).

16. NATO's intervention can also be understood in terms of the historical context. Milosevic's regime played a central role in the ethnic cleansing of Bosnia. The Federal Republic of Yugoslavia's forces killing between forty to forty-five civilian Albanian-Kosovars in Racak in January 1999 was interpreted as a warning to the West of what Milosevic may have planned for Kosovo as a whole. See GEN. WESLEY K. CLARK, *WAGING MODERN WAR* 158-59 (2001); Falk, *supra* note 12, at 849 (characterizing pro-interventionist arguments as follows: "it was...reasonable in light of earlier Serb tactics in Bosnia, as epitomized by concentration camps, numerous massacres and crimes against humanity, and the brutal annihilation in 1996 of some seven thousand Bosnian Muslims sheltered by the UN safe haven of Srebrenica, that international action of significant magnitude was needed in short order if full-scale ethnic cleansing in Kosovo was to be avoided"). A Serb scholar has called for an investigation of apparent Serb crimes against humanity in Kosovo. See Konstantin Obradovic, *International Humanitarian Law and the Kosovo Crisis*, 839 INT'L REV. RED CROSS 699, ¶¶ 51-52 (2000), available at <http://www.icrc.org/ihceng.nsf/4dc394db5b54f3fa4125673900241f2f70ee91ba152ad1014125698a00315a07?OpenDocument> (last visited Apr. 5, 2002).

17. Robert Hayden, *Humanitarian Hypocrisy*, JURIST, ¶ 2 (1999) (quoting Vaclav Havel, *Kosovo and the End of the Nation State*, N.Y. REV., June 10, 1999, at 6), available at <http://jurist.law.pitt.edu/hayden.htm> (last visited Apr. 1, 2001). Elie Wiesel, noted Holocaust survivor, called the war "moral" and stated that "where evil shows its face, you must intervene." Richard B. Bilder, *Kosovo and the New Interventionism: Promise or Peril?*, 9 J. TRANSNAT'L L. & POL'Y 153, 153 (1999) (quoting David Rhode, *Wiesel, Man of Peace, Cites Need to Act*, N.Y. TIMES, June 2, 1999, at A15); see also Reisman, *supra* note 12, at 861.

18. See, e.g., AMNESTY INT'L, RUSSIAN FEDERATION: CHECHNYA FOR THE MOTHERLAND (1999) (documenting the targeting and killing of civilians in Grozny and elsewhere), available at <http://web.amnesty.org/802568F7005C4453/0/63F63639FCAF524E8025690000692D5E!Open> (last visited Apr. 5, 2002); Janine di Giovanni, *Battered Rebels Flee Ruined Grozny*, TIMES (London), Feb. 1, 2000, at 14 (describing the Russian bombardment of Grozny), available at 2000 WL 2863223; Human Rights Watch, *Russian*

the NATO intervention in Kosovo and Serbia.²⁰ This is not to suggest that NATO did all it could have done to avoid civilian casualties. NATO pilots flew at high

Atrocities in Chechnya Detailed (2000), available at <http://www.hrw.org/press/2000/06.chech0602.htm> (last visited Apr. 5, 2002).

19. See ERIC PROKOSCH, *THE TECHNOLOGY OF KILLING—A MILITARY AND POLITICAL HISTORY OF ANTI-PERSONNEL WEAPONS* 96 (1995) (concluding that the United States did not have a policy of indiscriminate bombing in Vietnam, but that the choice of munitions, broad discretion given to pilots concerning “targets of opportunity,” and inaccurate bombing led to high civilian casualties); JOSEPH M. SWEENEY ET AL., *THE INTERNATIONAL LEGAL SYSTEM* 700 (2d ed. 1981) (quoting *The Christmas Bombing*, N.Y. TIMES, Dec. 31, 1972, § 4.1 (magazine) (describing indiscriminate United States bombing of areas in then North Vietnam)). But see Burris Carnahan, *Linebacker II and Protocol I: The Convergence of Law and Professionalism*, 31 AM. U. L. REV. 861 (1981) (arguing that the U.S. bombing of Hanoi complied with Additional Protocol I); SWEENEY ET AL., *supra*, at 704 (quoting HENRY KISSINGER, *WHITE HOUSE YEARS* 1454, 1460 (1979) (citing Malcolm Browne for the proposition that “the damage caused by American bombing [of Hanoi] was grossly exaggerated”). For differing views of civilian casualties caused in Desert Storm, see MIDDLE E. WATCH, *NEEDLESS DEATHS IN THE GULF WAR: CIVILIAN CASUALTIES DURING THE AIR CAMPAIGN AND VIOLATIONS OF THE LAWS OF WAR* (1991); Anthony Chase, *Historical Reconstruction in Popular Legal and Political Culture*, 24 SETON HALL L. REV. 1969, 2012, 2013 (1994) (noting that seventy percent of the bombs dropped in Desert Storm missed their targets, which must have resulted in a considerable number of civilian casualties given that much of the conflict took place in populated areas). But see U.S. DEP’T OF DEF., *CONDUCT OF THE PERSIAN GULF CONFLICT, AN INTERIM REPORT TO CONGRESS* 12-2 to 12-3 (1991) (stating that Coalition forces selected munitions and aircraft to minimize civilian casualties: “[t]o the degree possible and consistent with risk to aircraft and aircrews, aircraft and munitions were carefully selected so that attacks on targets within populated areas that could prove the greatest degree of accuracy and the least risk to civilian objects and the civilian population”); Comdr. Charles A. Allen, Panel Discussion, *Implementing Limitations on the Use of Force: The Doctrine of Proportionality and Necessity*, 86 AM. SOC’Y INT’L L. PROC. 39, 65–66 (1992) (Panelist Fred Green noting that even if the Middle East Watch’s estimates of civilian casualties were correct, given “the amount of ordnance delivered, that level is itself prima facie evidence of a very discriminate air campaign”); Adrienne L. DeSaussure, *The Role of the Law of Armed Conflict in the Persian Gulf War, an Overview*, 1994 A.F. L. REV. 41, 48–58 (asserting that the Coalition, including the United States, strictly complied with humanitarian law during the conflict in contrast to Iraq’s repeated violations).

20. See Tim Ripley, *Kosovo: A Bomb Damage Assessment*, JANE’S INTELLIGENCE REV. 10, 10 (Sept. 1999) (“[T]he overwhelming majority of NATO air strikes were very accurate and almost all hit their intended aim points. Serb claims that the Albanian refugees were fleeing indiscriminate NATO bombing are palpably false.”), available at 1999 WL 8945937. NATO initially estimated that its actions caused no more than 1500 civilians’ deaths. Human Rights Watch concluded that about 500 civilians were actually killed by NATO warplanes. See Elizabeth Becker, *Rights Group Says NATO Killed 500 Civilians in Kosovo War*, N.Y. TIMES, Feb. 7, 2000, at A10; Human Rights Watch, *Civilian Deaths in the NATO Air Campaign*, ¶ 1 (2000), available at <http://www.hrw.org/reports/2000/nato/index.htm#TopOfPage>, The Civilian Deaths (last visited Apr. 5, 2002) [hereinafter Human Rights Watch, *Civilian Deaths*]. The Yugoslav government claims 1200 to 5700 civilian deaths. See Human Rights Watch, *Rape as a Weapon*, *supra* note 12, ¶ 3, available at <http://www.hrw.org/reports/2000/fry/index.htm#TopOfPage>, Summary; see also William M. Arkin, *Smart Bombs, Dumb Targeting?*, 56 BULL. ATOMIC SCIENTISTS 46, at ¶ 11

altitude, probably making it difficult to distinguish some civilians and civilian objects from legitimate targets.²¹ NATO planes also bombed a wide variety of targets, including bridges, electrical generating plants, oil refineries, and the like, which, though they may fit within the definition of “military objective,” are predominantly used by and for civilians.²² NATO, however, did far more than most armed forces do to avoid civilian casualties.²³

But NATO warplanes did employ the cluster bomb in this conflict. This Article contends that, even under NATO’s restrictive rules of engagement,²⁴ the cluster bomb not only poses special dangers for civilians, but also can terrorize them long after the fighting stops: all the more reason, therefore, that in the more

(2000), available at <http://www.thebulletin.org/issues/2000/mj00/mj00arkin.html> (last visited Apr. 5, 2002).

21. See *infra* notes 67–68 and accompanying text for a discussion of this issue.

22. See Obradovic, *supra* note 16 (arguing that Article 52(3) of Additional Protocol I to the Geneva Conventions of 1949 prohibited NATO’s destroying the bridge at Varvarin, because “it would be difficult to classify [the bridge]...as a military objective that had effectively contributed to the war effort of the Yugoslav army, nor did its destruction give NATO forces any ‘definite military advantage’”); see also Allen, *supra* note 19, at 42–43 (Panelist Frits Kalshoven discussing when a bridge is a legitimate military objective), 49–50 (Panelist Francoise J. Hampton discussing the proportionality principle and the conditions under which bridges in the Gulf War may be attacked). But see Allen, *supra* note 19 at 54–55 (Panelist Yoram Dinstein arguing that any bridge “spanning a great river like the Euphrates can be classified as a major artery of communication” and thus is a legitimate military objective); Arkin, *supra* note 20, at 46. William Arkin criticized NATO for adopting a mechanical approach to target selection rather than evaluating whether the target was actually contributing to the Yugoslav military effort. Arkin also criticized NATO for attacking the electric grid and for conducting so called “crony attacks,” attacks on the businesses of Milosevic’s “cronies” that had marginal value as purely military objectives. See Arkin, *supra* note 20, at 46.

23. See *supra* note 20. NATO, however, has been accused of committing a war crime in bombing Belgrade’s civilian television station. See AMNESTY INT’L, NATO/FEDERAL REPUBLIC OF YUGOSLAVIA “COLLATERAL DAMAGE” OR UNLAWFUL KILLINGS? VIOLATION OF THE LAWS OF WAR BY NATO DURING OPERATION ALLIED FORCE 46 (2000). But see FINAL REPORT TO THE PROSECUTOR BY THE COMMITTEE ESTABLISHED TO REVIEW THE NATO BOMBING CAMPAIGN AGAINST THE FEDERAL REPUBLIC OF YUGOSLAVIA, ¶ 56 (2000) (rejecting the argument that the station was a “civilian object” and concluding it was a legitimate “military objective”), available at <http://www.un.org/icty/pressreal/nato061300.htm> (visited Mar. 19, 2001) [hereinafter REPORT TO THE PROSECUTOR]; Human Rights Watch, *Civilian Deaths*, *supra* note 20, ¶ 1 (concluding that the bombing of the station was a violation of humanitarian law, but not a war crime), available at <http://www.hrw.org/reports/2000/nato/index.htm#TopOfPage>, International Humanitarian Law and Accountability.

24. “The rules of engagement from the very start were very strict: It was ordered that bombs would not be released on any target unless the pilot could confirm the target and be assured of no civilian casualties.” Lt. Comdr. Stuart Walter Belt, *Missiles Over Kosovo: Emergence, Lex Lata, of a Customary Norm Requiring the Use of Precision Munitions in Urban Areas*, 47 NAVAL L. REV. 115, 159 n.268 (2000) (quoting John Tirpak, *The First Six Weeks*, A.F. MAG., June 1999, at 27). This standard would, nonetheless, seem difficult to strictly carry out from 15,000 feet.

typical conflict when the parties care less about the plight of the civilian population, the cluster bomb puts civilians in extreme peril.

I. THE CLUSTER BOMB

Although never deployed after 1945, the threat of missile-delivered thermonuclear warheads held the world on edge throughout the cold war. Since the advent of nuclear weapons, however, the technology of so-called conventional weapons has advanced exponentially. In the last decade, the laser rifle capable of permanently blinding enemy soldiers has been introduced;²⁵ the general purpose bomb can now be delivered by global positioning satellite systems; and, during the Vietnam War, the anti-personnel cluster bomb was developed by the United States.²⁶ Testing proved this last weapon more effective than napalm.²⁷ "We thought," said a high ranking military officer about the deployment of cluster bombs in Vietnam, that "these weapons could give us a quantum leap on the enemy, but not break the unwritten rules [presumably against deploying nuclear weapons.]"²⁸ Wary of student protests over the use of napalm, the Air Force quietly introduced cluster bombs into the war.²⁹ Until NATO's intervention in Kosovo, the cluster bomb had largely escaped public scrutiny.

Cluster bombs endanger the civilian population in two principal ways. A cluster bomb consists of a great number of small, but extraordinarily powerful

25. See Victor W. Sidel, *The International Arms Trade and its Impact on Health*, 311 BRIT. MED. J. 1677, 1678 (1995) (noting China's sales of laser blinding rifles at recent arms marts), available at <http://bmj.com/cgi/content/full/311/7021/1677> (last visited Apr. 5, 2002).

26. See Michael Krepon, *Weapons Potentially Inhumane: The Case of Cluster Bombs*, in IV THE VIETNAM WAR AND INTERNATIONAL LAW, THE CONCLUDING PHASE 267-68 (Richard A. Falk ed., 1976).

27. See *id.* Note that laser-blinding weapons have been banned by international convention. See Protocol on Blinding Laser Weapons (Protocol IV), Additional Protocol to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects, Oct. 13, 1995, reprinted in 35 I.L.M. 1218 (1996), and in DOCUMENTS ON THE LAWS OF WAR, 143 (Adam Roberts & Richard Guelff eds., 1989) [hereinafter *Blinding Laser Weapons Protocol*]. Article 1 provides: "It is prohibited to employ laser weapons specifically designed to cause permanent blindness to unenhanced vision, that is to the naked eye or to the eye with corrective eyesight devices. The high Contracting Parties shall not transfer such weapons to any State or non-State entity." *Id.* arts. 1, 3. The Protocol, however, does not ban lasers from the battlefield nor ban the manufacture or stockpiling of laser weapons. See *id.* art. 3; W. Hays Parks, *Memorandum of Law: Travaux Préparatoires and Legal Analysis of Blinding Laser Weapons Protocol*, ARMY LAW., June 1997, at 33.

28. Krepon, *supra* note 26, at 269.

29. See *id.* at 271-72. The Joint Chiefs of Staff ordered in 1965 that "no publicity be given to this weapon." PROKOSCH, *supra* note 19, at 99 (citing KAHN, 531 n.5 (2d ed. 1987)).

bombs, contained within a large canister or dispenser.³⁰ The cluster bomb is an "area weapon," so called because a single dispenser can spread its cluster bombs over a huge area, from one to five football fields.³¹ Each of the small bombs contains over a hundred tiny pieces of shrapnel, which can cause physical injury at especially long distances.³² If dropped on a military target in a populated area, cluster bombs, because of their enormous footprint and because of each small bomb's terrific destructive power, almost certainly will kill, maim, or otherwise wound a large number of innocent civilians.

Secondly, five to thirty percent of the small cluster bombs are duds.³³ But they can remain dangerous years after launch; a slight vibration can detonate them. At least in some models, the passage of time makes the cluster bomb more dangerous, as the fuzing mechanism deteriorates.³⁴ Since the small cluster bombs often look like toys, children tend to pick them up, often resulting in death or amputation. The question here is whether the cluster bomb violates international law. Both the United States and Russia insist that these bombs do not.³⁵ This Article will examine that claim, focusing on the manner in which NATO used this weapon in the former Yugoslavia.

30. See Federation of American Scientists, *CBU-87*, ¶ 1, available at <http://www.fas.org/man/dod-101/sys/dumb/cbu-87.htm> (last visited Apr. 5, 2002) [hereinafter FAS, *CBU-87*].

31. See *infra* notes 56–65 and accompanying text for a more detailed discussion of this point.

32. See Virgil Wiebe, *Footprints of Death: Cluster Bombs as Indiscriminate Weapons Under International Humanitarian Law*, 22 MICH. J. INT'L L. 85, 89 (2000) (asserting that a CBU-87B submunition may shower shrapnel in an area out to a radius of up to 150 meters (492 ft.)). Precise distances are hard to verify, but the high initial velocity of the fragments suggests that a submunition may injure humans far away from the impact site. See *infra* note 55 and accompanying text.

33. See Paul Beaver, *Unexploded Ordnance Proves a Problem in Kosovo*, 3 JANE'S MISSILES & ROCKETS, Aug. 1, 1999, § 8, available at 1999 WL 7271366.

34. See RAE MCGRATH, U.K. WORKING GROUP ON LANDMINES, CLUSTER BOMBS 4, available at <http://www.landmineaction.org/clusterb.htm> (last visited Apr. 5, 2002).

35. "These weapons are not mines, are acceptable under the laws of armed conflict..." U.S. DEP'T OF DEF., REPORT TO CONGRESS: KOSOVO/OPERATION ALLIED FORCE AFTER-ACTION REPORT 90 (2000), available at <http://www.defenselink.mil/pubs/kaar02072000.pdf> [hereinafter AFTER-ACTION REPORT]. Furthermore, Maj. Gen. Charles Wald testified in a congressional hearing that cluster munitions are legal:

Have lawyers vetoed use of these—these military lawyers—have they vetoed occasionally the use of CBU-87s?

WALD: Never. It's not illegal. It's totally within the law of armed conflict, and it's legal in the international community to use that weapon.

TITUS PEACHEY & VIRGIL WIEBE, THE MENNONITE CENTRAL COMMITTEE CLUSTER BOMB REPORT 16 (2000) (quoting Pentagon Briefing on Operation Allied Forces (May 14, 1999) (statement of Maj. Gen. Charles Wald)); see also Pavel Baev, *West Can't Oppose War*, MOSCOW TIMES, Dec. 7, 1999 (responding to NATO criticism of Russia's use of cluster bombs in Chechnya), available at LEXIS, Nexis Library, Moscow Times File.

Part I of this Article will analyze the cluster bomb, with particular emphasis on the cluster bomb the United States primarily used in the conflict, namely, the Cluster Bomb Unit 87-B (CBU-87B). Part II of this Article discusses the history of the international law of air warfare and analyzes whether the cluster bomb is a weapon causing “unnecessary and superfluous suffering.” Part III analyzes the 1977 Additional Protocol I to the Geneva Conventions of 1949 and determines whether NATO’s employing cluster bombs in Serbia and Kosovo violated this Protocol. Part IV analyzes whether NATO member states should incur a duty to make reparations and whether members of NATO’s military forces have committed war crimes for using this weapon.

A. The Nature of Cluster Bombs

All bombs or warheads fall within three general classes: (1) the general purpose bomb; (2) the penetration bomb; and (3) the fragmentation bomb.³⁶ A bomb (warhead) consists of the following: (a) a casing, (b) an explosive fill, and (c) a fuze (arming and safety mechanism).³⁷ The general-purpose bomb has usually a one-half inch (1.27 cm.) casing; fifty percent of the bomb’s weight consists of the explosive fill. On exploding, the casing produces a fragmentation effect and the explosive fill produces a blast effect.³⁸ The penetration bomb typically has a much harder casing with a significantly lower percentage of its weight devoted to explosive fill.³⁹ A fragmentation bomb has a much lower ratio of weight of explosive fill to total weight. The casing of a fragmentation bomb is scored so that, upon impact, it will break up into numerous pieces of shrapnel that will fly at high velocities to kill or injure troops or to penetrate light armor. A hand grenade, for example, can be thought of as a primitive type of fragmentation bomb.

36. See Federation of American Scientists, *Bombs for Beginners*, ¶ 2, available at <http://www.fas.org/man/dod-101/sys/dumb/bombs.htm> (last visited Apr. 5, 2002) [hereinafter FAS, *Bombs for Beginners*].

37. See *id.*; see also ARTHUR BAMFORD HARTLEY, *THE UNEXPLODED BOMB* 9 (1958) (describing a conventional bomb as “a combination of the following parts: [1] a container or *bomb-case*, often referred to simply as *the case*; [2] a *fuze*; [3] an ‘initiating charge’ or *gaine*, with which is usually associated a secondary, or *booster*, charge often referred to (from its composition) as *the picrics*; [4] the main charge or *main filling* (usually high explosive); [5] superstructure fittings—fins, lifting-lugs, *kopfrings*, etc”) (emphasis added); Greg Gobel, *Dumb Bombs*, at 2, available at <http://vectorsite.tripod.com/avbomb0.html> (last visited Apr. 5, 2002); U.S. Navy, *Warhead Primer* (describing the elements of a warhead as follows: fuze (including the safety and arming devices); explosive fill; warhead case), available at <http://www.ih.navy.mil> (last visited Apr. 5, 2002).

38. See FAS, *Bombs for Beginners*, *supra* note 36, at Damage Mechanisms, ¶¶ 11–12, available at <http://www.fas.org/man/dod-101/sys/dumb/bombs.htm>.

39. See *id.*

1. An Exponentially More Powerful Fragmentation Bomb

Unlike the general-purpose bomb or the penetration bomb, a cluster bomb contains smaller bombs inside. It is a highly developed fragmentation bomb.⁴⁰ Essentially, each cluster bomb consists of a large canister, the dispenser, which holds anywhere from 10 to 500 small fragmentation bombs (submunitions), euphemistically called “bomblets.”⁴¹ When dropped from an aircraft, the dispenser of the cluster bomb hurtles to earth, but, well before making impact,⁴² releases the small bomblets. The dispenser is designed to spin so on dispersal it spreads the bomblets over a large area.⁴³

40. The submunitions within the cluster bomb do not have to be fragmentation bombs. Note the CBU-97, a cluster bomb containing an anti-tank submunition whose primary role is penetrating tanks and other armored vehicles. *See also* Glenn W. Goodman, Jr., *Highly Effective New US Smart Submunitions Promise To Be True Force Multipliers*, ARMED FORCES J. INT’L L., Aug. 2000, at 20–23 (analyzing the advantages of the CBU-97). Nevertheless, cluster bombs originated as fragmentation weapons and the greatest danger they pose to the civilian population is as a fragmentation weapon. *But see Conflict in the Balkans; Balkans Notebook; Cluster Bombs Killed Refugees*, ATLANTA J. & CONST., Apr. 18, 1999, at 16A (noting that NATO may have mistakenly dropped CBU-97 anti-tank heat seeking submunitions on a column of refugees; the submunitions apparently cannot tell a tractor from a tank), *available at* 1999 WL 3763859. NATO, however, denied ever using cluster bombs against the refugee column. *See NATO Press Conference*, Apr. 19, 1999 (statement of Brigadier General Daniel R. Leaf), *available at* <http://www.nato.int/docu/speech/1999/s990419b.htm>. That UXO clearance crews have not found CBU-97 remnants or duds supports NATO’s denial. Unless otherwise indicated, *cluster bombs as used in this Article refer to cluster bombs containing fragmentation submunitions*.

41. *See* PROKOSCH, *supra* note 19, at 105–06 (noting that the manufacturer of cluster bombs and the military chose bland language in naming the components of the cluster bombs in contrast to the colorful language chosen to name other types of weapon systems and providing an excellent discussion of cluster bombs, generally).

42. The canister of the CBU-87 can release its bomblets at an altitude from 300 to 3000 feet. Capt. Kelly Leggett, *The Air Force’s New Cluster Weapon—The Combined Effects Munition*, USAF FIGHTER WEAPONS REV., Spring 1988, at 25.

43. The Air Force’s Air University defines cluster bombs as follows:

Cluster munitions (CBUs) fall into the dumb bomb or unguided category with the exception of sensor-fuzed weapons. CBU’s combine dispensers, fuzes, and submunitions into a single weapon with a specialized or general-purpose mission. Once released, CBUs fall for a specified amount of time or distance before their dispensers open, allowing the submunitions to effectively cover a wide area target. The submunitions are activated by an internal fuze and can detonate above ground, at impact, or in a delayed mode.

Air University, *Cluster Bomb List*, ¶ 2 (1996), *available at* <http://www.au.af.mil/au/database/projects/ay1996/acsc/96-004/hardware/docs/cluster.htm> (last visited Apr. 5, 2002) [hereinafter *Cluster Bomb List*].

The cluster bomb favored by the United States Air Force in Kosovo, the CBU-87B, contains 202 bomblets.⁴⁴ The CBU-87B weighs 1000 pounds (455 kilos). It consists of the following two parts: (1) a dispenser nearly 8 feet long and 15 1/2 inches (2.44 m. x .39 m.) in diameter, technically called the SUU-65 Tactical Munitions Dispenser (TMD), containing 202 "bomblets," and (2) the warhead consisting of bomblets or submunitions themselves, technically termed, Bomb Live Unit 97/B (BLU-97/B).⁴⁵ Each bomblet is about the size of a soda can, 7" by 2.5" (17.8 cm. x 6.4 cm.), weighs 3.41 pounds (1.55 k.), and is painted yellow with a red stripe. Upon release by the canister (dispenser), each bomblet opens a small parachute (a ballute) that arms the bomblet, slows its descent, and properly orients it.⁴⁶ The spin rate of the dispenser and the altitude at which it releases the bomblets can be adjusted to enlarge or contract the area covered.⁴⁷ An optional Doppler radar device helps insure the altitude of release.⁴⁸ The bomblets "are usually designed to explode on impact, just before impact, or a short time after impact."⁴⁹ The container (casing) of each bomblet is scored so as to produce over 300 shards of shrapnel.⁵⁰ Although cluster bombs originated as an antipersonnel weapon, the BLU-97 also serves as an anti-armor weapon and an incendiary bomb: Each of the BLU-97/B submunitions possesses a zirconium ring to start fires and a shaped charge to penetrate up to seven inches (17.8 cm.) of armor. The lethal power of the BLU-97 has been described as follows:

The warhead characteristics of the Combined Effects Bomblet (CEB) are...far superior to those of its predecessors. Its greater explosive weight (0.65 pounds), larger cone diameter (2.35 inches), greater cone angle (70 degrees) and top-attack orientation provide extremely lethal armor penetration and after armor effect. Its controlled fragments (308 thirty-grain) *maintain lethality at great*

44. Technically, the version used in Kosovo and Serbia was the CBU-87B/B: "[T]he CBU-87B/B is identical to the CBU-87/B, except the CBU-87B/B's submunitions have an all-mechanical secondary detonator instead of the piezoelectric detonator." Capt. Ronald P. Morrell, *Employing CBU-87s in the B-1*, USAF FIGHTER WEAPONS REV., Winter 1996, at 12. Since most of the literature refers to this weapon as the CBU-87/B, this Article will use that description as well to avoid confusion.

45. Note, technically, the bomblet in use during the Kosovo/Serbia conflict was denominated the "BLU-97 A/B," because it used a different secondary detonator as set forth in the previous note. See Morrell, *supra* note 44, at 13. For simplicity, this Article will refer to this submunition as the "BLU-97." See also PEACHEY & WIEBE, *supra* note 35, at 9.

46. See Leggette, *supra* note 42, at 27.

47. See *infra* note 57 for a discussion of spin rate.

48. See Leggette, *supra* note 42, at 25 ("An optional FZU-39/B doppler radar sensor may be attached and allows dispenser functioning at preselected heights of burst (HOB) ranging from 300 to 3,000 feet above ground level.").

49. Virgil Wiebe & Titus Peachey, *Drop Today, Kill Tomorrow, Cluster Munitions as Inhumane and Indiscriminate Weapons*, at 2 (1997) (Mennonite Central Committee 1997), available at http://www.mcc.org/clusterbomb/drop_today/ (last visited Apr. 5, 2002).

50. See Edmond Dantes, *CBU-87 Combined Effects Munition: The Pilot's Weapon of Choice*, ASIAN DEF. J., Mar. 1991, at 78.

distances and will defeat the majority of targets found on today's battlefield. In addition the CEMs have shown dramatic performance against trucks, aircraft, radar installations, and surface ship communications and deck equipment, which is far superior to any other area weapon.⁵¹

A single BLU-97 bomblet can cause serious injury over long distances. "The 1988 CEM Test and Evaluation report by the USAF Tactical Fighter Weapons Center determined a pattern density of *two* bomblets per 1000 square feet (304.9 sq. m.) provided significant damage from fragmentation to *soft targets*."⁵² Another test showed the lethal effect over a 1000 square foot area of roughly nine bomblets:

Significant damage to an armored target, such as an APC or a tank, requires a direct hit by shaped charges. A pattern density of 8.8 submunitions per 1,000 square feet (304.9 sq. m.) resulted in an eighty-five percent probability of hit (P_h) [presumably by the shaped charge⁵³] against a randomly placed 200 square foot vehicle.⁵⁴

The submunition can cause serious injuries over long distances because of the extreme velocity each of its more than 300 pieces of shrapnel attains:

An automatic rifle bullet has a starting speed of 750 meters per second, while the explosive charges within cluster bombs have a starting speed of 2,500 meters per second. When reaching...a [human target], the combination of kinetic energy and explosive power makes a wound thirty times larger than the projectile itself.⁵⁵

51. *Id.* at 80 (emphasis added). Cluster bombs in Desert Storm, however, often did not destroy individual artillery pieces, "but rather [they] were knocked out *because of effects on* ammunition stores and *crews*." Donald R. Kennedy & William L. Kincheloe, *Steel Rain: Submunitions in the Desert*, ARMY LAW., Jan. 1993, at 24, 26 (emphasis added); see also Leggette, *supra* note 42, at 27 (describing the BLU-97B bomblet, including its fragmentation, incendiary, and armor penetrating characteristics).

52. Capt. Robert G. Vallin, *How to Effectively and Efficiently Employ the CBU-87 with the F-16C*, USAF FIGHTER WEAPONS REV., Spring 1981, at 2 (emphasis added).

53. Recall that there are 308 pieces of shrapnel per bomblet, but only one shaped charge. See, e.g., Dantes, *supra* note 50.

54. Morrell, *supra* note 44, at 13.

55. Vesna Peric-Zimonjic, *NATO Cluster Bombs Spray Death*, INTER PRESS SERVICE, May 14, 1999, available at LEXIS, Nexis Library, Inter Press Service File, May 14, 1999 (citing an unnamed military source); see also Human Rights Watch, *Ticking Time Bombs*, ¶ 4 (1999) ("If the bomblet has been properly oriented, the downward-firing charge travels at 2,570 feet per second upon detonation."), available at <http://www.hrw.org/reports/1999/nato2/nato995-02.htm> (last visited Apr. 5, 2002); cf. R.G. LEE ET AL., GUIDED WEAPONS 171 (3d ed. 1998) ("On detonation, the fragments [of fragmentation warheads] are propelled outwards at velocities of 2000 to 4000 metres per second.").

Containing 202 BLU-97 bomblets producing over 55,000 pieces of shrapnel,⁵⁶ a single CBU-87B may, depending on various factors, cover as large an area as 800 ft. by 400 ft. (244 m. x 122 m.) or approximately *five and one-half football fields*.⁵⁷ Usually several CBU-87Bs are dropped at once.⁵⁸ The B-1 Bomber as well as the B-52 can carry thirty CBU-87Bs; the B-2 Bomber can carry thirty-six.⁵⁹ These can be dropped close together or some distance apart to create a

56. The 55,000 figure assumes a dud rate of ten percent. If the dud rate were only five percent as the manufacturers claim, the number of fragments increases to over 59,000. See *infra* notes 75–110 and accompanying text for a detailed discussion of dud cluster bomb submunitions.

57. See *Cluster Bomb List*, *supra* note 43, ¶ 7, available at <http://www.au.af.mil/au/database/projects/ay1996/acsc/96-004/hardware/docs/cluster.htm>. The exact size of the footprint made by the CBU-87/B can vary, depending on “altitude from which the dispenser is dropped, altitude at which the dispenser opens, the dispenser spin rate, wind, and the slope of the ground on which the bomblets fall.” PEACHEY & WIEBE, *supra* note 35, at 12–13 (quoting rates of 400 feet by 800 ft. (244 m. by 130 m.) medium to high altitude delivery according to William Arkin, that is, 5.5 football fields; 295 feet by 361 feet (90 meters by 110 meters), or 1.8 football fields, according to the *Asian Defence Journal*).

Spin rate affects the size of the footprint. A low spin rate of 500 rpm “creates a pattern of bomblets making impact roughly three meters apart. A high spin rate of 2500 rpm scatters the bomblets roughly six meters apart on impact.” *Id.* at 12 n.43; see also Leggette, *supra* note 42, at 25 (stating that the spin rate settings “allow[] a range of impact patterns from 70 by 70 feet [21 m. by 21 m.] (less than one-tenth a football field) to 450 by 150 feet [137 m. by 46 m.] (slightly more than one football field)). Spin rates lower than 1000 are considered too dense. See Vallin, *supra* note 52, at 3. For maximum effectiveness, a spin rate of 2000 is generally recommended. See Capt. Bruce West, *Employment of the B-1 and CBU-87*, USAF FIGHTER WEAPONS REV., Summer 1994, at 2, 4; see also Morrell, *supra* note 44, at 14. Captain West also observes that “the approved spin rates for the CEM [Combined Effects Munitions such as the BLU-97] are setting 3 (1000 revolutions per minute (rpm)) and setting 5 (2000 rpm).” See Morell, *supra* note 44, at 13. But see Vallin, *supra* note 52, at 5–6 (recommending 2000 spin rate against a variety of targets, but 1500 against principally armor).

Peachey and Wiebe note that some of the discrepancy in the size of the footprint may arise from how a footprint is defined. Some may be referring to the “main impact area” of the bomblets, omitting those bomblets straying from the main impact area. PEACHEY & WIEBE, *supra* note 35, at 13. Furthermore each bomblet propels shrapnel “long distances” possibly being able to cause injury 500 feet (152 m.) from the point of impact. See FAS, *CBU-87*, *supra* note 30, ¶ 1, available at <http://www.fas.org/man/dod-101/sys/dumb/cbu-87.htm> (last visited Apr. 5, 2002) (“The footprint for the CBU-87 is approximately 200 meters by 400 meters” [656 ft. by 1312 ft.] or approximately 14.9 football fields.); see also Human Rights Watch, *NATO’s Use of Cluster Munitions in Yugoslavia* (1999), available at <http://www.hrw.org/background/arms/clus0511.htm> (last visited Apr. 5, 2002).

58. See Dantes, *supra* note 50, at 80; see also PEACHEY & WIEBE, *supra* note 35, at 14 (noting that NATO dropped up to twenty cluster bomb dispensers on a park “just on the outskirts of Pristina,” the administrative capital of Kosovo); Wiebe, *supra*, note 32, at 110 (noting that in 1999 clearance crews in the village of Musa, Kosovo discovered at least five cluster bomb footprints where NATO had targeted Serb anti-aircraft positions).

59. See Federation of American Scientists, *B-52*, at Specifications (2000), available at <http://www.fas.org/nuke/guide/usa/bomber/b-52.htm> (last visited Apr. 5, 2002);

larger footprint.⁶⁰ For example, six of an F-15E fighter's load of twelve CBU-87Bs⁶¹ can be set (1) to create "salvo" fire, making a footprint from nearly two to nearly seven and one half football fields⁶² (concentrating the six CBUs on a single spot), or (2) to create "ripple" fire making a footprint from nearly four football fields to more than eleven football fields (essentially dropping the six cluster bombs end-to-end in a straight row).⁶³ Bomb and mine clearance crews in Kosovo note that the footprint CBU-87Bs create is typically a square kilometer (.62 sq. mile), or *nearly nineteen football fields*.⁶⁴ Furthermore, the cluster bomb can cause injury far beyond its actual footprint.⁶⁵

Unlike earlier cluster bombs, the CBU-87B can be dropped from as high as 40,000 feet (12,195 m.).⁶⁶ In the Serbia/Kosovo conflict, the bombers generally flew at altitudes of 15,000 feet (4,573 m.) or above to avoid the Serb anti-aircraft batteries.⁶⁷ Although the bombs can also be delivered by missiles, rockets, or

see also FAS, *CBU-87B*, *supra* note 57, at Specifications (noting that the F-4 carries six CBU-87Bs; the F-16, the A-7 and the A10 carry four; and the F-111 carries eight CBU-87s). Apparently, a B-52 attack with cluster bombs cost the Serbs the most casualties in a single engagement in the conflict. See Charles Bremner, *B-52 Raid "Killed Several Hundred Serbs,"* TIMES (London), June 10, 1999 (fewer than half the 800 to 1200 Serb troops are believed to have survived the cluster bomb attack by the B-52 bomber); William Drozdiak, *War in the Balkans/Hundreds of Serb Troops Die in Air Raid*, HOUS. CHRON., June 9, 1999, at 24 (same).

60. See Morrell, *supra* note 44, at 12. Capt. Morrell illustrates his points with a table, indicating the pattern length, pattern width, and density of cluster bombs when, from the B-1 Bomber, *ten* are dropped at a time, when *twenty* are dropped at a time, or when *thirty* are dropped at a time. See *id.* at 15.

61. See Federation of American Scientists, *The F-15 Eagle*, at Specifications (2000), available at <http://www.fas.org/man/dod-101/sys/ac/f-15.htm> (last visited Apr. 5, 2002).

62. Such a footprint would range from 328 to 656 square foot area (100 by 200-sq. m. area). See Dantes, *supra* note 50, at 79.

63. Such a footprint would range from 656 ft. by 328 ft. (200 m. by 100 m.) to 1,968 ft. by 328 ft. (600 m. by 100 m.). See Dantes, *supra* note 50, at 79; see also Leggette, *supra* note 42, at 25.

64. See PEACHEY & WIEBE, *supra* note 35, at 14.

65. See *id.* at 13 (quoting Human Rights Watch Project, *U.S. Cluster Bombs for Turkey*, ¶ 52 (1994), available at <http://www.hrw.org/reports/1994/turkey2/> (last visited Apr. 5, 2002), for the proposition that shrapnel from cluster bombs can injure human beings as much as 500 ft. away). "Thus, anyone within a long distance from the perimeter created by the bomblets in a cluster strike could potentially be hit by flying shrapnel. While a typical footprint for a CBU-87 strike may be 200 by 400 meters [656 ft. by 1312 ft.] (14.9 football fields), the area in which people would risk injury during the strike would be closer to 350 by 550 meters [1148 ft. by 1804 ft.] (almost 36 football fields)." *Id.* at 14.

66. See Dantes, *supra* note 50, at 78.

67. NATO prohibited military aircraft from flying below 15,000 ft. because they did not know the numbers of anti-aircraft missiles that the Serbs had. See Nick Cook, *War of Extremes*, JANE'S DEF. WEEKLY, July 7, 1999, ¶ 14, available at 1999 WL 7271279; John A. Tirpak, *Washington Watch*, A.F. MAG., May 5, 1999, ¶ 44, available at <http://www.afa.org/magazine/watch/0699watch.html>; see also CLARK, *supra* note 16, at 276 (stating that NATO had set up a system "to enable our aircraft to descend well below

artillery, they were delivered only by aircraft in Yugoslavia.⁶⁸ Dropping the bombs from great altitude, however, increases the risk of missing the target. In Desert Storm, for example, "bombing from medium or high altitudes had a significant impact on both cluster bomb accuracy and reliability. Not only was there a greater dispersal pattern for the submunitions than was intended with low altitude delivery, but pilots were outside the range needed to make sighting correction or assess damage."⁶⁹ The evidence is unclear whether flying at 15,000 feet or higher during the Kosovo conflict endangered civilians. Since, however, "pilots' ability to properly identify...mobile targets was so important to avoid civilian casualties,...[the] civilian deaths raise the question[] whether...flying at high altitudes may have contributed to these civilian deaths by precluding proper target identification."⁷⁰

15,000 feet, if necessary to identify targets on the ground, but the pilots reported that they were usually more effective using high powered binoculars and orbiting well above antiaircraft machine gun altitudes").

68. See *NATO's Use of Cluster Munitions in Yugoslavia*, *supra* note 57, ¶ 2, available at <http://www.hrw.org/background/arms/clus0511.htm>.

69. *Id.* ¶ 12. "The 15,000-foot rule effectively made it impossible for NATO aircrews to respect the fundamental rule of distinguishing between military objectives and civilians or civilian objects." AMNESTY INT'L, *supra* note 23, at 37. The report quoted Brigadier General Leaf: "[I]t appears [from the videos of the attack] possible the vehicles are tractor type vehicles. As I reviewed the tapes with the pilots, they agreed. However, they were emphatic *from the attack altitude* to the naked eye, they appeared to be military vehicles...." (emphasis in original). *Id.* at 37 (quoting Brigadier General Leaf during the April 19 press briefing). The report also quotes General Michael Short on the pilots' reactions to the Djakovica bombings:

[T]hey came back to me and said, '[w]e need to let the forward air controllers go down to 5,000 feet. We need to let the strikers go down as low as 8,000 feet and in a diving delivery to ensure that they verify their target, and then right back up again to 15,000 feet. We think that will get it done. We acknowledge that that increased the risk significantly, but none of us want to hit a tractor full of refugees again. We can't stand that.'

Id. (quoting General Michael Short in a BBC television documentary); see also CLARK, *supra* note 16, at 115 (stating that he was assured that the pilots could hit their targets from this altitude and that "the political impact of aircraft losses would still outweigh any potential benefits of a few Serb vehicles hit").

70. Human Rights Watch, *Civilian Deaths*, *supra* note 20, ¶ 6, available at <http://www.hrw.org/reports/2000/nato/index.htm#TopOfPage>, The Civilian Deaths; see also *infra* note 257 and accompanying text. But see REPORT TO THE PROSECUTOR, *supra* note 23, available at <http://www.un.org/icty/pressreal/nato061300.htm>. The report concluded that despite the high altitude, NATO pilots apparently hit their targets "in the vast majority of cases":

The committee agrees there is nothing inherently unlawful about flying above the height which can be reached by enemy air defenses. However, NATO air commanders have a duty to take practicable measures to distinguish military objectives from civilians or civilian objectives. The 15,000 feet minimum altitude adopted for part of the campaign may have meant the target could not be verified with the naked eye.

Cluster bombs used in Serbia and the Kosovo Province are both sophisticated and dumb. It is a sophisticated weapon in the sense that the designers have taken the simple concept of a hand-grenade and in a single bomb have created a weapon thousands of times more powerful. Except for nuclear weapons, biological weapons, and poison gas, the cluster bomb is perhaps more dangerous to civilians than any other weapon in modern warfare.⁷¹ It is also sophisticated given its several components: dispensers that can be set at various rates of spin and programmed to release at a designated altitude, submunitions with high tech arming mechanisms, secondary fuzes, and ballutes. It is dumb in the sense that the submunitions or bomblets used in the former Yugoslavia could not be aimed at a target independently.⁷² Given the huge area that a single bomb can cover, these weapons pose enormous risks to noncombatants, men, women, and children, who happen to be unlucky enough to fall within the trajectory of the over 55,000 pieces of shrapnel of the two hundred or more bomblets that a single cluster bomb releases.⁷³ "Because of the high velocity of the fragments and the uniformity of

However, it appears that with the use of modern technology, the obligation to distinguish was effectively carried out in the vast majority of cases during the bombing campaign.

Id. ¶ 56. *Compare* INT'L COMM. OF THE RED CROSS, COMMENTARY ON THE ADDITIONAL PROTOCOLS OF 8 JUNE 1977 TO THE GENEVA CONVENTIONS OF 12 AUGUST 1949 (Yves Sandoz, et al. eds., 1987) [hereinafter ICRC COMMENTARY]:

It is principally by visual means—in particular, by means of aerial observation—that an attacker will find out that an intended objective is not a military objective, or that it is an object entitled to special protection. Thus, to take a simple example, an airman who has received the order to machine-gun troops traveling along a road, and who finds only children going to school, must abstain from attack. However, with the increased range of weapons, particularly in military operations on land, it may happen that the attacker has no direct view of the objective, either because it is very far away or because the attack takes place at night. *In this case, even greater caution is required.*

Id. at 686 (emphasis added).

71. Incendiary weapons might qualify, but recall that cluster bombs are more "effective" against personnel than napalm. See Krepon, *supra* note 26, at 269.

72. See *Cluster Bomb List*, *supra* note 43, ¶ 1 ("CBUs fall into the dumb bomb or unguided category...."), available at <http://www.au.af.mil/au/database/projects/ay1996/acsc/96-004/hardware/docs/cluster.htm>. The United States has one cluster bomb with "smart" submunitions: the CBU-97, a heat seeking anti-tank submunition. Despite earlier reports that NATO planes dropped CBU-97s on a refugee column in Kosovo, the evidence now suggests NATO used other bombs to carry out the attack. For a more detailed discussion of this incident, see *infra* note 297. See also Goodman, *supra* note 40, at 20–23 (analyzing the advantages of the CBU-97). Reports indicate that the cluster bomb dispensers dropped in Afghanistan were equipped with a new tail kit that has enhanced accuracy. See Watson, *supra* note 2.

73. Usually more than one CBU-87B is dropped at a time. Given the use of multiple cluster bombs on one target area, it is not surprising that one Air Force Captain referred to the use of CBU-87s as the "'shotgun' school of bombing." This may also explain why several deminers working the Decani area of Kosovo regularly referred to cluster

dispersion, it is a virtual certainty that any person located within the pattern area will be killed or wounded.”⁷⁴

2. *Deadly Duds*

Aside from blanketing huge areas, cluster bombs produce a large number of duds. The manufacturer of the CBU-87B submunition claims a dud rate of five percent.⁷⁵ Thus, the manufacturer expects that of the 202 “bomblets” in a single CBU-87B, 10 to 11 of them will fail to explode. There have been, however, numerous reports that in combat conditions, the dud rate is considerably higher—up to 23 to 30% or up to 46 to 60 bomblets per CBU-87B.⁷⁶ In the Persian Gulf War, thousands of bomblets failed to explode because they landed in deep sand.⁷⁷ Despite subsequent modifications to the bomblet,⁷⁸ some observers believe that landing on a soft surface prevented many bomblets from detonating in Yugoslavia.⁷⁹

bomb footprints as a “square kilometer in size” [or almost 19 football fields]. PEACHEY & WIEBE, *supra* note 35, at 14.

74. Krepon, *supra* note 26, at 267–68.

75. See Federation of American Scientists, *BLU-97/B Combined Effects Bomb*, ¶ 2, available at <http://www.fas.org/man/dod-101/sys/dumb/cbu-87.htm> (last visited Apr. 5, 2002).

76. See Beaver, *supra* note 33, § 8 (stating that “NATO specialists say that they would expect about thirty percent of the munitions left from the cluster bomb canisters to remain live and unexploded after each raid”); see also Richard Norton-Taylor, *A Million Tiny Fragments with Each Impact*, GUARDIAN, June 23, 1999, ¶ 9 (quoting Colonel Bede Grossmith of the Royal Engineers: “We would expect ten percent [of the RBL755 bomblets] not to go off”), available at <http://www.guardian.co.uk/Kosovo/Story/0,2763,207744,00.html>.

77. See Trevor Nash, *RO in Kuwait: The Big Clean-up*, 1992 ASIAN J. AIR WARFARE 60, 60 (1992); see also Lt. Col. Gary W. Wright, Scatterable Munitions = Unexploded Ordnance = Fratricide 14 (unpublished USAWC Military Studies Program Paper, U.S. Army War College, Carlisle Barracks, Pennsylvania 17013) (citing Steve Kroft, Director, *The Battlefield* (60 Minutes CBS News, Oct. 25, 1991)).

78. See Morrell, *supra* note 44, at 12 (“[T]he CBU-87B/B is identical to the CBU-87/B, except the CBU-87B/B’s submunitions have an all-mechanical secondary detonator instead of the piezoelectric detonator.”). Presumably, the modification was to make the secondary fuze more sensitive to reduce the dud rate. See Leggette, *supra* note 42, at 27–29 (noting that the secondary omnidirectional firing mechanism together with the primary fuze should make the bomblet “function equally well on hard or soft terrain including snow, mud and water,” thereby reducing the dud rate); see also *Ticking Time Bombs*, *supra* note 55, available at <http://www.hrw.org/reports/1999/nato2/nato995-02.htm>. Experience in combat conditions, however, suggests that this assertion overstates the capability of the bomblet. See PEACHEY & WIEBE, *supra* note 35, at 10–11. The secondary fuze is supposed “to detonate if the bomblet impacts other than straight on, or if the bomblet lands in soft terrain or water.” *Id.*

79. See, e.g., MCGRATH, *supra* note 34, at 2. McGrath notes other causes for submunition failure: faulty manufacture, lengthy storage of submunitions, ground crews’ mistakes in loading, and the mechanical stresses of flying in combat. See *id.* Bomblets

NATO dropped nearly 1,800 cluster bomb dispensers on Yugoslavia—in Serbia and Kosovo.⁸⁰ Approximately 1,100 were CBU-87Bs dropped by the United States; over 530 were RBL755s dropped by Great Britain; apparently 165 CBU-87Bs were dropped by the Dutch.⁸¹ With 202 cluster bombs per CBU-87B

caught in tree branches or whose descent is slowed by tree branches may also fail to impact with enough force to detonate. *See id.*

80. *See U.S. Dep't of Def., Briefing*, June 22, 1999 (statement of Kenneth Bacon, Deputy Assistant Secretary of Defense) ("The U.S. dropped about 1,100 cluster bombs. Not all of those were dropped in Kosovo, obviously."), *available at* http://www.defenselink.mil/news/Jun1999/t06221999_t0622asd.html; *see also* U.K. Ministry of Def., *Lessons From the Crisis, Appendix F* (2000) (noting that Great Britain dropped 531 RBL55 cluster bombs in the Kosovo intervention), *available at* http://www.isn-lase.ethz.ch/cgi-bin/isn/MapProcessorCGI_isn?mapfile=pull/ConvertDocFrameCGI.map&ri=&lang=en&ds=isn_pull&d=http%3a%2f%2fwwww.mod.uk%2findex.php3%3fpagel%3d1557&pa=25%7e531%4010%7e532%4010%7ebombs%403%7ebombs%4010%7ecluster%403%7ebombs%401%7e531%403%7e532%403%7ecluster%4010%7e531%401%7e532%401%7ecluster%401%7ecluster%404%7ebomb%404%7e531%404%7e532%404%7ekosovo%4010%7e531%402%7e532%402%7ekosovo%403%7ekosovo%401%7eko%404%7ecluster%402%7ebomb%402%7ekosovo%402%7e& (last visited Apr. 5, 2002). UNMACC had determined that 1279 cluster bomb dispensers were dropped on the Kosovo Province. E-mail from Col. Flanagan, head of the U.N. Mine Action Coordination Centre, to Thomas Michael McDonnell, Associate Professor of Law, Pace University School of Law (June 28, 2001) (on file at Pace Law School Library) [hereinafter Col. Flanagan E-mail]; *see also* Richard Lloyd, *Civilians Face Persistent Threat from Unexploded Cluster Bombs*, JANE'S DEF. WEEKLY, Nov. 29, 2000, ¶ 1, *available at* 2000 WL 26051028.. Presumably, the remainder, about 352, were dropped on Serbia proper. The cluster bomb dispensers dropped on Kosovo contained approximately 289,536 submunitions (cluster bombs). *See id.* ¶ 1. Assuming the same ratio of CBU-87Bs to RBL755s in Serbia as in the conflict as a whole, approximately 64,000 cluster bombs were dropped on Serbia. The figures for Kosovo were, however, subsequently increased. *See infra* notes 81, 84.

81. *See* Wiebe, *supra* note 32, at 127-28 (citing Memorandum from F.H.G. Degraeve (Minister of Defense) & J.J. van Artsen (Minister of Foreign Affairs), to the Chair of the Permanent Committee for Foreign Affairs of the Lower House of the States-General, *Cluster Bombs* (Nov. 17, 2000) and calculating the total number of cluster bombs dispensers dropped by NATO at 1797). NATO provided United Nations Mine Action Coordination Centre (UNMACC) the following figures for bombs dropped solely on Kosovo: "Three different types of cluster bombs were used by the allied forces (833 by CBU-87, 96 x CBU-99 and 492 x RBL-755) although no reference was made to the use of the CBU-99 'Rockeye' bombs when the information was initially provided." UNMIK, *Mine Action Programme, Annual Report 2001*, ¶ 11 (2001), *available at* http://www.mineaction.org/unmik_org/downloads/reports/annual_report2001.pdf (last visited Apr. 5, 2002). The RBL755 resembles the CBU-87. Its earlier version, the BL755, is described as "[a] 'dual-role' weapon similar to the U.S. CBU-87 [and] designed to attack a range of both 'hard and soft' targets. The TDM [the dispenser] weighs 600 lbs., and contains 147 'beer-can size' bomblets similar in appearance to the BLU-97 bomblet delivered by the CBU-87." *Ticking Time Bombs*, *supra* note 55, ¶ 6, *available at* <http://www.hrw.org/reports/1999/nato2/nato995-01.htm> (last visited June 16, 2001). The "R" variant of the BL755 was developed after the Gulf War to provide medium-altitude operations (above 10,000 ft.) (3,048 m.). *See also* TIM LAMING, ROYAL AIR FORCE MANUAL 233 (1994) (describing the BL755 Cluster Bomb as capable of "destroy[ing] both soft- and

dispenser and 147 per RBL755 dispenser, NATO dropped over 330,000 cluster bombs on Yugoslavia. Even accepting the manufacturers' conservative dud rate yields a high number of duds in Kosovo and Serbia, namely, over 16,000.⁸² After removing a large number of dud cluster bombs from Kosovo, the United Nations Mine Action Coordination Centre (UNMACC) estimated that the actual dud rate for cluster bombs dropped there was seven percent for CBU-87Bs and eleven percent for RBL-755.⁸³ Assuming the same rate for cluster bombs dropped in Serbia (outside of Kosovo) yields 26,457 total dud cluster bombs on the ground.⁸⁴

hard-skinned targets whilst enabling the carrier aircraft to maintain a low-level attack profile" and noting each of its 147 bomblets incorporate shaped charges "capable of penetrating 250mm thick armour"); Gobel, *supra* note 37, at 14 (noting that the BL755 bomblets are 15 centimeters long (5.9 inches) and about 5 centimeters (2 inches) in diameter, "combining a hollow charge with spiral segmenting case for antipersonnel attack").

The United States also dropped the Rockeye Cluster Bomb, used extensively in Vietnam and having a high dud rate, but no figures had initially been released as to how many were used or at what targets these bombs were aimed. See AFTER-ACTION REPORT, *supra* note 35, at 89; Mary Foster, *Kosovo and Landmines, Kosovo and the Landmine Treaty*, PLOUGHSHARES MONITOR, Sept. 1999, ¶ 13 (observing that the Rockeye II Mk20 system with Mk 118 bomblets, contains 247 cylindrical submunitions which are designed to detonate on impact, "but frequently—as often as 30 to 40% of the time in the Gulf War—don't"), available at <http://www.ploughshares.ca/CONTENT/MONITOR/mons99c.html> (last visited Apr. 5, 2002). UNMACC received information indicating that 96 Rockeye dispensers were dropped on Kosovo. See UNMIK, *supra*, at 4, available at http://www.mineaction.org/unmik_org/downloads/reports/annual_report2001.pdf. FAS describes the Rockeye as follows:

The MK-20 Rockeye is a free-fall, unguided cluster weapon designed to kill tanks and armored vehicles. The system consists of a clamshell dispenser, a mechanical MK-339 timed fuze, and 247 dual-purpose armor-piercing shaped-charge bomblets. The bomblet weighs 1.32 pounds and has a 0.4-pound shaped-charge warhead of high explosives, which produces up to 250,000 psi at the point of impact, allowing penetration of approximately 7.5 inches of armor. Rockeye is most efficiently used against area targets requiring penetration to kill.

Federation of American Scientists, *MK-Rockeye*, ¶ 1 (1999), available at <http://www.fas.org/man/dod-101/sys/dumb/mk20.htm> (last visited Jan 30, 2002). See PROKOSCH *supra* note 19, at 101–02, for an analysis of the Rockeye.

82. See *infra* note 84 for the calculations.

83. See Human Rights Watch, *Cluster Bombs in Afghanistan*, ¶ 2 (2001) (noting that UNMACC made this estimate in March 2001), available at <http://www.hrw.org/backgrounder/arms/cluster-bck1031.htm#kosovo> (last visited Apr. 10, 2002). Approximately 600 cluster bomb dispensers were dropped by Coalition Forces as of the end of November 2001. See Paul Watson, *Silent Peril Lies in Wait for Afghanistan's People*, L.A. TIMES, Dec. 1, 2001, at A1. A villager returned to his home in Kalakan, Afghanistan, 12 miles from Kabul, two weeks after the United States planes had dropped cluster bombs there. He picked up a "dud" cluster bomb, which exploded, killing him and a companion. See *id.*

In late October 2001, the United States began broadcasting warnings to the people of Afghanistan to distinguish between food packets and dud cluster bombs. See *Afghans Warned Over Cluster Bombs*, Oct. 30, 2001, available at <http://www.cnn.com/2002/US/10>

In Afghanistan, UNMACC has indicated that coalition forces provided information on 103 cluster bomb strikes and that 1,210 CBU-87B dispensers were dropped on 78 of these sites, totaling 244,420 cluster bomblets.⁸⁵ Assuming a dud rate of seven percent yields 17,109 cluster bombs that remain on the ground in Afghanistan.⁸⁶ When figures become available for the remaining 25 sites, the total number of dud cluster bombs may approach the numbers in Kosovo and Serbia.⁸⁷

/29/ret.bomb.warnings/index.html (last visited Apr. 8, 2002). Both the food packets and the cluster bombs have the same yellow color. *See id.* A UN demining team reported that in the last week of October, eight villagers were killed outright by a cluster bomb attack after the United States apparently mistakenly dropped a cluster bomb on Shakar Qala, an Afghan village near the city of Herat. *See id.* Another villager was wounded after picking up a dud cluster bomb. *See id.*

84. The calculations are as follows: 1100 CBU-87s dropped by the U.S. plus 165 CBU-87s dropped by the Dutch, equals 1265 CBU-87's dropped. Each CBU-87 contains 202 bomblets, for a total of 255,530 bomblets [1265 by 202 = 255,530]. Great Britain dropped 530 RBL-755's, each with 147 bomblets, totaling 77,910 bomblets [530 by 147 = 77,910]. Adding the two totals yields 333,440 bomblets [255,530 + 77,910 = 333,440.] A five percent overall dud rate computes as follows: 333,440 by .05 = 16,672. The calculations for a seven percent dud rate for CBU-87s are: 255,530 by .07 = 17,887.1, and for an eleven percent dud rate for RBL-775 are: 77,910 by .11 = 8,570.1. Adding the two together yields a final figure for duds dropped on Yugoslavia: 17,887.1 + 8570.1 = 26,457.2 total duds. These calculations do not include the Rockeye Cluster Bomb (CBU-99); NATO belatedly reported having dropped ninety-six CBU-99s on the Kosovo Province alone. *See* UNMIK, *supra* note 81, ¶ 11. Research has not yet revealed whether the Rockeyes form part of or are in addition to the 1100 cluster bomb dispensers dropped by the United States. Since the Rockeye dispenser contains 247 bomblets as contrasted with the 202 bomblets carried by the CBU-87, the total number of bomblets is, in any event, presumably higher than the estimate given above.

More precise figures from NATO are available for cluster bombs dropped on the Kosovo Province alone and for their likely dud rate: 833 CBU-87s x 202 = 168,266 x .07 = 11,778.62; 492 RBL-755s x 147 = 72,324 x .11 = 7,955.64; 96 CBU-99s x 247 = 23,712 x .10 = 2,371.2. *See* UNMIK *supra* note 81, ¶ 9. Totaling the duds for these three types of cluster bombs, [11,778.62 + 7,955.64 + 2371.2] yields 22,105.46 duds in Kosovo. (This figure assumes a ten percent dud rate for the CBU-99; using a five percent dud rate for that cluster bomb would yield a slightly lower number of total duds, namely, approximately 20,920.)

85. *See UN To Clear Coalition Cluster Bombs in Afghanistan*, BBC WORLDWIDE MONITORING, Jan. 3, 2002, ¶ 6, available at LEXIS, Nexis Library, BBC Worldwide Monitoring File.

86. Some de-miners on the ground in Afghanistan have reported dud rates for CBU bomblets of twenty percent. The Pentagon itself apparently is claiming a ten percent dud rate. *See* Elizabeth Neuffer, *Fighting Terror After the Battle/Civilian Casualties*, BOSTON GLOBE, Jan. 20, 2002, at A23, available at LEXIS, News Library, Bglobe File.

87. The high dud rate may in part be due to a great many of the bomblets being past the warranty date indicated by their manufacturers. *See* Carlotta Gall, *Mines and NATO Bombs Still Killing in Kosovo*, N.Y. TIMES, Aug. 6, 1999, at A3. Human Rights Watch estimates the dud cluster bomb rate in Kosovo to be approximately ten to fifteen percent, thus from 25,000 to 37,500 dud cluster bombs (not counting cluster bombs dropped in Serbia proper). On the other hand, the number of dud submunitions the coalition dropped on Iraq and Kuwait in the Gulf War (excluding Gator Mine submunitions) is vastly larger:

Although duds, these bomblets remain dangerous. Their fuze mechanism is "sensitive."⁸⁸ A slight vibration can set off the bomblets. Brigadier General John Craddock, the commander of Task Force Falcon, the US peacekeeping force in Kosovo, described the extent of and risk posed by dud cluster bombs:

When you fly over in a helicopter you can see a lot of cluster bombs—not a lot but a significant amount of cluster bombs.... We're not out looking for it. We're just documenting it where we find it. [In terms of unexploded ordnance, a cluster bomb submunition] is probably the biggest danger in that it is so fragile.... I don't know that the residents are aware of how dangerous it is to even walk by that. [*Walking by*] could set it off.⁸⁹

In addition to the civilian population, cluster bombs have endangered ordnance clearance crews and friendly troops entering an area subjected to cluster

1,532,850. See Wright, *supra* note 77, at 38 (basing his figures on the manufacturers' conservative estimates of dud rates); see also III GULF WAR AIR POWER SURVEY 234 (1993) (not counting Army artillery's massive use of cluster bombs (Dual Purpose Improved Conventional Munitions (DPIC) and Multiple Launch Rocket Systems (MLRS), the Air Force alone dropped 21,696 Vietnam era cluster bomb dispensers (CBU-52/58/71); 10,035 CBU-87 dispensers; 5,345 Rockeye cluster bombs dispensers (MK20), and 1105 Gator Mines dispensers (CBU-89)); Human Rights Watch, *NATO's Use of Cluster Munitions in Yugoslavia*, *supra* note 57, ¶ 11 (estimating the number of live submunitions left in Iraq and Kuwait to be "at a minimum, 1.2 to 1.5 million"), available at <http://www.hrw.org/background/arms/clus0511.htm>.

88. Describing the BLU-97 submunition used in the Gulf War, Lt. Col. Wright noted, "[t]he BLU-97 is initiated by an extremely sensitive fuze and duds should not be moved." Wright, *supra* note 77, at 11 (emphasis added).

89. Beaver, *supra* note 33, § 8 (reporting on a Department of Defense (DoD) briefing on July 23, 1999) (emphasis added). The DoD report on the Kosovo Air Operation notes the danger of dud cluster bombs:

[B]ecause the bomblets are dispensed over a relatively large area and a small percentage of them typically fail to detonate, there is an unexploded ordnance hazard associated with this weapon. These submunitions are not mines, are acceptable under the laws of armed conflict, and are not timed to go off as anti-personnel devices. However, if the submunitions are disturbed or disassembled, they may explode, thus the need for early and aggressive unexploded—ordnance clearing efforts.

PEACHEY & WIEBE, *supra* note 35, at 16 (quoting AFTER-ACTION REPORT, *supra* note 35, at 90); see also REPORT OF THE INT'L COMM. OF THE RED CROSS FOR THE REVIEW CONFERENCE OF 1980 U.N. CONVENTION ON PROHIBITIONS OR RESTRICTIONS ON THE USE OF CERTAIN CONVENTIONAL WEAPONS WHICH MAY BE DEEMED TO BE EXCESSIVELY INJURIOUS OR TO HAVE INDISCRIMINATE EFFECTS 155 (I.C.R.C. 1994) (noting that dud cluster bomblets "are liable to explode at any time and can be triggered by even the slightest movement of the ground on which they are lying, such as vibrations caused by people walking or a moving vehicle").

weapon bombardment.⁹⁰ For example, the first NATO casualties in the Kosovo humanitarian intervention occurred after the conflict when a British clearance crew was attempting to remove BLU-97 bomblets. Some of them detonated, killing two British soldiers and two civilian clearance workers.⁹¹ Similarly, after the Gulf War, seven United States soldiers charged with clearing an Iraqi airfield were killed when a pile of BLU-97 bomblets inexplicably blew up. This incident happened during daylight when the highly trained crew was carrying out its duties: "The battalion commander indicated that the clearance mission was extremely difficult because every square meter on the airfield appeared to have one or two unexploded bomblets."⁹²

Although probably not intended by its designers,⁹³ the dud cluster bomb in effect becomes a landmine. Like a landmine, it can go off at the slightest touch, it is about the same size, and it can be concealed by falling into mud, undergrowth, or water.⁹⁴ It is, in fact, more deadly than the typical landmine.⁹⁵ "The

90. "When US Marine Corps forces attempted a night assault against Iraqi-occupied Kuwait International Airport, they reportedly were held up, not by fierce resistance, but by unexploded coalition cluster-bomb submunitions and mines." PEACHEY & WIEBE, *supra* note 35, at 16 (quoting Christopher Centner, *Ignorance Is Risk: The Big Lesson from Desert Storm Air Base Attacks*, AIRPOWER JOURNAL, Winter 1992, at 28).

91. See Donna Bryson, *Blast Killing Four Came from NATO Cluster Bomb*, ATLANTA CONSTITUTION, July 22, 1999, at 4A.

92. Wright, *supra* note 77, at 11 (emphasis added); see also U.S. GEN. ACCOUNTING OFFICE, CASUALTIES CAUSED BY IMPROPER HANDLING OF UNEXPLODED SUBMUNITIONS, OPERATION DESERT STORM, REPORT TO CONGRESSIONAL REQUESTERS, Aug. 6, 1993 (finding that twenty-five U.S. military personnel were killed by U.S. submunitions and others were injured).

93. Apparently, Germany, however, designed a large number of bombs dropped over London to go off a considerable time after landing to terrorize the population and to intimidate bomb clearance crews. See HARTLEY, *supra* note 37, at 28 (noting that in World War II German bombs could be and often were set for a delayed detonation for up to eighty hours after landing). A member of such a crew never knew if the bomb that had failed to explode was in fact a dud or had a delayed operating fuze. The BLU-97's can be set to delay the time of explosion until some time after they landed on the ground. Reportedly, some that were dropped in Kosovo and Serbia were so set or at least for some reason exploded sometime after landing on the ground. See Watson, *supra* note 2, at A1.

94. See Wiebe & Peachey, *supra* note 49, at 3 (noting that "[i]n this way, they become 'hidden killers' blending into their surroundings like landmines. One of the more 'typical' cluster bomb accidents in Laos occurs in the fields and gardens, when Lao villagers use hoes and diggers to prepare the soil for planting. The hidden submunitions have in effect created a minefield." Furthermore, "[a]lthough UXO is not a mine, UXO hazards pose problems similar to mines concerning both personnel safety and the movement and maneuver of forces on the battlefield." *Id.* (quoting UXO: MULTISERVICE PROCEDURES FOR OPERATIONS IN AN UNEXPLODED ORDNANCE ENVIRONMENT, AIR LAND SEA APPLICATION CENTER, ch. 2, pt. 1 (1996)). For a detailed discussion of cluster bombs in Laos, see Carmel Capati, Comment, *The Tragedy of Cluster Bombs in Laos: An Argument for Inclusion in the Proposed International Ban on Landmines*, 16 WIS. INT'L L.J. 227 (1997). For a sobering discussion of mine clearance from first-hand experience, see Brigadier P.M. Blagden, *Kuwait: Mine Clearing After Iraqi Invasion*, 126 ARMY Q. & DEF. J. 1, 4 (1996).

submunitions in cluster weapons generally have a higher explosive charge than anti-personnel landmines. This, coupled with the fragmentation pattern of the heavy outer shell, results in more upper-body injuries and deaths when compared to landmines," not to mention their "longer lethal range than most anti-personnel landmines."⁹⁶

Because cluster bomb dispensers discharge hundreds of dumb bomblets over large areas, subject to variations in wind, terrain, altitude, and spin rate, planners cannot target individual bomblets. It is thus impossible to know the precise footprint made by the submunitions in a given cluster bomb attack. During the Gulf War, "locations of UXO (unexploded ordnance) footprints [areas of possible UXO concentration] were not tracked and never passed to mobility planners."⁹⁷ According to the United States military service procedures report cited above, "[c]urrently, [at the conclusion of Desert Storm], no system exists to accurately track unexploded submunitions to facilitate surface movement and maneuver."⁹⁸ In Kosovo, NATO took nearly a year to release to the UNMACC detailed information on cluster bomb targets and drop sites and much of the information was inaccurate.⁹⁹

Because of the difficulty of tracking and defusing dud cluster bombs, they may imperil civilians and friendly troops far more than landmines. By posing a risk of gruesome wounds or death, dud cluster bombs also prevent some farmers from cultivating fields and other civilians from walking in certain parts of their land or using certain parks.¹⁰⁰ Even a five percent dud rate is enough to terrorize civilians in areas subject to cluster bomb bombardment:

Assuming a fairly standard strike of five [cluster bomb dispensers of UK's RBL755 with 147 bomblets each], the resulting thirty-five unexploded bomblets may have a post-conflict impact ranging from insignificant to devastating. Thirty-five bomblets spread across the agricultural and grazing land of a subsistence community could effectively destroy its future and force it to abandon its homes and land. It has no way of knowing that there are "only" 35 bomblets

95. See Wiebe & Peachey, *supra* note 49, at 3.

96. *Id.*

97. *Id.* (quoting Wright, *supra* note 77, at 17).

98. *Id.* (quoting UXO, *supra* note 94, ch.1, at 1).

99. See *infra* notes 246–52 and accompanying text.

100. See Lucian Kim, *Making Kosovo Safe from Thousands of Land Mines*, CHRISTIAN SCI. MONITOR, July 15, 1999, ¶ 4 (noting that fear of mines (and dud cluster bombs) can be "as detrimental as their actual existence, since a perceived threat limits people's movements as much as a real one"); cf. W.F. Deedes, *Nation Tied to the Land Learns to Live with Deadly Harvest*, ELECTRONIC TELEGRAPH, Nov. 14, 1997 (observing that in 1996, one third of the arable land in a Laotian province, some 300,000 hectares, could still not be cultivated because of the unexploded ordnance from the Vietnam War, principally dud American cluster bombs), available at <http://www.telegraph.co.uk/et/ac=005242090943279&rtmo=V15u4jPx&atmo=rrrrrrq&pg=et/97/11/14/wmine114.html> (last visited Apr. 5, 2002)

present nor would it have any reasonable expectation of the land being cleared within a feasible timescale.¹⁰¹

The terror that dud cluster bombs inspire was not limited to Kosovo and Serbia. NATO planes jettisoned cluster bombs and other ordnance in the Adriatic Sea when the planes were low on fuel or having mechanical difficulties. Italian fisherman began finding cluster bomblets in their nets.¹⁰² One cluster bomb exploded, causing a devastating fire in one fishing vessel and seriously injuring a crew member. The owner of that vessel said, "I'm afraid. I doubt they will be able to recover all these little cluster bombs. It will be a danger to us for years and years."¹⁰³ Consequently, these submunitions not only endanger civilians, but also affect their morale and way of life.

Tragically, dud cluster bombs appear to have a special allure for children. The BLU-97B, for example, bright yellow, the size of a soda can, with a small parachute on the top, looks like a high tech toy. A high percentage of civilians killed or maimed by dud cluster bombs are boys and girls who pick the duds up to play with. The case of the five young boys killed by a dud cluster bomb, discussed at the beginning of this Article, is, unfortunately, not unique.¹⁰⁴ A World Health

101. McGRATH, *supra* note 34, at 2.

102. See Tim Hundley, *Kosovo War's Jetsam Leaves Italy Fisherman Trawling for Trouble*, CHI. TRIB., July 16, 1999, ¶ 15 (reporting that Italian government temporarily banned trawling in the Atlantic because of the ordnance dumping), available at 1999 WL 2893228.

103. *Id.*; see also Paul Beaver, *The Challenge of Mine Clearance and Explosive Ordnance Disposal*, JANE'S DEF. WEEKLY, July 14, 1999, ¶ 12 (noting that NATO aircraft dropped ordnance, presumably including cluster bombs, "in surrounding waters"); Rachel Stohl, *Cluster Bombs Leave Lasting Legacy*, CENTER FOR DEF. INFO., Aug. 5, 1999, ¶ 5 (noting that ninety-seven bomblets have been recovered by allied minesweepers in the Adriatic sea: "munitions dumped at sea have caused deaths and injuries to Italian fisherman in the Adriatic and cost others the majority of the year's profits"), available at <http://www.cdi.org/weekly/1999/issue30.html#1>.

104. In another case, ten young men and boys in the village of Jahoc in Kosovo were playing around with a BLU-97 bomblet shortly after the war. They assumed that the bright yellow bomblet with the parachute was a complete dud. One young man who was trying to open it was "torn apart." Dan Eggen, *NATO 'Duds' Keep Killing in Kosovo; Faulty Cluster Bombs Taking Lives, Limbs*, WASH. POST, July 19, 1999, at A01, available at 1999 WL 17014725. Two others were killed; the remaining seven were injured, two critically. See *id.*; see also PEACHEY & WIEBE, *supra* note 35, at 18 ("It was yellow and it had a parachute," said Jashair, 10, of the cluster bomb that he and his friends found in October 1999 near the village of Boboshu. "We picked it up, and we banged it in the field. Then I poked it with a stick and it exploded," blinding him in one eye. (quoting Jeffrey Fleishman, *In Peacetime Kosovo, Bomb Casualties Continue*, PHILA. INQUIRER, Nov. 21, 1999, ¶ 2, available at <http://www.converge.org.nz/pma/sleth.htm> (last visited Apr. 5, 2002)); Capati, *supra* note 94, at 227 (citing the case of a fifteen-year-old killed in Laos while tilling a rice paddy); Peter J. Ekberg, *Remotely Delivered Landmines and International Law*, 33 COLUM. J. TRANSNAT'L L. 149, 149 (1995) (providing a personal account of a Bedouin teenage girl who had picked up a dud cluster bomb during Operation Desert Storm; the bomb exploded taking all the fingers off her right hand and causing grievous wounds to her face and chest); Ann Pedersen, *The Legacy of War, Bombs, Mines*

Organization study found that of the 150 casualties of landmines and dud cluster bombs in Kosovo as of July 1999, seventy-one percent of the victims were under the age of twenty-four.¹⁰⁵ About forty percent of these casualties were attributable to dud cluster bombs.¹⁰⁶ Another study found that a child in Kosovo is nearly five times more likely to be killed or injured by a cluster bomb than by a landmine.¹⁰⁷

UNMACC, part of the United Nations Interim Administrative Mission in Kosovo (UNMIK), estimated in October 1999 that "624 minefields and 1,392 cluster bombs with as many as 30,000 unexploded bomblets, [sic] had been dropped in 333 confirmed sites [in Kosovo, not counting Serbia sites] during the war."¹⁰⁸ These figures were later updated to 1279 cluster bomb dispensers dropped on Kosovo, in 583 strikes, at 350 separate locations.¹⁰⁹ Although UNMACC

and Mortars in Laos, U.N. VOLUNTEERS NEWS, Aug. 1997 (observing that in 1997 twenty-four years after the American bombing of Laos, about 200 people, many children, were being killed or injured each year by unexploded ordnance, mainly dud cluster bombs); Kevin Whitelaw, *NATO's Nasty Surprises: They May Look Like Toys, But Bright-yellow Bomb Remnants Pack a Deadly Wallop*, U.S. NEWS & WORLD REP., Oct. 25, 1999, at 43 (reporting four young boys killed while playing with a cluster bomb in Vrbovac, Kosovo near where NATO dropped cluster bombs); *Child Killed By Cluster Bomb in Southern Lebanon*, AGENCE FRANCE PRESSE, Feb. 13, 1999, ¶¶ 1-2 (noting that a five-year-old Lebanese boy was killed by an exploding dud cluster bomb while he was on a picnic with his parents three miles from the Israeli-occupied "security" zone in southern Lebanon).

105. See World Health Organization, *WHO Finds Heavy Toll from Land Mines in Kosovo*, ¶¶ 1-2 (1999), available at <http://www.who.int/inf-pr-1999/en/pr99-39.html> (last visited Apr. 5, 2002). A study by UNICEF reached similar results: "The majority of the victims are male between the ages of 10 and 25.... When the type of UXO has been specified in accounts of accident, more than forty percent are reported to involve cluster bombs." UNICEF, *Mine Awareness in the Community: Passing the Message On*, at 2 (2002), available at <http://www.unicef.org/kosovo/>, Mine awareness in the community (last visited Apr. 19, 2002).

106. See UNICEF, *supra* note 105, at 2, available at <http://www.unicef.org/kosovo/>, Mine awareness in the community.

107. See Claire Doole, *ICRC Calls for Cluster Bomb Ban* (BBC television broadcast, Sept. 5, 2000) (citing ICRC report); Peter Herby & Anna B. Nuiten, *Explosive Remnants of War: Protecting Civilians Through an Additional Protocol to the 1980 Convention*, 841 INT'L REV. RED CROSS 195, 198 (2001) (citing Dr. David Meddings, Epidemiologist, Unit of the Chief Medical Officer, ICRC), available at <http://www.icrc.org/eng/review>, March, No 841.

108. UNMACC, *Mine Awareness in the Community, Passing the Message On*, at 2 (2000), available at http://www.un.org/Depts/dpko/mine/macc/downloads/pi/unicef_mae.pdf (last visited Apr. 10, 2002).

109. See Col. Flanagan E-mail, *supra* note 80; Lloyd, *supra* note 80, ¶ 1 (stating that NATO now believes that eight to twelve percent of the bomblets failed to explode, resulting in as many as 34,744 bomblets on the ground in Kosovo); UNICEF, *supra* note 105, at 2 (quoting UNMACC source), available at <http://www.unicef.org/kosovo/>, Mine awareness in the community. See generally UNMACC, *Home Page*, at <http://www.welcome.to/macckosovo> (last visited Apr. 5, 2002). NATO later reported dropping 1321 cluster bomb dispensers on the Kosovo Province alone, at 224 separate locations. See UNMIK, *supra* note 81, ¶ 11 (the given figures, however, add up to 1421 cluster bomb dispensers; see *supra* note 81). Based on its clearance efforts, UNMACC now

concluded its work in Kosovo on December 15, 2001, it acknowledges that it can never be certain that its clearing efforts have been completely effective.¹¹⁰

In conclusion, the cluster bomb's attractiveness to the military—its terrific explosive and deadly power and its ability to blanket huge areas—puts civilian, non-combatants at risk. After the conflict ends, the dud cluster bombs act like unmarked mines, threatening the civilian population. Far more powerful than mines, however, these dud cluster bombs wreak much greater damage when they go off.

II. AIR WARFARE, ADVANCED CONVENTIONAL WEAPONS, AND INTERNATIONAL LAW

A. History

For much of the last century, the law of air warfare remained moribund, locked in rules inspired by the 19th century battlefield, while the technology of aircraft, missiles, and bombs shattered record after record, barrier after barrier. The Hague Rules of Land Warfare, agreed upon in 1907, made it a violation to bomb or otherwise attack an undefended city.¹¹¹ The rules were written before the advent of the airplane, although the use of the dirigible, primarily for scouting the enemy and observing the battle scene, had been common for decades. In 1899, the major powers signed and later ratified a five-year ban on "the launching of projectiles and

estimates a dud rate of seven percent for CBU-87s and eleven percent for RBL-755's, giving approximately 26,657 dud cluster bombs. *See supra* notes 92–93 and accompanying text.

110. *See* UNMIK, *Mine Action Programme, Annual Report 2000*, ¶ 18 (2000), available at http://www.un.org/Depts/dpko/mine/macc/downloads/reports/annual_2000.pdf (last visited Apr. 5, 2002) [hereinafter UNMIK, *Annual Report 2000*]. The 2001 Annual Report indicates that K-FOR troops cleared another 7455 cluster munitions from Kosovo, yielding a total cleared of 15,940, of the between 20,920 and 22,105 left on Kosovo soil. *See* UNMIK, *Mine Action Programme, Annual Report 2001*, *supra* note 81, ¶ 9, including n.1; and *supra* note 81. In the Kosovo Province alone, however, these calculations suggest that as of December 2001, between nearly 5000 to over 6000 dud cluster bombs remained uncleared.

111. *See* Regulations Respecting the Laws and Customs of War on Land, Annex to the 1907 Hague Convention Respecting the Laws and Customs of War on Land, Oct. 18, 1907, art. 25, 34 Martens (3d) 360, 36 Stat. 2199, reprinted in 2 AM. J. INT'L L. 43 (1908), and in DOCUMENTS ON THE LAWS OF WAR, *supra* note 27, at 48 ("The attack or bombardment, by whatever means, of towns, villages, dwellings, or buildings which are undefended is prohibited.") (entered into force Jan. 26, 1910).

One commentator notes that "[t]he arrival of aircraft, however, totally undermined [the Hague rules], which were tied to the notion of advancing land-based armies through the field which could occupy without problem undefended cities, but which needed to bombard defended cities in order to occupy them." L. Doswald-Beck, *The Value of the 1977 Geneva Protocols for the Protection of Civilians*, in ARMED CONFLICT AND THE NEW LAW: ASPECTS OF THE 1977 GENEVA PROTOCOLS AND THE 1981 WEAPONS CONVENTION 137, 142 (Michael A. Meyer ed., 1989).

explosives from balloons or by other new methods of a similar nature.”¹¹² A few states signed and ratified a five-year extension of the ban, but all sides ignored it in World War I.¹¹³ After that war, several states attempted to develop a law of air warfare:¹¹⁴ distinguished jurists were designated to develop applicable rules, which they did the following year.¹¹⁵ The 1923 “Rules of Aerial Warfare” attempted to reestablish the principle that “aerial bombardment is legitimate only when directed at a military objective....”¹¹⁶ “Military objective” was defined as “[a]n object of which the destruction or injury would constitute a distinct military advantage to the belligerent.”¹¹⁷ The Rules, which were never adopted by states, narrowly qualified the term “military objective,”¹¹⁸ and would have made illegal some of the bombardments of purely commercial establishments in World War I.¹¹⁹ Thus during the first seventy-seven years of the 20th century, the state of international humanitarian law of air warfare calls to mind Shakespeare’s quip: “The law hath not been dead, though it hath slept.”¹²⁰

A particularly notable violation of the 1907 Hague Rules and the 1923 Rules of Aerial Warfare occurred in 1937 when the Nazi German Airforce was

112. Declaration Concerning the Prohibition, for the Term of Five Years, the Launching of Projectiles and Explosives from Balloons, and Other New Methods of a Similar Nature, July 29, 1899, 26 Martens (2d) 994, 32 Stat. 1839, *reprinted in* 1 AM. J. INT’L. L. 153 (1907) (entered into force 1909). Germany, Austria-Hungary, Belgium, China, Denmark, Spain, Mexico, France, Greece, Italy, Japan, Luxembourg, Montenegro, the Netherlands, Persia, Portugal, Romania, Russia, Serbia, Siam, Sweden, Norway, Switzerland, Turkey, and Bulgaria signed the Declaration and all but China and Turkey ratified it. *See* Declaration to Prohibit for the Term of Five Years the Launching of Projectiles and Explosives from Balloons, and Other New Methods of a Similar Nature, 32 Stat. 1839 (signed 1899) (noting that the United States has ratified the Hague Declaration), *available at* 1901 WL 16245.

113. *See* DOCUMENTS ON THE LAWS OF WAR, *supra* note 27, at 121–22 (noting that France, Germany, Italy, Japan, and Russia never signed or acceded to the Declaration and that the United States, which had been bound, announced in 1942 that it would not observe the terms of the Declaration); *see also* L. Doswald-Beck, *supra* note 111, at 142.

114. The 1921–1922 Washington Conference on the Limitation of Armament was called for this purpose. *See* DOCUMENTS ON THE LAWS OF WAR, *supra* note 27, at 121–22.

115. *See id.* at 122 (noting that states at the 1921–1922 Washington Conference—the United States, Great Britain, France, Italy, Japan and the Netherlands—agreed to appoint a Commission to develop what would become the 1923 Rules on Aerial Warfare).

116. *Id.* at 143.

117. Rules Concerning the Control of Wireless Telegraphy in Time of War and Air Warfare, (1922–1923), pt. 2, ch. 4, art. 24(1), *available at* <http://www.icrc.org/IHL.NSF/52d68d14de6160e0c12563da005fdb1b/cd78ffa34e34a182c125641e003a12a0?OpenDocument>.

118. “[B]ombardment is legitimate *only when directed exclusively* at the following objectives: military forces, military works; military establishments of depots; factories constituting important and well known centres engaged in the manufacture of arms, ammunition, or distinctively military supplies; lines of communication or transportation used for military purposes.” *Id.* art. 24(2) (emphasis added).

119. *See* L. Doswald-Beck, *supra* note 111, at 143.

120. WILLIAM SHAKESPEARE, MEASURE FOR MEASURE, act 2, sc. 1.

called in by General Francisco Franco to bomb and strafe the Basque City of Guernica, apparently to permit the Luftwaffe to analyze clinically the effectiveness of their air force under combat conditions.¹²¹ Aside from empty pronouncements, the world community did nothing after this beautiful city burned and over a thousand civilians lost their lives.¹²² The lack of forceful world action may ultimately have led to all sides bombing cities indiscriminately in World War II. As that war commenced, Germany decided to bomb London, deliberately hitting civilian neighborhoods as well as some legitimate military targets.¹²³ First, the bombing consisted of the Luftwaffe directly dropping bombs, but later V-1 and V-2 missiles with crude guidance systems hit London helter skelter.¹²⁴ In retaliation, both Britain and later the United States bombed German cities.¹²⁵ The Allied

121. See HUGH THOMAS, *THE SPANISH CIVIL WAR* 421 (1961); see also RENE A. WORMSER, *THE STORY OF THE LAW* 526, 543 (1962). The bombing of this city became the subject of Picasso's famous painting, *Guernica*, which remained at the Louvre until democracy returned to Spain after Generalissimo Franco's death in 1975. But see James S. Corum, *Inflated by Air—Common Perceptions of Civilian Casualties from Bombing* 7 (1990) (unpublished Graduate Student paper, U.S. Air Force Air War College) (on file with the Author) (arguing that Guernica had a bridge and intersection that was vital for the withdrawal of as many as twenty-three battalions of Basque army troops).

122. See THOMAS, *supra* note 121, at 421.

123. Furthermore in April and May of 1940, the Germans indiscriminately bombed civilian populations in Norway, the Netherlands and Belgium. See Howard Levie, *Some Major Inadequacies in the Existing Law Relating to the Protection of Individuals During Armed Conflict*, in WHEN BATTLE RAGES, HOW CAN LAW PROTECT? 14TH HAMMARSKJOLD FORUM 7 (John Casey ed., 1971), reprinted in LEVIE ON THE LAW OF WAR 161 n.143 (Michael N. Schmitt & Leslie C. Green eds., 1998).

124. It is estimated that the German bombing of London during the blitz, from September 1940 to July 1941 cost 10,000 people their lives and badly injured 17,000 more. See MICROSOFT 98 ENCARTA ENCYCLOPEDIA, *London, History—War Damage* (1998). The total number of civilians killed in Britain during World War II has been estimated as follows: 51,509 from bombing from aircraft; 6184 from flying bombs, 2754 from rockets, and 48 from cross-channel guns. See W. Hays Parks, *Air War and the Law of War*, 1 A.F. L. REV. 1, 225 (1990). The Japanese employed a similarly indiscriminate weapon, attaching mines to balloons with no directional system. See MICHAEL BOTHE, KARL J. PARTSCH, & WALDEMAR A. SOLF, *NEW RULES FOR VICTIMS OF ARMED CONFLICTS* 302 (1982).

125. See CONRAD C. CRANE, *BOMBS, CITIES, AND CIVILIANS* 1–3 (1993) (noting that Britain engaged in a deliberate campaign of bombing German cities, whereas the United States, until much later in the war, aimed at military targets, which, however, owing to the relatively imprecise nature of bombing at that time, often did result in a significant number of civilian casualties). America's and Great Britain's bombing destroyed 485,000 residential buildings in Germany and heavily damaged another 415,000, "making a total of twenty percent of all dwelling units in Germany"; Allied bombing resulted in a minimum of 305,000 German military and civilians killed and 780,000 wounded. U.S. STRATEGIC BOMBING SURVEY: SUMMARY REPORT, at 15 (1945), available at <http://www.anesi.com/ussbs02.htm> (last visited Apr. 10, 2002); see also Mark L. Sacharoff, *The Aftermath of the Persian Gulf War: Strengthening the Laws of Warfare, Problems and Paradoxes of the Laws of Warfare*, 6 TEMP. INT'L & COMP. L.J. 71, 74 (1992) (citing IV U.S. STRATEGIC BOMBING SURVEY 7 (1976)). Other sources estimate that 12 million civilians died from aerial bombardment during World War II; furthermore, "during World War I, the proportion of civilian dead of the total killed came to thirteen percent while the

bombing included the firebombing of Dresden and Tokyo.¹²⁶ This so-called carpet bombing or target area bombing consisted of blanketing a large area of a city which may or may not have military targets within the specified area.¹²⁷ Expanding this concept, the atomic bombs dropped on Hiroshima destroyed more than four square miles (ten sq. km.) or sixty percent of the city, ultimately killing approximately 90,000 to 140,000 persons.¹²⁸

proportion rose to seventy percent during World War II.” Belt, *supra* note 24, at 142 n.179 (citing Levie, *supra* note 123, at 148, and EDWARD KWAKWA, THE INTERNATIONAL LAW OF ARMED CONFLICT: PERSONAL AND MATERIAL FIELDS OF APPLICATION 17 n.52 (1992)); see also Levie, *supra* note 123, at 148 (“The estimate has been made that while World War I caused 10 million deaths, of which 500,000 were civilians, World War II caused 50 million, of which 24 million were civilians; and half of the civilian deaths (12 million) were caused by air raids!” (citing Pictet, *The Need to Restore the Laws and Customs Relating to Armed Conflict*, REV. (INT’L COMMISSION JURISTS) 22, 37 (1969)).

126. Approximately 83,000 civilians died in the firebombing of Tokyo; another 40,000 were injured; 135,000 civilians died in the firebombing of Dresden. See L. Doswald-Beck, *supra* note 111, at 145; Sacharoff, *supra* note 125, at 74 (citing X U.S. STRATEGIC BOMBING SURVEY 1, 3, 38 (1976)). In addition, the Allied firebombing of Hamburg resulted in “the most complete blotting out of a city that has ever happened.” See, e.g., J.M. SPAIGHT, AIR POWER AND WAR RIGHTS 278 (3d ed. 1947).

127. Carpet bombing is defined as the “total devastation of an entire area aimed at leaving nothing alive.” *Air Chiefs Talk of Carpet Bombing*, available at <http://www.socialister.dk/sworke/1645/pages/war2.htm> (last visited Apr. 10, 2002); see also 1957 Draft Rules for the Limitation of the Dangers Incurred by the Civilian Population in Time of War, (1956) ch. 3, art. 10 (providing in relevant part as follows: “Target Area Bombing, Art. 10: It is forbidden to attack without distinction, a single objective, an area including several military objectives at a distance from one another where elements of the civilian population, or dwellings, are situated in between the said military objectives”), available at <http://www1.umn.edu/humanrts/instrree/1957a.htm> (last visited Apr. 8, 2002). This Article was the precursor to the First 1977 Protocol to the Geneva Conventions of 1949, art. 51(5)(a).

128. Precise casualty figures for Hiroshima and Nagasaki bombings probably can never be known. Some sources indicate that 70,000 to 80,000 persons died outright from the Hiroshima bombing and that another 70,000 were injured. See ENCYCLOPEDIA BRITANNICA ONLINE, *World War II, Hiroshima and Nagasaki*, available at <http://search.eb.com/bol/topic?eu=118868&sctn=26#s> (last visited Apr. 5, 2002). This source also estimates that 35,000 to 45,000 people died in the Nagasaki bombing. See *id.* Other sources suggest a higher death rate, considering those who died much later from radiation sickness and other injuries sustained in the bombing. See 13 FUNK WAGNALLS NEW ENCYCLOPEDIA 124 (1983) (noting that the Supreme Allied Headquarters reported that 129,558 persons were killed, injured, or missing and 176,987 made homeless by the bombing). Dropping the second atomic bomb on Nagasaki resulted in the following casualties: An estimated 70,000 people were “killed outright” and another 70,000 “doomed to die of bomb-related causes in the decade that followed.” *The Atomic Bombing of Nagasaki*, at <http://www.-gaigo.ac.jp/nagasaki/10.html> (last visited Apr. 5, 2002); see also Radiation Effects Research Foundation: A Cooperative Japan-US Research Organization, (noting that the precise number of fatalities will never be known but estimating 90,000 to 140,000 persons in Hiroshima and from 60,000 to 80,000 persons in Nagasaki), available at <http://www.rerf.or.jp/eigo/experhp/rerfhome.htm> (last visited Apr. 8, 2002). One source notes that “the combined heat and blast [from the Hiroshima atomic bomb] pulverized

From the First World War through the Second World War, as well as in Korea and Vietnam, humanitarian law was never changed to deal with the exponential advances in weapon technology. Until 1977, aside from customary international law, the 1907 Hague Rules of Land warfare contained the only arguably controlling law concerning how war could be conducted.¹²⁹ By the outbreak of World War I, the Hague Rules were hopelessly obsolete concerning air warfare.¹³⁰ The 1923 Rules of Aerial Warfare, though well intended, were never adopted in a formal treaty and were never followed in practice.¹³¹ All sides in both World Wars, as well as in Korea and Vietnam, largely ignored custom.¹³² The law of air warfare was so unsettled that the British Commander of the RAF during World War II could credibly assert in 1947, "International law can always be argued pro and con, but in this matter of the use of aircraft in war there is, as it happens, no international law at all."¹³³

Advances in weapons technology and the advent and development of air warfare endangered the civilian population as never before:

[Until the 20th century], [d]estruction [in war] occurred within the range of the weapons then available, i.e., small arms and artillery.

everything in the explosion's immediate vicinity, generated spontaneous fires that burned almost 4.4 square miles completely out...." *ENCYCLOPEDIA BRITANNICA*, *supra*, ¶ 2, available at <http://search.eb.com/bol/topic?eu=118868§n=26#s>; see also MICROSOFT 98 ENCARTA ENCYCLOPEDIA, *Hiroshima and Nagasaki* (1998) ("U.S. estimates put the number killed in Hiroshima at 66,000 to 78,000 and in Nagasaki at 39,000 [while Japanese] gave a combined total of 240,000.").

129. See L. Doswald-Beck, *supra* note 111, at 152; see also Hans Blix, *Means and Methods of Combat*, in UNESCO, *INTERNATIONAL DIMENSIONS OF HUMANITARIAN LAW* 135, 136 (1988) (Mr. Blix represented Sweden at the Geneva Conference in which the Additional Protocols were drafted.) ("[L]ack of rules on bombing from the air was felt to be absurd."); Elbridge Colby, *Laws of Aerial Warfare*, 10 MINN. L. REV. 123, 148-53 (1926). The four Geneva Conventions of 1949 did advance humanitarian law, but did virtually nothing concerning the manner in which military forces may conduct war. The Geneva Conventions focused on the protection of individuals, civilians and prisoners of war who were held or under the jurisdiction of an occupying power.

130. See Colby, *supra* note 129, at 148-53.

131. See III HOWARD S. LEVIE, *PROTECTION OF WAR VICTIMS: PROTOCOL I TO THE 1949 GENEVA CONVENTIONS, RECORD OF PROCEEDINGS OF THE 1974-1977 GENEVA DIPLOMATIC CONFERENCE ON THE REAFFIRMATION AND DEVELOPMENT OF INTERNATIONAL HUMANITARIAN LAW APPLICABLE IN ARMED CONFLICTS* 126-27 (Supp. 1979) (statement of Mr. Mirimanoff-Chilikine of the ICRC) [hereinafter LEVIE, *RECORD OF PROCEEDINGS*].

132. See, e.g., *id.* at 60 (statement of Mr. Mirimanoff-Chilikine of the ICRC). "Customary international law," a recognized source of international law, is defined as "law result[ing] from a general and consistent practice of states followed by them from a sense of legal obligation." *RESTATEMENT (THIRD) OF FOREIGN RELATIONS* § 102 (1987); see also Statute of the Int'l Court of Justice, June 26, 1945, art. 38(1)(b), U.N.T.S. 993, 59 Stat. 1031 (entered into force Oct. 24, 1945).

133. Parks, *supra* note 124, at 2 (quoting Sir Arthur T. Harris, Marshal of the Royal Air Force, ARTHUR T. HARRIS, *BOMBER OFFENSIVE* 177 (1947)). But see *infra* notes 169-70 and accompanying text (discussing customary international law as restricting air warfare even before Additional Protocol I was adopted).

The concept of the battlefield contains the idea of geographic limitation. Civilians in the area were often able to move away or flee (or even watch the fighting from the surrounding hills...).

The advent of the airplane fundamentally altered the nature of warfare and brought in its wake a vast potential for destruction to the civilian population. Long range-missiles have taken this process even further. Bomb and missile attacks on strategic targets carry destruction far behind the front line, into the heart of a country, where they can strike at cities, towns, roads and railways, cultivated land and, above all, at the population that is not involved in the hostilities.¹³⁴

International law has still not caught up with advances in air power and weapons technology. The next two sections deal with how international law has responded to the relevant advances here, namely: (1) whether the cluster bomb causes unnecessary and superfluous suffering in violation of international agreements, and (2) whether the manner in which NATO used this weapon violates the First Additional Protocol of 1977 to the Geneva Convention of 1949, a treaty primarily designed to prohibit methods and means of warfare that unduly endanger civilians.

134. PROKOSCH, *supra* note 19, at 174 n.31 (quoting HANS-PETER GASSER, INTERNATIONAL HUMANITARIAN LAW 61 (1993)). In the nineteenth century, there were civilian victims. Civilians were often the victims in a defended city under siege; humanitarian law did not forbid the starvation of civilians in laying siege to a city or town. See Col. William J. Fenrick, *The Rule of Proportionality and Protocol I in Conventional Warfare*, 98 MIL. L. REV. 91, 114 (1982) (quoting The German High Command Trial, 12 LRTWC 1, 84 (1948) (concluding but regretting that international law permitted Field Marshal von Leeb, who apparently approved of an order to fire upon civilians who might attempt to flee Leningrad which was being denied food under the state of siege: "We might wish the law were otherwise but we must administer it as we find it.")). Note, however, that the 1977 First Protocol to the Geneva Conventions expressly prohibits starvation of civilians. See Additional Protocol I of 1977 to the Geneva Conventions of 1949, *opened for signature* Dec. 12, 1977, art. 54, 1125 U.N.T.S. 3-608 (1979), *reprinted in* 16 I.L.M. 1391 (1978), *and in* DOCUMENTS ON THE LAWS OF WAR, *supra* note 27 (entered into force Dec. 7, 1978). But aerial and artillery bombardment threatens civilians on a scale not experienced since the practice of the victorious army killing all men, women, and children of the vanquished, a practice carried out by armies of the world from primitive times until the end of the Middle Ages. See L. Doswald-Beck, *supra* note 111, at 139-140, 141; *see also* Levie, *supra* note 123 (discussing the increased threat that aerial warfare poses for civilians). Some commentators, however, have argued that modern air wars generally cause fewer civilian casualties than land wars. See, e.g., Major C.B. Shotwell, *Economy and Humanity in the Use of Force: A Look at the Aerial Rules of Engagement in the 1991 Gulf War*, 4 USAF J. LEGAL STUD. 15, 26 (1993) (asserting that the civilian death per ton of bombs dropped in Desert Storm was the lowest in the history of air warfare, thereby generally protecting the civilian population).

B. Cluster Bombs: A Weapon Causing Unnecessary and Superfluous Suffering?

Recognizing the cruel and unnecessary suffering some weapons cause, most states over the last 130 years have banned certain weapons and certain methods of using legitimate weapons. In St. Petersburg in 1868, the state parties banned dumddum bullets and any projectile less than 400 grams containing an explosive or charged with "fulminating or inflammable" substances.¹³⁵ At The Hague in 1899, the state parties banned poison and poisoned weapons. With the 1925 Geneva protocol, the state parties expressly banned the use of poison gas and later biological weapons. Under the First Protocol to the 1980 Convention on Conventional Weapons, the state parties banned fragmentation weapons whose fragments X-rays could not detect.¹³⁶ Under the 1995 Fourth Protocol to that Convention, the state parties banned blinding laser weapons.¹³⁷ Responding to an international grass roots campaign, an overwhelming number of countries entered into the Land Mines Convention in 1997, under which the parties banned anti-personnel landmines.¹³⁸

135. Roger S. Clark, *Methods of Warfare That Cause Unnecessary Suffering or Are Indiscriminate: A Memorial Tribute to Howard Berman*, 28 CAL. W. RES. INT'L L.J. 379, 384 (1998); see also 1868 St. Petersburg Declaration Renouncing the Use, in Time of War, of Explosive Projectiles Under 400 Grammes Weight, Dec. 11, 1868, 18 Martens 474-75, reprinted in 1 AM. J. INT'L L. 95-96 (Supp. 1907), and in DOCUMENTS ON THE LAWS OF WAR, *supra* note 27, at 29-31 [hereinafter 1868 St. Petersburg Declaration].

136. See Protocol on Non-Detectable Fragments to the U.N. Conference on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May be Deemed to be Excessively Injurious or to Have Indiscriminate Effects, *opened for signature* Apr. 10, 1981, 1342 U.N.T.S. 137, reprinted in 19 I.L.M. 1523-26 (1980), and in DOCUMENTS ON THE LAWS OF WAR, *supra* note 27, at 473, 479 (entered into force Dec. 2, 1983) [hereinafter Protocol on Non-Detectable Fragments]; see also Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, June 17, 1925, 26 Martens (3d) 643 (1932-1933), reprinted in 25 AM. J. INT'L L. SUPP. 94 (entered into force Feb. 8, 1928), and in DOCUMENTS ON THE LAWS OF WAR, *supra* note 27, at 139 (entered into force Feb. 8, 1928); 1899 Hague Declaration Concerning Asphyxiating Gases, July 29, 1899, 26 Martens NRG (2d) 998, reprinted in 1 AM. J. INT'L L. SUPP. 157 (1907), and in DOCUMENTS ON THE LAWS OF WAR, *supra* note 27, at 36.

137. See Blinding Laser Weapons Protocol, *supra* note 27, art. 1. Unfortunately, that Protocol leaves expansive exceptions, failing to prohibit production of laser blinding weapons and permitting their use when not intentionally directed at blinding.

138. See Ottawa Convention for the Banning of Anti-Personnel Landmines: Convention on the Prohibition of the Use, Stockpiling, Production, and Transfer of Anti-Personnel Mines and on Their Destruction, *opened for signature*, Dec. 3, 1997, reprinted in 36 I.L.M. 1507 (1997) (entered into force Mar. 1, 1999) [hereinafter Ottawa Convention]. As of this writing, 133 states have signed the Landmine Convention and 122 have ratified it. Signatures, Ratifications/Accessions to the Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction, Sept. 18, 1997, ICRC, available at <http://gvalnwb2.icrc.org/icrceng.nsf/Index/CE A9 A 0 1 FDEFEE3044125658D0030BC1A?Opendocument> (last visited Apr. 20, 2002). The United States has refused to sign this treaty. See Christine Capuche, *The Ottawa Treaty and its Impact on U.S. Military Policy & Planning*, 25 BROOK J. INT'L L. 183, 184 (1999) (noting

The 1868 Declaration of St. Petersburg, the first modern international agreement to ban a weapon of warfare, established, among others, the following two principles: (1) "[T]he only legitimate object which States should endeavor to accomplish during war is to weaken the military forces of the enemy," and (2) "That this object would be exceeded by the employment of arms which uselessly aggravate the suffering of disabled men, or render their death inevitable."¹³⁹ This Declaration subsequently led to the Hague Convention of 1899 and later to Hague Convention of 1907, Regulation 23(e), prohibiting belligerents from "employ[ing] arms, projectiles, or material calculated to cause unnecessary suffering."¹⁴⁰ The Hague Rules have achieved the status of customary international law.¹⁴¹

Following the lead of the St. Petersburg Declaration and the two Hague Conventions, the 1977 First Additional Protocol prohibits methods or means of warfare that inflict unnecessary suffering on civilians or combatants:

In any armed conflict, the right of the parties to the conflict to choose methods or means of warfare *is not unlimited*.

It is prohibited to employ weapons, projectiles and material and methods of warfare of a nature *to cause superfluous injury or unnecessary suffering*.¹⁴²

This Article is hardly clear to the uninitiated reader. The first subparagraph derives from Article 22 of the 1907 Hague Rules. Commentators suggest that this subparagraph refers, among other things, to conduct already

that President Clinton stated that he refused to sign the treaty because it would require the removal of mines separating North and South Korea and would ban anti-tank mines).

139. 1868 St. Petersburg Declaration, *supra* note 135; see also Yves Sandoz, ICRC Involvement in Banning or Restricting the Use of Certain Weapons, INT'L COMMITTEE ON RED CROSS, (Feb. 9 2000) (presentation by Yves Sandoz at New York University School of Law at seminar for diplomats on international humanitarian law), available at <http://www.icrc.org/icrceng.nsf/5cacfd48ca698b641256242003b3295/a7c47c76aaea2e22412568a2002c4db5?OpenDocument&Highlight=2,yves>.

140. Hague Regulations Respecting the Laws and Customs of War on Land, Oct. 18, 1907, art. 23(e), reprinted in DOCUMENTS ON THE LAWS OF WAR, *supra* note 27, at 52 (entered into force Jan. 26, 1910).

141. See the decision of the International Military Tribunal at Nuremberg, In re Goering and Others, INTERNATIONAL LAW REPORTS 203 (October 1, 1946) (concluding that the "[Hague] Convention expressly stated that it was an attempt to revise the general laws and customs of war, which it thus recognized to be then existing; but by 1939 these rules laid down in the Convention were recognized by all civilized nations, and were regarded as being declaratory of the laws and customs of war which are referred to in Article 6(b) of the Charter."); see also In re Matter of a Proposal for a Formal Request for Deferral to the Competence of the Tribunal Addressed to the Republic of Bosnia and Herzegovina in Respect of Radon Karadzic, Ratko Mladic, and Mico Stanisic, International Criminal Tribunal for the Former Yugoslavia (May 16, 1995), ¶ 64 (concluding that Article 3 of the Statute establishing the ICTY provides a non-exhaustive list of facts fitting within the rubric of "laws or customs of war" and are "not limited to those contained in the Hague Convention").

142. Additional Protocol I, *supra* note 134, arts. 35(1), (2) (emphasis added).

banned by international law such as the use of poison or poison weapons, perfidious killing, wounding or capturing enemy combatants, denying quarter, murdering prisoners of war or other detained persons, and attacks on civilians as such.¹⁴³ The second subparagraph “reaffirms” the rule of the 1899 and 1907 Hague Regulations and “expressly extends” its application to “methods of warfare” as well as the “weapons, projectiles and material” which were the subject of the rules in the 1899 and 1907 Hague Regulations.¹⁴⁴ This subparagraph limits the means and methods of warfare a party may employ to those necessary for accomplishing the military objective: “The prohibition concerning the infliction of superfluous injury of unnecessary suffering is merely an implementing rule derived from the basic principles...prohibiting those measures of military violence, not otherwise prohibited by international law, which are not necessary (relevant and proportionate) to the achievement of a definite military advantage.”¹⁴⁵

This standard is vague. Military actors have to weigh the type of weapon and the method of employing it to determine whether it is “relevant and proportionate” to achieving “a definite military advantage.” If the weapon, the method of employing it, or both are like using a sledgehammer to kill a fly, presumably the military actor has violated this subparagraph. Would, however, using an ordinary hammer violate the subparagraph, though a light fly swatter presumably would be a sufficient (and actually a more effective) method of achieving the objective? Line drawing in this context is challenging.¹⁴⁶

143. See BOTHE ET AL., *supra* note 124, at 194; see also ICRC COMMENTARY, *supra* note 70, at 390.

144. BOTHE ET AL., *supra* note 124, at 195; see also Burris M. Carnahan, *Unnecessary Suffering, the Red Cross and Tactical Laser Weapons*, 18 LOY. L.A. INT’L & COMP. L. REV. 705, 713 (1996) (noting that “[i]t has been observed that ‘[t]he term “unnecessary suffering” implies that there is such a thing as “necessary suffering,”’ because ‘the infliction of some suffering and injury are an inherent feature of armed conflict.’” (citations omitted)); ICRC COMMENTARY, *supra* note 70, at 409–10.

145. BOTHE ET AL., *supra* note 124, at 195. The terms superfluous, suffering, and unnecessary injury are not defined. See Timothy McCormack, *From Solferino to Sarajevo: A Continuing Role for International Humanitarian Law?*, 21 MELB. U. L. REV. 621, 634 (1997).

146. At least one commentator suggests that this section should not be analogized to the rule of proportionality:

[I]n the case of Hague Rules, Article 23(e) and the First Additional Protocol, Article 35 (2), which apply to suffering or injury inflicted on combatants and damage to material military objectives, the very idea of proportionality is irrelevant; the rule adopted by international law-making bodies that the suffering, injury or damage likely to result from a certain means or method of warfare is ‘unnecessary’ and ‘superfluous’ absolutely prohibits any recourse to that means or method, and hence excludes any evaluation of the proportional relationship between the suffering, injury or damage that would be caused if it were used and ‘the concrete and direct military advantage’ that might be ‘anticipated.’

Henri Meyrowitz, *The Principle of Superfluous Injury or Unnecessary Suffering*, 299 INT’L REV. RED CROSS 98, 110 (1994). But see McCormack, *supra* note 145, at 635 (observing

The test is even actually more complex than the previous paragraph suggests. On the humanitarian side of the equation, the military actor needs to take into account the "painfulness or severity of wounds, mortality rates, and the incidence of permanent damage or disfigurement and the feasibility of treatment under field conditions."¹⁴⁷ The military side of the equation involves the direct military advantage anticipated by using the weapon or method of combat. For example, if the military actor is attempting to disable the enemy's tanks, an anti-tank weapon designed to pierce several inches of armor might be used. No one could credibly claim that an artillery shell that is so designed would violate this Article. Yet such a weapon could inflict extraordinary suffering upon tank crews.¹⁴⁸ Only if the military actor used an anti-tank weapon of this sort solely to kill troops without intending to disable armor might employment of that weapon violate this Article of the Protocol. Consequently, whether a military actor violates this Article depends greatly on the circumstances. Only a manifestly clear violation of this Article will likely be recognized.

Employing cluster bombs in some circumstances may, however, meet this strict test. By all accounts, the BLU-97 submunition is an exceptionally powerful bomb. A single BLU-97 submunition sends 308 pieces of shrapnel at more than three times the speed of a bullet shot from an automatic rifle, each piece capable of causing injury at long distances.¹⁴⁹ The submunition often inflicts fatal wounds on all within its direct path; those who survive generally lose one or more limbs. Physicians report never having had to treat such horrific wounds. The shrapnel is so small, 30 grains, that surgeons have great difficulty in removing it. Each submunition also contains a conical metal strip designed to penetrate seven inches (17.8 cm.) of armor. If it strikes a human being instead, it obviously would cause grave injuries if not death.¹⁵⁰ The fragmentation cluster bomb meets the

that, "the existence of the general prohibition [in Article 35 of the First Protocol] itself has never resulted in the prohibition of a specific weapons type"). The only way to stop the use of a weapon is to ban it outright. *See id.*

147. BOTHE ET AL., *supra* note 124, at 196; *see also* ICRC COMMENTARY, *supra* note 70, at 407-08, ¶¶ 1428-29.

148. *See* Fritz Kalshoven, *Conventional Weaponry: The Law from St. Petersburg to Lucerne and Beyond*, in *ARMED CONFLICT AND THE NEW LAW*, *supra* note 111, at 259 (citing David Hughes-Morgan, U.K. Representative to the Geneva Convention drafting the Additional Protocols). The preamble to the 1868 St. Petersburg Declaration stated that in order to achieve military objectives it suffices to put enemy troops hors de combat rather than to kill them. Given the advances in artillery and aerial bombardment, that principle is now qualified. *See* BOTHE ET AL., *supra* note 124, at 196.

149. *See supra* note 55 and accompanying text.

150. One physician describes the extraordinary power of the BLU-97B submunition:

Cluster bombs cause enormous pain and injury. A person standing a metre or two away from the cluster bomb gets the so-called 'air-blast' injuries, coming from a powerful air wave. *The body remains mostly intact while internal organs like liver, brain or lungs are imploded inside.* Parts of the exploding bombs cause severe injuries to people standing fifteen or twenty metres away, ripping apart their limbs or

humanitarian test for weapons causing superfluous suffering: cluster bombs cause “painfulness and sever[e]...wounds”; those who are not killed by these weapons, suffer maiming, usually losing a limb. Thus there is a “high incidence” both of “mortality” and “disfigurement.” Needless to say, the wounds caused by cluster bombs are so severe that “treatment under battlefield conditions” is hardly “feasible.”

Outside of nuclear weapons, biological weapons, or poison gas, it is hard to imagine a weapon more harmful to human beings than cluster bombs.¹⁵¹ One could persuasively argue that these weapons are so deadly and so pernicious that the few who survive may envy the dead. Consequently, the case for holding that these weapons impose “superfluous injury” and “unnecessary suffering” is established regardless of the anticipated military advantage in employing them. The Protocol, however, does not so provide.

Cluster bombs are typically used against airfields, trucks, and tanks, as well as troops. If used to defeat tanks, a well-recognized military objective, it may be difficult to demonstrate that given the armor that one has to penetrate to defeat a tank, that deploying this weapon so violates the Protocol. If deployed solely against troops on the ground, the case might be different. Conventional artillery shelling though clearly destructive does not necessarily wreak the same degree of destruction that is uniformly wrought by the wide swath of cluster bombs, wiping out or maiming all in their path. During the Gulf War, the Iraqi soldiers called cluster bombs steel rain, from which few emerge alive and virtually none

hitting them into the stomach or head. Only those standing more than twenty metres away suffer minor injuries.

Peric-Zimonjic, *supra* note 55, ¶ 12 (quoting Dr. Miodrag Lazic, head of the surgical department at Nis University hospital).

151. Incendiary weapons might qualify, but recall that cluster bombs are more “effective” against personnel than napalm. See Krepon, *supra* note 26, at 269. Furthermore, the BLU-97 bomblet is also an incendiary weapon. See *supra* notes 43–55 and accompanying text. Anti-personnel incendiary bombs were banned by the Third Protocol of the CCW:

Munitions designed to combine penetration, blast or fragmentation effects with an additional incendiary effect, such as armour-piercing projectiles, fragmentation shells, explosive bombs and similar combined-effects munitions in which the incendiary effect is not specifically designed to cause burn injury to persons, but to be used against military objectives, such as armoured vehicles, aircraft and installations or facilities.

Protocol on Prohibitions or Restrictions on the Use of Incendiary Weapons, U.N. Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May be Deemed to be Excessively Injurious or to Have Indiscriminate Effects, with Annexed Protocols, *opened for signature*, Apr. 10, 1981, art. 1(1)(b)(ii), 1342 U.N.T.S. 137, *reprinted in* 19 I.L.M. 1287, 1523–26 (1980), *and in* DOCUMENTS ON THE LAWS OF WAR, *supra* note 27, at 485 (entered into force Dec. 2, 1983) [hereinafter Protocol on the Use of Incendiary Weapons].

unscathed.¹⁵² Modern weaponry, however, generally has amazing destructive power.

Balancing the humanitarian concerns against the military ones, as required by the Protocol, does not yield a ready answer on the fragmentation cluster bomb. It is a horrific weapon, leaving death and grievous wounds in its huge wake. Logically, such a weapon should be deemed to cause unnecessary suffering, particularly when directed solely against troops.¹⁵³ International humanitarian law, however, does not conclusively so hold. When used against more hardened targets, international law almost certainly does not prohibit the weapon. To bring the cluster bomb unquestionably under the rule of law requires a more specific ban.

A Red Cross proposal to add more objective criteria to the superfluous suffering prohibition may help lend more precision to the legal analysis. In examining treaties that have banned weapons, a physician observed that by focusing on banning a particular weapon, these treaties left a wide loophole,

152. See, e.g., Kennedy & Kincheloe, *supra* note 51, at 26 (noting that “the Iraqis referred to the grenade barrage as ‘steel rain’ or ‘iron rain’ because of the huge quantity delivered and impact pattern density, with grenades [cluster bombs] striking every few feet in the target area”).

153. But even used against troops, it is not clear that the weapon violates Article 35 of the Protocol:

This last assertion, stating that a weapon is unlawful whenever unnecessary suffering would foreseeably occur in a simple majority of instances, is a more sweeping conclusion than the evidence warrants. The military value of a weapon in specific circumstances may be so great that it outweighs the fact that these circumstances were not present when the weapon produced the majority of casualties. Over the last eighty years, for example warplanes using small-caliber incendiary and explosive munitions have caused the vast majority of wounds during aerial strafing of ground forces, not during air-to-air combat. Yet the military value of such munitions in attacking other aircraft is so great that today no one would question the legality of their use by fighter aircraft.

Carnahan, *supra* note 144, at 720. Militarily, the cluster bomb has considerable value. For example, against a platoon of tanks, it is 458% more effective than the Mark-82, a 500 lb. dumb bomb. See West, *supra* note 57, at 3 (also noting that the CBU-87 was 37% more effective than the Mark-82 against an infantry company, 35% more against a truck park, 32% more effective against a truck column, and 220% more effective against a tank column. Only against an Armor Personnel Carrier (APC) platoon, an APC column, and aircraft on a ramp was the Mark-82 more effective.) Aside from the Mark series of bombs, another alternative to the cluster bomb is the concrete bomb. Note that the United States used this weapon in Iraq to limit civilian casualties “[i]f we have a target that—a specific target that we are very concerned about collateral damage.” *U.S. Dep’t of Def., Briefing*, Oct. 7, 1999 (statement of Gen. Shelton, Chairman on the Joint Chiefs of Staff), available at http://www.fas.org/news/iraq/1999/10/t10071999_t007usac-iraq.htm; see also Lance Renfro, *U.S. Using Concrete Bombs on Iraq*, ASSOCIATED PRESS, Oct. 7, 1999, ¶ 8, available at <http://www.cnn.com/WORLD/meast/9910/07/us.iraq/> (last visited Apr. 5, 2002).

allowing states to get around them.¹⁵⁴ For example, an 1899 treaty outlawed dum-dum bullets because such bullets splay open, causing large wounds upon entering the body.¹⁵⁵ The treaty, however, did not limit the velocity of bullets. Smaller bullets going at a higher rate of speed can cause wounds as large as those caused by dum-dum bullets. By the simple expedient of using faster bullets, states' armies circumvented the 1899 Convention.¹⁵⁶

The physician did not, however, suggest that the drafters of the 1899 Convention should also have limited the speed of bullets. She proposed that the drafters should have concentrated not on the weapon, but on how the weapon *affects the human body*.¹⁵⁷ Consequently, instead of outlawing dum-dum bullets, she would have banned any bullet that causes certain effects.¹⁵⁸ For example, projectiles could be prohibited if they are "of a nature to burst or deform while penetrating the human body, to tumble early in the human body, or to cause shock waves leading to extensive tissue damage or even a lethal shock."¹⁵⁹ In this vein, the Red Cross initiated the SIRUS Project, whose aim is to develop objective criteria for determining whether a weapon causes "unnecessary and superfluous suffering."¹⁶⁰

Aside from criticizing the way the international community has gone about banning certain weapons, the SIRUS Project criticizes the "unnecessary and superfluous suffering" standard as being hopelessly vague and subjective. The Red

154. See Robin M. Coupland, *The SIRUS Project: Towards a Determination of Which Weapons Cause "Superfluous Injury or Unnecessary Suffering"*, § 3.5 (1997), available at http://www.redcross.org.au/ihl/articles/coupland_the_sirus_project_97.htm (last visited Apr. 8, 2002).

155. See The Hague, act 4, declaration 3, July 29, 1899, reprinted in DOCUMENTS ON THE LAWS OF WAR, *supra* note 27, at 39, available at <http://www.icrc.org/IHL.NSF/52d68d14de6160e0c12563da005fdb1b/81ef87b37f70d8fac125641e003513a1?OpenDocument>.

156. See Meyrowitz, *supra* note 146, at 118 (noting that commentators criticized "the small-calibre high-velocity weapons used by the United States Army during the Vietnam War as violating spirit, if not the letter, of the 1899 Convention"); see also *id.* at 119 (quoting Giorgio Malinverni, *Armes Conventionnelles Modernes Et Droit International*, in XXX ANNUAIRE SUISSE DE DROIT INTERNATIONAL, 23, 47 (1974) ("[H]igh velocity projectiles obviously belong to the category of weapons causing superfluous injury or unnecessary suffering.")).

157. See Coupland, *supra* note 154, at 12.

158. See *id.*

159. Meyrowitz, *supra* note 146, at 118 (quoting GERMAN DEFENSE MINISTRY, HUMANITARIAN LAW IN ARMED CONFLICTS—MANUAL ¶ 407 (1992)). The ICRC report on weapons that cause unnecessary suffering states, "Because of the tendency of high velocity projectiles to tumble and become deformed in the body, and to set up especially intense hydrodynamic shock waves, the wounds which they cause may resemble those of dum-dum bullets." *Id.* at 119 (quoting INT'L COMM. OF THE RED CROSS, WEAPONS THAT MAY CAUSE UNNECESSARY SUFFERING OR HAVE INDISCRIMINATE EFFECTS: REPORT ON THE WORK OF EXPERTS 39 (1973)).

160. *Id.* at 119.

Cross proposes that the standard be interpreted to include whether the *design of the weapon foreseeably causes* the following:

Criterion 1. specific disease, specific abnormal physiological state, specific abnormal psychological state, specific and permanent disability or specific disfigurement.¹⁶¹

Criterion 2. a field mortality of more than 25% or hospital mortality of more than 5%.¹⁶²

Criterion 3. Grade 3 wounds as measured by the Red Cross wound classification. ("Grade 3 denotes skin wounds of 10 cm or more with a cavity.")¹⁶³

Criterion 4. effects for which there is no well-recognized and proven treatment.¹⁶⁴

If the international community agreed that these criteria determined whether a weapon should be banned for causing "unnecessary and superfluous injury," then cluster bombs would be banned. Cluster bombs fall squarely under the first three criteria. Cluster bomb submunitions are so powerful that few survive the attack. If troops are unlucky enough to be within the footprint of a CBU-87B, for example, most will die. The mortality rate is unquestionably higher than the twenty-five percent set forth in criterion two. A high percentage of those who survive will suffer permanent disability, usually the loss of a limb, criterion one. Cluster bombs cause gaping wounds, easily satisfying criterion three.¹⁶⁵

Unfortunately, current legal interpretations of "superfluous and unnecessary injury" do not embrace the SIrUS criteria.¹⁶⁶ Nonetheless, a noted commentator has observed that "[a]lthough weapons or means of warfare are seldom prohibited on the sole basis of their incompatibility with such general principles as those of humanity or the dictates of public conscience, a *sense of abhorrence of a particular weapon* can be an important factor in the development of treaty prohibitions."¹⁶⁷ The SIrUS criteria may help to generate a "sense of

161. See Coupland, *supra* note 154, at 12–13.

162. See *id.* at 13.

163. Of the wounds that conventional weapons inflict, less than ten percent fall into the Red Cross's Grade 3 category, exceptionally large wounds. See *id.* at 14.

164. See Coupland, *supra* note 154, at 13.

165. The ICRC wound grading scheme is as follows: Grade 1 denotes skin wounds of less than 10 cm without a cavity; Grade 2 denotes skin wounds of less than 10 cm but with a cavity; Grade 3 denotes skin wounds of 10 cm or more with a cavity. It is not possible to establish a precise correlation between grade and energy deposit nor between grade and type of weapon. See *id.*

166. See Carnahan, *supra* note 144, at 732 (observing that "[n]one of the criteria cited there [in the SIrUS project] refer to the military value of the weapon. As demonstrated earlier, such an approach finds no support in state practice or other accepted sources of international law.>").

167. Theodor Meron, *The Martens Clause, Principles of Humanity, and Dictates of Public Conscience*, 94 AM. J. INT'L L. 79, 83–84 (2000) (emphasis added).

abhorrence" for cluster bombs. If such a sense leads to a ban on cluster bombs, that would constitute a significant advance in international humanitarian law.

III. THE CLUSTER BOMB, NATO'S AIR CAMPAIGN, AND A TREATY ATTEMPTING TO PROTECT CIVILIANS FROM MODERN LAND AND AIR WARFARE

A. *The 1977 Additional Protocol I to the Geneva Conventions of 1949*

Although the cluster bomb may not yet be classified as a weapon inflicting superfluous injury, the typical manner in which it is used may run afoul of the First Additional Protocol to the Geneva Conventions. That Protocol arose out of the world's experience with air warfare in the first 75 years of the last century. In 1938 after the Luftwaffe's and Mussolini's Air Force's bombing in Spain and similar types of indiscriminate bombing by Japan in China,¹⁶⁸ the League of Nations unanimously issued a resolution "concerning Protection of Civilian Population Against Bombing from the Air in Case of War":

1. The intentional bombing of the civilian population is illegal;
2. Objectives aimed at from the air must be legitimate military objectives and must be identifiable;
3. Any attack on legitimate military objectives must be carried out in such a way that civilian populations in the neighborhood are not bombed through negligence....¹⁶⁹

Germany and the Allied Powers ignored the Resolution in World War II. Some commentators assert that the Resolution constitutes customary international law and is thus binding on belligerents regardless of their adherence to treaty.¹⁷⁰

168. See IAN BROWNLIE, *SYSTEM OF THE LAW OF NATIONS, STATE RESPONSIBILITY* (PART I) 113-14 (1983) (quoting United States Diplomatic Note from the American Ambassador in Tokyo to the Japanese Minister for Foreign Affairs, *Protesting Japanese Indiscriminate Bombing of Nanking*, Sept. 22, 1937); MICHAEL SHALLER, *THE UNITED STATES AND CHINA IN THE TWENTIETH CENTURY* 50 (1979).

169. L. Doswald-Beck, *supra* note 111, at 167 n.32 (citing *Paper on the Protection of Civilian Populations Against Air Bombardment*, League of Nations Doc. A.69, 1938, IX (1938)); see Fenrick, *supra* note 134, at 97 (quoting D. SCHINDLER & J. TOMAN, *THE LAWS OF ARMED CONFLICT* 162 (2d ed. 1981) (quoting the 1938 League of Nations Resolution concerning Protection of Civilian Population Against Bombing)).

170. Explaining that there are three principles of customary international law applicable in land, sea, or air warfare, Prime Minister A.N. Chamberlain stated:

In the first place, it is against international law to bomb civilians as such and to make deliberate attacks upon civilian populations. In the second place, targets which are aimed at from the air must be legitimate military objectives and must be capable of identification. In the third place, reasonable care must be taken in attacking those military objectives, so that, by carelessness, a civilian population in the neighborhood is not bombed.

But given the manner in which aerial and artillery bombardment has been conducted throughout the world since 1938, at best one can conclude that at least as of 1976 this asserted custom was "fragile."¹⁷¹

In 1956 at the XIXth International Conference of the Red Cross, the participants adopted Draft Rules for the Limitation of the Dangers Incurred by the Civilian Population in Time of War.¹⁷² Although ignored by states at the time, the Rules contain the seeds of a treaty later adopted by most countries. The Rules require military commanders to identify and target only military objectives:

Art. 8. The person responsible for ordering or launching an attack shall first of all: (a) make sure that the objective, or objectives, to be attacked are military objectives within the meaning of the present rules, and are duly identified.¹⁷³

The commanders are directed to choose military objectives that least threaten civilians and consider the "loss and destruction" that an attack "is liable to inflict on civilians."¹⁷⁴ The Rule then sets forth the customary international law proportionality principle prohibiting a military actor from attacking, "if, after due consideration, it is apparent that the loss and destruction would be disproportionate to the military advantage anticipated...."¹⁷⁵

The next Rule requires that military commanders should choose weapons that minimize civilian casualties and use the weapons in a manner likely to prevent civilian losses, particularly stressing the need for precision bombing in populated areas:

In particular, *in towns and other places with a large civilian population*, which are not in the vicinity of military or naval operations, the attack shall be conducted *with the greatest degree of*

L.R. Penna, *Customary International Law and Protocol I: An Analysis of Some Provisions*, in STUDIES AND ESSAYS ON INTERNATIONAL HUMANITARIAN LAW AND RED CROSS PRINCIPLES 200 (1984) (quoting with approval Prime Minister Chamberlain's statement of the rule of customary international law and noting that his statement was later codified in a unanimously adopted League of Nations Resolution, quoted *supra* note 169 and accompanying text). This work provides a useful discussion of the customary rules protecting civilians. I guess my problem with custom is that all sides violated these rules in every war since World War II and possibly since WWI. If every side violates a rule over a long period of time, the so-called custom appears weak, to say the least.

171. See L. Doswald-Beck, *supra* note 111, at 145.

172. See Int'l Comm. of the Red Cross, *Draft Rules for the Limitation of Dangers Incurred by the Civilian Population in Time of War*, ¶ 1 (1956), available at <http://www.icrc.org/ihl.nsf/73cb71d18dc4372741256739003e6372/fea0b928100d3135c12563cd002d6c10?OpenDocument> (last visited Apr. 5, 2002) [hereinafter *Draft Rules*].

173. See *id.*; see also Fenrick, *supra* note 134, at 97 (quoting *Draft Rules*, *supra* note 172, art. 8(a)).

174. Fenrick, *supra* note 134, at 97 (quoting *Draft Rules*, *supra* note 172, art. 8(a), (b)).

175. *Id.*

precision. It must not cause losses or destruction beyond the immediate surroundings of the objective attacked.¹⁷⁶

Ten years later, the United Nations International Conference on Human Rights held in Teheran passed a resolution seeking "additional humanitarian international conventions...to ensure the better protection of civilians."¹⁷⁷ That same year the U.N. General Assembly unanimously passed a resolution stating that "it is prohibited to launch attacks against the civilian population as such" and that a "distinction must be made at all times between persons taking part in hostilities and members of the civilian population to the effect that the latter be spared as much as possible."¹⁷⁸ The General Assembly passed a similar resolution the following year.¹⁷⁹

In 1973, the International Committee of the Red Cross (ICRC) submitted the text of two draft Protocols additional to the Geneva Conventions.¹⁸⁰ These became the working documents of an international conference convened by the Swiss Federal Council in 1974.¹⁸¹ A principal purpose of the Conference was to deal with the "methods and means of combat," the law governing which had remained unchanged since the 1907 Hague Conference.¹⁸²

Conferences on humanitarian law often respond to perceived abuses in recent wars. This conference was no exception. The Second World War, Korea, Vietnam, Bangladesh, the Middle East, Nigeria, and Japan's invasion of China presented an array of examples that many believed the conference had to address.¹⁸³ Protecting civilians from armed conflict became one of the key themes of the conference.

Additional Protocol I to the Geneva Conventions of 1949 emerged from the Conference. Section IV of Protocol I, the longest of the sections, is devoted to protecting civilians.¹⁸⁴ The Protocol addresses many of the problems modern weaponry and aircraft pose for the civilian population.

176. *Id.*

177. L. Doswald-Beck, *supra* note 111, at 150 (citing Resolution XXIII adopted by the International Conference on Human Rights, Teheran, 12th May 1968).

178. *Id.*

179. *See id.* at 154 (citing U.N. G.A. Res. 2675, U.N. GAOR (1970)).

180. *See* BOTHE ET AL., *supra* note 124, at 4.

181. *See id.* One hundred twenty-four States participated the first year of the Conference; 120 in the second; 107 in the third; and 109 in the fourth. The Conference met for several months each year from 1974 to 1977.

182. *Id.* at 2. The International Committee of the Red Cross (ICRC) explains the difference between methods and means of combat: "The term 'means of combat' or 'means of warfare' (*cf.* Article 35—'Basic rules') generally refers to the weapons being used, while the expression 'methods of combat' generally refers to the way in which such weapons are used." ICRC COMMENTARY, *supra* note 70, at 621, ¶ 1957.

183. *See* Hans Peter Gasser, *A Brief Analysis of the Geneva Protocols*, 19 AKRON L. REV. 525, 525 (1986); *see also* SHALLER, *supra* note 168, at 50.

184. *See* Additional Protocol I, *supra* note 134, art. 48.

World War II enshrined the concept of total war,¹⁸⁵ namely, that the civilian infrastructure that helps play a part in developing the technology used in the warfare is fair game.¹⁸⁶ Since civilians themselves work in institutions that ultimately play some role in the war effort, killing civilians is an acceptable war aim. When one accepts the concept of total war, destroying everything that even remotely contributes to the war effort in highly developed societies inevitably seems justified. Parallel to this notion is the idea of acceptable "collateral damage," an Orwellian euphemism for killing, maiming, and wounding civilians when attempting to bomb "military targets."

Some commentators suggested that "quasi-combatants" could be made the subject of attack.¹⁸⁷ Quasi-combatants, for example, would be civilians working in important industries for the war effort. Under this theory, these civilians presumably could be killed in their homes as a lawful military objective. Major General Ira Eaker, commander of the Eighth Air Force in World War II, stated: "The material destruction by these overcast attacks *in workmen's homes* and in harbor facilities and allied war industries is considerable and is certainly alone worth the effort."¹⁸⁸ The quasi-combatant notion essentially legitimizes the concept of total war.

Additional Protocol I completely rejects this notion. The Protocol broadly defines civilians as anyone who is not a member of the armed forces or who is not otherwise actively participating in the conflict.¹⁸⁹ The definition also prohibits

185. See WORMSER, *supra* note 121, at 543.

186. See SPAIGHT, *supra* note 126, at 272 (quoting J.C. Ford, S.J., for the proposition that target area bombing or "obliteration bombing" of large sections of cities "leads...to the immoral barbarity of total war"); Sacharoff, *supra* note 125, at 72 (explaining that "[t]otal war" describes strategies, tactics, and weapons that result in wholesale destruction of cities and a great part of populations").

187. See, e.g., L. Doswald-Beck, *supra* 111, at 147 (citing J. STONE, *LEGAL CONTROLS OF INTERNATIONAL CONFLICT* 630-31 (1954)).

188. CRANE, *supra* note 125, at 67 (quoting Maj. Gen. Ira Eaker, commanding the Eighth Air Force in World War II. Eaker was "especially enthusiastic" about nonvisual attacks occurring at night or in overcast skies, using primitive radar systems.). Maj. General James Doolittle, who later commanded the Eighth Air Force, opposed non-visual bombing and urged only precision bombing. See *id.* at 72.

189. The Protocol defines "civilian" negatively, namely, as one who neither is a member of the armed forces nor is otherwise taking an active part in the conflict:

1. A civilian is any person who does not belong to one of the categories of persons referred to in Article 4 A(1), (2), (3) and (6) of the Third Convention and in Article 43 of this Protocol. In case of doubt whether a person is a civilian, that person shall be considered to be a civilian.
2. The civilian population comprises all persons who are civilians.
3. The presence within the civilian population of individual's who do not come within the definition of civilians does not deprive the population of its civilian character.

Additional Protocol I, *supra* note 134, art. 50. This broad definition of civilian has drawn sharp criticism. See, e.g., Parks, *supra* note 124, at 116-35; Lt. Col. Burris M. Carnahan, *Additional Protocol I: A Military View*, 19 AKRON L. REV. 543, 544-46 (1986).

attacking a civilian population solely because some combatants mingle with the civilian population.¹⁹⁰ Consequently, attacking villages in which some guerrilla fighters are known to congregate is prohibited.¹⁹¹

Furthermore, the Protocol addresses other consequences of aerial and artillery bombardment. Additional Protocol I does not ban any conventional weapons; it does, however, prohibit the way conventional weapons may be used.¹⁹² First, the civilian population itself, as well as individual civilians, "shall not be the object of attack."¹⁹³ The Luftwaffe's bombing of Guernica thus would have been prohibited by this provision. Second, terror bombing is likewise banned.¹⁹⁴ Britain's strategy of massive night bombing of German cities to break civilian morale in World War II and Saddam Hussein's employing Scud Missiles to bomb Israel during the Gulf War would be prohibited under this provision.¹⁹⁵ Third, the Protocol prohibits "indiscriminate attacks." Article 51(4) defines such attacks as follows:

- (a) those which are not directed at a specific military objective;
- (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

190. See Additional Protocol I, *supra* note 134, art. 51(7).

191. See *id.*

192. In 1974, the International Committee of the Red Cross convened a conference in Lucerne to attempt to form a multi-lateral treaty to ban certain anti-personnel weapons, namely, cluster bombs, flechettes, incendiary bombs, air laid landmines, and tumbling projectiles of small caliber weapons. To the surprise of many, the experts were sharply divided on the desirability of abolishing these conventional weapons. See Frits Kalshoven, *The Solider and his Golf Clubs*, in STUDIES AND ESSAYS ON INTERNATIONAL HUMANITARIAN LAW AND RED CROSS PRINCIPLES 382 (Int'l Comm. of the Red Cross ed., 1984) (citing Chapter IV of the *Official Report of the Lucerne Conference*); see also PROKOSCH, *supra* note 19, at 150-55; Frits Kalshoven, *Conventional Weaponry: The Law from St. Petersburg to Lucerne and Beyond*, in ARMED CONFLICT AND THE NEW LAW, *supra* note 111, at 265. Consequently, it was agreed that there would be a subsequent U.N. conference dealing with specific conventional weapons. See PROKOSCH, *supra* note 19, at 149, 150. This latter conference resulted in a convention, entitled, U.N. Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May be Deemed to be Excessively Injurious or to Have Indiscriminate Effects, with Annexed Protocols, *opened for signature*, Apr. 10, 1981, 1342 U.N.T.S. 137, *reprinted in* 19 I.L.M. 1287, 1523-26 (1980), and in DOCUMENTS ON THE LAWS OF WAR, *supra* note 27, at 473 (entered into force Dec. 2, 1983) (Protocols I & II ratified by the United States on Mar. 24, 1995) [hereinafter Convention on Conventional Weapons].

193. Additional Protocol I, *supra* note 134, art. 51(2).

194. See *id.* art. 51(2): "Acts or threats of violence the primary purpose of which is to spread terror among the civilian population are prohibited." *Id.*

195. See CRANE, *supra* note 125, at 18.

consequently, in each such case, are of a nature *to strike military objectives and civilians or civilian objects without distinction*.¹⁹⁶

B. Whether Knowingly Delivering “Dud” Cluster Bombs Violates Additional Protocol I

1. An Indiscriminate Weapon?

The issue here is whether knowingly bombarding an area with cluster bombs coupled with knowledge of their substantial dud rate fails to discriminate military targets from civilians. Subparagraph (b) of Article 51(4) refers to “blind” weapons which “*cannot be directed at a specific military objective*.”¹⁹⁷ Attaching incendiary bombs to free flying balloons, as the Japanese did in World War II, or using rocket bombs with crude guidance systems, as the Germans did with their V2 rockets, would violate this subparagraph.¹⁹⁸ Such blind weapons by their nature or by the manner in which they are used *cannot be accurately targeted* to discriminate between civilians and military objectives. Unrecorded and unmarked minefields of mines without reliable self-destruct mechanisms violate subparagraph (b):

The true problem with manually emplaced mines of obsolete design is that they may remain active and in place for many years after their military purpose has passed into history. Unless all feasible precautions, such as recording, marking or other warning and mine removal, are taken to reduce the danger to civilians, such minefields could offend against paragraph 4(b) as *blind weapons which are indiscriminate as to time*.¹⁹⁹

196. Additional Protocol I, *supra* note 134, art. 51(4) (emphasis added). The Additional Protocol applies only to international conflicts. *See id.* art. 1(3) (incorporating by reference common Article 2 of the Geneva Conventions of 1949). The Kosovo intervention, however, was an international conflict. In any event, there is a recent trend towards eliminating the distinctions in international humanitarian law between internal and international conflicts. *See* Wiebe, *supra* note 32, at 100 (citing Prosecutor v. Tadic, Decision on the Defense Motion for Interlocutory Appeal on Jurisdiction (I.C.T.Y. 1995) (No. IT-94-1), available at <http://www.un.org/icty/ind-e.htm>) (applying customary international law both to internal and international conflicts)).

197. *Id.* art. 51(4)(b) (emphasis added); *see* BOTHE ET AL., *supra* note 124, at 305. Subparagraph (a) means aiming at other than a “specific military objective” or aiming randomly. *See* BOTHE ET AL., *supra* note 124, at 305. The Protocol does not define “military objective” as narrowly as do the 1923 Rules on Aerial Warfare, but it does qualify the term: “[M]ilitary objectives are limited to 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.” Additional Protocol I, *supra* note 134, art. 52(2).

198. *See* BOTHE ET AL., *supra* note 124, at 305; *see also* ICRC COMMENTARY, *supra* note 70, at 621, ¶ 1958.

199. *See* BOTHE ET AL., *supra* note 124, at 308 (emphasis added). Note that the principle of discrimination is part of customary international law. Additional Protocol I,

The dud cluster bomb is virtually identical to an unmarked and unmapped mine without modern self-destruct mechanisms.²⁰⁰ As noted above, a minimum of five percent of the bomblets are duds. They fail to go off either on delivery or impact. This failure, however, does not mean these duds are harmless. A slight vibration can set them off. As noted above, every CBU-87B dropped has a minimum of 10-11 dud bomblets to a maximum of 60-62 dud bomblets.²⁰¹ The effects of the unexploded bomblets “cannot be limited as required by this Protocol”;²⁰² the bomblets can blow up at any time, even years after their initial attempted use. Furthermore they “are of a nature to strike military objectives or civilian objectives without distinction”: in other theaters, civilians, most often children, have been primary victims of dud cluster bombs, because of the cluster bomb’s attractive color and size.²⁰³ Unlike mines, the military force dropping the cluster bomb has no idea precisely where the dud cluster bomblets have come to earth. Although armies presumably know where they planted the mines and presumably can provide maps to help de-mine an area, the United States Air Force cannot provide a similar service either for the Serbs or for the Kosovars or even for the NATO-led Kosovo Force troops (K-FOR).²⁰⁴ By releasing cluster bombs,

however, fleshes out the meaning of the principle. See ICRC COMMENTARY, *supra* note 70, at 598–600, 621–22, ¶¶ 1863–1875, 1959–60.

200. Bothe suggested that mines that are obvious and contain self-destruct mechanisms might escape the proscription of Article 51. See BOTHE ET AL., *supra* note 124, at 308. Although most dud cluster bombs lie on the surface many hide in the mud, undergrowth, water or building roofs. As of this writing, no U.S. cluster bomblets (submunitions) have self-destruct mechanisms. None did that were dropped on Kosovo and Serbia. (Gator mines, which were not used in Kosovo, do have self-destruct mechanisms.) See Federation of American Scientists, *CBU-78 GATOR*, ¶ 1, available at <http://www.fas.org/man/dod-101/sys/dumb/cbu-78.htm> (last visited Apr. 5, 2002).

201. See *supra* notes 75-84 and accompanying text.

202. Additional Protocol I, *supra* note 134, art. 51(5)(c). Subparagraph (c) creates a standard that is less precise than the previous subsection banning blind weapons. Subparagraph (c) prohibits a “method or means of combat the effects of which cannot be limited as required by this Protocol;....” Because the bomblets have no self-destruct mechanism, as currently constituted, “the effects of cluster bombs cannot be limited as required by this Protocol.” *Id.*

203. Human Rights Watch, *Cluster Bombs Memorandum For Convention on Conventional Weapons (CCW) Delegates*, ¶ 6 (1999) (noting its previous documenting that 1220 Kuwaiti and 400 Iraqi civilians were killed and another 2500 injured in the first two years after the end of the 1991 Persian Gulf War by an estimated 1.2 million cluster bomb duds, which saw the most extensive use of cluster bombs in history”), available at <http://www.hrw.org/about/projects/arms/memo-cluster.htm> (last visited Apr. 5, 2002) [hereinafter Human Rights Watch, *Cluster Bombs Memorandum*]; see also *Ticking Time Bombs*, *supra* note 55, ¶ 2, available at <http://www.hrw.org/reports/1999/nato2/>.

204. The U.N. clearance crews confirmed this inability to precisely mark the footprint of cluster bombs dropped on Kosovo: “NATO gave us information about where they thought they dropped them. These were detailed grid references, but many turned out not to be correct,” stated John Flanagan, a colonel from New Zealand, who heads the U.N.’s Mine Action Coordination Centre in Kosovo. Jonathan Steele, *Kosovo: One year On: Unexploded Bombs: Death Lurks in the Fields Kosovo Tries to Clean Up After Air Strikes*, *GUARDIAN*, Mar. 14, 2000, available at <http://www.scienceforpeace.sa.utoronto.ca/>

NATO (or any other military force employing this weapon) can provide only general "precautions." It cannot "record, mark [and provide clear] warnings" because it does not know exactly either the number of duds or the places where they landed. This incapacity underlines the indiscriminate nature of cluster bombs, making their use, except in remote areas, generally illegal under all but a narrow reading of the Protocol.²⁰⁵

Defenders of cluster bombs might argue that dud cluster bombs are merely unexploded ordnance (UXO), a problem common to all modern military conflicts, and that alone such UXO do not constitute a violation of humanitarian law.²⁰⁶ That UXO is common does not necessarily render it acceptable under modern humanitarian law. The foreseeably high dud rate, the small size of the cluster bomblets, their ability to hide themselves in the mud, water and undergrowth, the extreme sensitivity of their fuzes, their attractiveness to children, their extraordinary powerful destructive effects despite their size, all put the dud cluster bomb in another category as compared to most other unexploded ordnance.²⁰⁷ A recent call to train troops much more thoroughly about dud cluster

FrontPageFiles/DeathLurks.html (last visited Apr. 5, 2002). Further quoting Colonel Flanagan and explaining the UXO problem, the Article continues:

They may have intended to drop six bombs on one target and four go off somewhere else, as much as one kilometre from the intended spot. The UN coordinates the work of several civilian demining teams. As well as falling wide, about 28,000 of the deadly canisters failed to explode. If they stay on the surface and can be seen, they can be detonated by putting an explosive charge beside them. But most go through the soil and are lying between 10cm and 20cm underground, ready to blast a tractor or a person who steps on one. When hidden, they are far harder to detect and dispose of than ordinary landmines. "[Flanagan also stated that] NATO doesn't want to create a precedent for cleaning up in post-conflict situations. They first made this clear in the Gulf war. [The Gulf war cleanup] cost \$700m, but luckily the Kuwaitis could pay.... Kosovo, by contrast, is poor and much more heavily populated than the Kuwaiti desert. My personal opinion is that if they're going to use these kinds of weapons, they have to recognize there is a postwar environmental effect.

Id.

205. If cluster bombs were dropped in a remote area such as a desert where civilians cannot reasonably be expected to visit or use, there might not be a danger of indiscriminate civilian casualties. Nonetheless, approximately 1600 Iraqi and Kuwaiti civilians were killed in the two years after Desert Storm from unexploded ordnance, especially dud cluster bombs. See Human Rights Watch, *Cluster Bombs Memorandum*, *supra* note 203, ¶ 4, available at <http://www.hrw.org/about/projects/arms/memo-cluster.htm>.

206. See Kennedy & Kincheloe, *supra* note 51, at 29. "Dud munitions, regardless of the percentage that may fail to function as designed (that is, the so-called dud rate), always cause problems. Uncleared land remains hazardous and uninhabitable. Millions of British and German landmines laid in 1942 are still on the ground in Libya, notably around Tobruk." *Id.*

207. Human Rights Watch points out that the sheer number of bomblets dropped causes major humanitarian law issues, given the foreseeable dud rate. For example, at least

bombs demonstrates that the military views cluster bombs as different from other UXO.²⁰⁸

Furthermore, the toy-like appearance of the bomblets violates the spirit of another treaty, The Mine Protocol to the Convention Prohibiting Certain Conventional Weapons (CCW).²⁰⁹ That Protocol prohibits the use “in all circumstances” of “booby-traps which are in any way attached to or associated with...children’s toys....”²¹⁰ Presumably, the designers of the bomblet did not intend it to be attractive to children. The yellow color presumably is used to help clearance crews find dud bomblets. The small parachute serves an important orienting and arming function. Under general principles of criminal law, however, an actor may still be considered to have acted intentionally when he or she hopes that an injury will not occur yet knows to a practical certainty that it will.²¹¹ Thus, even though neither the designers who made the bomblets, nor the Generals who ordered their use, nor the pilots who delivered these bombs may have intended the harm, they would still be acting intentionally because they knew that it is practically certain that a deadly device made to look like a toy will be picked up by children.

Aside from constituting an indiscriminate weapon, the dud cluster bomb after landing violates the proportionality principle set forth in Article 51 of the Protocol.²¹² Article 51 provides two examples of military force that fails to

a million and a half bomblets failed to go off and lay on the ground in Desert Storm. See Human Rights Watch, *Cluster Bombs in Afghanistan*, *supra* note 83, ¶ 6, available at <http://www.hrw.org/background/arms/cluster-bck1031.htm#kosovo>. See also *infra* notes 234–238 and accompanying text regarding how such duds affect the environment.

208. See Wright, *supra* note 77. Dud cluster bombs *are*, however, comparable to one type of UXO: unmarked mines. Failing to remove either unmarked mines or dud cluster bombs violates Additional Protocol I.

209. See generally Convention on Conventional Weapons, *supra* note 192.

210. *Id.* arts. 2(2), (6)(1)(v) (emphasis added); see also GERMAN MINISTRY OF DEF., *supra* note 159, at 39–40, ¶ 415. The NATO countries, including the United States, have ratified the Second Protocol to the CCW. See Int’l Comm. of the Red Cross, *States That Have Adhered to the Convention and Annexed Protocols* (2001), available at <http://gvalnwb2.icrc.org/icrceng.nsf/5cacfd48ca698b641256242003b3295/174d6fbf8970b648>. An Amended Protocol II, which generally strengthens the anti-mine provisions of the original Protocol, has been adopted; it retains virtually verbatim the proscription against booby traps “associated” with toys. See Conventional Weapons Convention, *supra* note 192, Protocol on Prohibitions or Restrictions on the Use of Mines, Booby Traps and other Devices as Amended (Amended Protocol II), Oct. 13, 1995, 35 I.L.M. 1206 (1996), art. 7(e), transmitted to the Senate by President Clinton, Jan. 7, 1997, available at 1997 WL 49691.

211. See, e.g., MODEL PENAL CODE § 2.02(2)(b)(ii) (2000). But see *infra* note 366 for a discussion of the argument that since an adjoining Protocol to the CCW expressly excludes from its ban incendiary weapons such as the Combined Effects Munition (like the BLU-97), the drafters presumably did not intend to ban cluster submunitions in the accompanying Mine Protocol.

212. The proportionality principle also appears in Article 57(2)(b) of Additional Protocol I. See *infra* notes 340–41 and accompanying text.

discriminate properly between military objectives and civilians.²¹³ The second example is most relevant here.²¹⁴ It refines the proportionality standard rather than presenting a concrete case. This example codifies the customary international law rule on proportionality, making indiscriminate: “(b) an attack 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....”²¹⁵

This provision was controversial and was contentiously debated by the members of the drafting conference.²¹⁶ The standard is vague and subject to abuse. How does one weigh the importance of a military objective as against anticipated “incidental” civilian casualties? As a practical matter, it can be expected only to apply to flagrant misconduct, misconduct where, in essence reasonable minds cannot differ as to the disproportionate use of force.²¹⁷ The incendiary bombing of

213. See Additional Protocol I, *supra* note 134, art. 51(5)(a), (b).

214. See *id.* art. 51(5)(b).

215. Additional Protocol I, *supra* note 134, art. 51(5)(b). Including the rule of proportionality was an attempt to gain flexibility and also adherents to the Protocol to avoid the fate of the 1923 Rules of Aerial Warfare:

Since the First World War there had been many vain attempts at codifying the immunity of the civilian population. The 1922/23 project [Draft Rules of Aerial Warfare] would have required combatants to abstain from bombing when it might affect the civilian population, but a good text was useless if it went unsigned, unratified and unimplemented. The Red Cross was conscious of the fact that the rule of proportionality contained a subjective element, and was thus liable to abuse. The aim was, however, to avoid or in any case restrict the incidental effects of attacks directed against military objectives.

LEVIE, RECORD OF PROCEEDINGS *supra* note 131, at 126–27 (statement of Mirimanoff-Chilikine of the ICRC).

216. See LEVIE, RECORD OF PROCEEDINGS, *supra* note 131, at 129–73 (“[I]t would be impossible to prove that the military advantage expected was in fact disproportionate.”) (comment of Mr. Al-Adhami (Iraq), *id.* at 133). *But see id.* at 134 (“An absolute prohibition would result in a very difficult situation, for instance where there was a single civilian near a major military objective whose presence might deter attack.”) (comment of Mr. Samuels (Canada)).

217. See Allen, *supra* note 19, at 43–46 (Frits Kalshoven, panelist, discussing the doctrine of proportionality, noting the “notoriously vague notion of ‘military necessity’” and the difficulty of balancing it against humanitarian values); see also BOTHE ET AL., *supra* note 124, at 310 (noting the difficulties of balancing the importance of the military target and foreseeable extent of civilian casualties and/or damage to civilian objects and concluding that “a plain and manifest breach of the rule will be recognizable”). In the *Kupreskic* Judgment, the ICTY Trial Chamber addressed the issue of proportionality as follows:

In the case under discussion, [the Martens clause would mean] that the prescriptions of Articles 57 and 58 (and of the corresponding customary rules) must be interpreted so as to construe as narrowly as possible the discretionary power to attack belligerents and, by the same token, so as to expand the protection accorded to civilians....

Tokyo during World War II might fit here, since though the bombing was purportedly designed to reach military targets, General Curtis LeMay ordered the attack, knowing that thousands of civilians would be killed.²¹⁸ He defended the attack on the ground that the cottage industries in Japan where work was done at home justified targeting civilians in their dwellings.²¹⁹ The incendiary bombing of Tokyo cost the lives of well over 80,000 civilians.²²⁰

526. As an example of the way in which the Martens clause may be utilized, regard might be had to considerations such as the cumulative effect of attacks on military objectives causing incidental damage to civilians. In other words, it may happen that single attacks on military objectives causing incidental damage to civilians, although they may raise doubts as to their lawfulness, nevertheless do not appear on their face to fall foul per se of the loose prescriptions of Articles 57 and 58 (or of the corresponding customary rules). However, *in case of repeated attacks, all or most of them falling within the grey area between indisputable legality and unlawfulness, it might be warranted to conclude that the cumulative effect of such acts entails that they may not be in keeping with international law.* Indeed, this pattern of military conduct may turn out to jeopardize excessively the lives and assets of civilians, contrary to the demands of humanity.

Kupreskic et al., Case No: IT-95-16-T (Int'l Crim. Tribunal Former Yugoslavia 2000), paras. 524-26 (citations omitted) (emphasis added).

The Report to the ICTY Prosecutor on the NATO bombing campaign criticized the tribunal reasoning:

This formulation in Kupreskic can be regarded as a progressive statement of the applicable law with regard to the obligation to protect civilians. Its practical import, however, is somewhat ambiguous and its application far from clear. It is the committee's view that where individual (and legitimate) attacks on military objectives are concerned, the mere cumulating of such instances, all of which are deemed to have been lawful cannot ipso facto be said to amount to a crime. The committee understands the above formulation, instead, to refer to an overall assessment of the totality of civilian victims as against the goals of the military campaign.

REPORT TO THE PROSECUTOR, *supra* note 23, at ¶ 52.

218. See CRANE, *supra* note 125, at 133.

219. See *id.*

All you had to do was visit one of those targets after we'd roasted it, and see the ruins of a multitude of tiny houses, with a drill press sticking up through the wreckage of every home. The entire population got into the act and worked to make those airplanes or munitions of war...men, women, children. We knew we were going to kill a lot of women and kids when we burned that town. Had to be done.

Id. (quoting General Curtis LeMay). The ICRC gives this example of disproportionate bombardment: "The presence of a soldier on leave obviously cannot justify the destruction of a village." ICRC COMMENTARY, *supra* note 70, at 684.

220. The incendiary bombardment by American planes on the night of March 9, 1945 covered six important industrial targets and numerous smaller factories, railroad yards, home industries, and cable plants, "but it also included one of the most densely populated areas of the world, Asakita Ku, with a population of more than 135,000 people

This codified rule of proportionality, however, easily applies to clearing dud cluster bombs. After the conflict is over, a military force, here NATO, can hardly claim to “anticipate[.]...a concrete and direct military advantage” in maintaining the dud cluster bombs in the ground. Their presence endangers civilians and in many cases prevents civilians from using such civilian objects as fields, forests, and parks. Since after the conflict there is no “concrete and direct” military advantage to keeping the dud cluster bombs, there is no need to balance the military objective against the civilian one.

Defenders of using cluster bombs might argue that the prohibition in Article 51(5) applies only to “attacks.” The Protocol, however, defines “attacks” broadly: “‘Attacks’ mean acts of violence against the adversary, whether in offence or in defense.”²²¹ This definition of attacks “appl[ies] to any land, sea or air warfare which may affect the civilian population, individual civilians, or civilian objects on land.”²²² Dropping dud cluster bombs with sensitive fuzes that can detonate with a slight vibration is an “act of violence.” Delivering dud cluster bombs certainly “may affect the civilian population and individual civilians.” If lodged in a civilian object, a dud cluster bomb could prevent civilians from using it or if the dud explodes, it could seriously damage the object.

One question is whether the attack occurs within the narrow time frame of the launch of the cluster bomb or within a broader time frame. One authority answers this question in the context of whether placing mines is an “attack” within the meaning of the Protocol:

Some authorities express the view that the emplacement of mines is not an attack as that term is defined in Art. 50 [art. 49] because no act of violence occurs until the mine is actuated by the presence of persons or vehicles. This seems to be specious reasoning. There is nothing in Art. 50(1) [49(1)] which excludes a delayed act of violence from the definition. In any event, the laying of a minefield is a military operation within the meaning of Art. 48.²²³

per square mile.” CRANE, *supra* note 125, at 132. An estimated 90,000 to 100,000 people were killed in the raid. *See id.* Apparently, the incendiary bombs destroyed about one quarter of the buildings in Tokyo. *See* MICROSOFT 98 ENCARTA ENCYCLOPEDIA, *Air Warfare, World War II* (1998).

221. Additional Protocol I, *supra* note 134, art. 49(1); *see also* ICRC COMMENTARY, *supra* note 70, at 622 (“[F]rom the legal point of view the use of mines constituted an attack in the sense of the Protocol when a person was directly endangered by such a mine, [meaning the attack could take place years after hostilities have ceased]. It may be considered that mines also come within the scope of subparagraph (c),...[which prohibits] a method or means of combat the effects of which cannot be limited as required by this Protocol.”)

222. *Id.* art. 49(3).

223. BOTHE ET AL., *supra* note 124, at 308 n.26. Article 48 requires military actors “at all times [to] distinguish between the civilian population and combatants and between civilian objects and military objectives and accordingly *shall direct their operations only*

The ICRC Commentary is in accord with this position.²²⁴ Since forces using cluster bombs know that a substantial number of them will be duds and since dud cluster bombs function like mines, and, in fact, have more sensitive fuzes and more powerful charges, delivering dud cluster bombs should be regarded as the functional equivalent of laying mines for purposes of the Additional Protocol I. Consequently, an “attack” with cluster bombs, just like an attack with mines, may occur long after the cluster bomb is launched and even when formal hostilities have concluded.

On the other hand, a defender of the cluster bomb could argue that “attacks” should be narrowly construed only to apply to the initial launch of the cluster bomb, not to a dud cluster bomb exploding long afterwards. When dud cluster bombs explode, they are typically not acts of violence “against an adversary.” Furthermore, the *travaux préparatoires* (treaty drafting history) lends some support to the proposition that the term “attacks” should be narrowly construed. The drafters rejected the phrase “military operations” as a replacement for “attacks” in Article 49.²²⁵ The *travaux* and the plain meaning rule suggest that the term “military operations” had a broader meaning and would imply greater protection of civilians.²²⁶ Great Britain’s representative, however, in arguing for retention of the “against the adversary” language, stated that “[t]he adversary was in any case a military adversary, and the protection of the civilian population covered the populations of all parties to the conflict.”²²⁷ Article 51 states that the “civilian population, as such, as well as individual civilians, shall not be the object of attack.”²²⁸ Article 49(3), quoted above, discusses the application of “attacks” in terms of protecting civilians. If one strictly applied the “against the adversary” language in Article 49(1), an attack on civilians would not necessarily constitute an attack within the meaning of the Protocol, because it was not directed against the adversary military force. That cannot be the meaning of either Article 49 or 51 of the Protocol and should not be the interpretation of attack with regard to dud cluster bombs either.

Given the documented dangers to life and limb that cluster bombs pose and the numerous dud cluster bombs dropped in Serbia and Kosovo, risking civilians is “excessive” compared to the non-existent “military advantage” after the conflict ended. Any armed forces using cluster bombs, including NATO member

against military objectives.” Additional Protocol I, *supra* note 134, art. 48 (emphasis added).

224. See *supra* note 221.

225. See LEVIE, RECORD OF PROCEEDINGS, *supra* note 131, at 85–86. The United States apparently has adopted the narrow view of attack, “emphasizing direct civilian casualties or deaths” rather than those occurring sometime after the launching of the attack. See Wiebe, *supra* note 32, at 103 (quoting Matthew C. Taxman, *International Law and the Politics of Urban Air Operations* 21, available at <http://www.rand.org/publications/MR/MR1175/index/html>).

226. See LEVIE, RECORD OF PROCEEDINGS, *supra* note 131, at 85–86.

227. *Id.* at 86.

228. Additional Protocol I, *supra* note 134, art. 51.

states, are thus obligated by the Protocol's rule of proportionality to take all necessary steps to prevent the cluster bombs from indiscriminately causing civilian casualties. These steps include, at a minimum, mapping of bomb sites and cluster bomb delivery points, posting warnings, educating the populus, particularly the young who are especially attracted to cluster bombs, and ultimately removing the cluster bombs from the stricken areas.

2. A Weapon Unduly Endangering the Environment and the Health of the Population?

Aside from violating Article 51 of the Protocol, knowingly delivering dud cluster bombs may violate the articles proscribing military actions that harm the environment. Article 35 "prohibit[s] methods or means of warfare which are intended, or *may be expected*, to cause *widespread, long-term and severe damage* to the natural environment."²²⁹ Article 55 employs the same key language:

Care shall be taken in warfare to protect the natural environment against *widespread, long-term and severe damage*. This protection includes a prohibition of the use of methods or means of warfare which are intended or *may be expected* to cause such damage to the natural environment and thereby *to prejudice the health* or survival of the population.²³⁰

Although it has taken two and one half years to clear Kosovo and will probably take Serbia longer to clear the country of most cluster bombs,²³¹ the population can never be assured that all the duds, in fact, will have been cleared. Unlike mines, cluster bombs cannot be precisely marked and often hide themselves in mud, underbrush, trees, bodies of water, and even house roofs. As a practical matter, therefore, large portions of the land of Kosovo and Serbia will be forever environmentally damaged, greatly "prejudicing the health" of the population. In

229. *Id.* art. 35(3).

230. *Id.* art. 55(3). Although the Articles may seem to be covering the same subject, Article 35 refers to environmental harms irrespective of harm to the human population while Article 55 applies to environmental harms that endanger the health or survival of the human population. *See* ICRC COMMENTARY, *supra* note 70, at 414. Dud cluster bombs would thus fit better under Article 55.

231. The UNMACC hoped to and did finish its clearance efforts in Kosovo by the end of 2001. *See* UNMIK, *Annual Report 2000*, *supra* note 110, available at http://www.un.org/Depts/dpko/mine/macc/downloads/reports/annual_2000.pdf. UNMACC removed 8485 dud cluster bombs and K-FOR apparently removed 7455 for a total of 15,490 dud cluster bombs cleared. *See* UNMIK, *Mine Action Programme, Annual Report 2001*, *supra* note 81, ¶ 9, including n.1. In the Kosovo Province alone, however, these figures suggest as of December 2001 that between 5000 to over 6000 dud cluster bombs remained on the ground. *See supra* note 110; UNMIK, *supra* note 81, ¶ 15 (noting that all of the 224 cluster bomb-affected locations in Kosovo "have now been cleared to some degree"). Information about how long it will take to clear the rest of Serbia has not been found to be readily available.

other theatres of war, for example, such as Laos, civilians are still dying from Vietnam-era cluster bombs dropped over thirty years ago.²³²

The official ICRC Commentary provides a prototypical example of a violation of Article 35:

Landmines and booby-traps have in some cases been scattered in astronomical quantities in certain theatres of war. Once the war is over, these devices can only be eliminated with considerable risk by patient efforts which must continue for many years. Meanwhile they form a serious and constant threat to the population. This is just one example, but in reality all delayed-action devices or those which have not exploded, for whatever reason, have a similar effect on the environment, with ominous consequences.²³³

The previously documented similarities between cluster bombs and mines indicate that widespread use of cluster bombs should likewise violate the environmental prohibitions of the Protocol. After Desert Storm, NATO military commanders were on notice of the high dud rate of cluster bombs and their corresponding dangers. Consequently, the commanders could have “expected [cluster bombs]...to cause such damage to the natural environment and thereby to prejudice the health...of the population.”²³⁴

On the other hand, the requirements of Articles 35 and 55 are quite strict. The damage must be “widespread, long-term *and* severe.”²³⁵ “Long-term” is measured in decades, “widespread” means “on the scale of several hundred square kilometres” and “severe” as “involving serious or significant disruption or harm to human life, natural or economic resources or other assets.”²³⁶ Assuming one

232. See Capati, *supra* note 94; Pedersen, *supra* note 104; Wiebe, *supra* note 32, at 92 (noting that ordnance experts estimate that between “nine and twenty-seven million unexploded cluster bomblets remain in the ground in Laos”). Admittedly, the number of cluster bombs dropped on Laos far exceeds the number dropped on Kosovo and the rest of Serbia. Terrorizing a population, however, does not require a vast quantity of deadly duds. See *supra* text accompanying note 101.

233. ICRC COMMENTARY, *supra* note 70, at 411. Presumably, this example actually better illustrates an Article 55 violation than an Article 35(3) violation. See *supra* note 230 and *infra* note 236 for a discussion of the differences between the two articles.

234. Additional Protocol I, *supra* note 134, art. 55(3).

235. See *id.* arts. 35, 55 (emphasis added).

236. BOTHE ET AL., *supra* note 124, at 347; see also ICRC COMMENTARY, *supra* note 70, at 416; Nicholas G. Alexander, Comment, *Airstrikes and Environmental Damage: Can the United States be Held Liable for Operation Allied Force?*, 11 COLO. J. INT’L ENVTL. L. & POL’Y 471, 479 (2000). Compare Additional Protocol I, *supra* note 134, arts. 35(3), 55, with The 1977 Convention of the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (ENMOD Convention), 31 U.S.T. 333, 16 I.L.M. 88 (1977). That convention uses similar language, prohibiting intentional environmental harms that are “widespread, long term *or* severe.” *Id.* art. 1 (emphasis added). Note, however, that only one element there need be established. Furthermore, the parties there give the three elements a different definition from that which Additional Protocol I gives to “widespread, long term, and severe.” ENMOD apparently applies “long

could show significant disruption to human life or to natural or economic resources, one may have some difficulty in showing that hundreds of square kilometers were so affected by the nearly 1,800 cluster bomb dispensers NATO planes dropped. Two and one half to five years to clear cluster bombs are not decades. That some risk remains after clearance efforts, one could argue, does not amount to "significant disruption to human life" under the Protocol.²³⁷ Therefore, meeting the stringent tests of the Protocol would be difficult. In addition, even willfully violating Articles 35(3) and 55 does not constitute a grave breach; thus, so violating the Protocol and the environment never amounts to a war crime, but rather a civil breach of the Protocol.²³⁸

Yet even if within two and one half to five years, cluster bombs could be cleared from most of the land, they will almost certainly never be cleared with a degree of confidence such that reasonable parents would permit their children to play in the area subject to cluster bomb attack. Although cluster bombs did not cover hundreds of square miles, the 350 identified cluster bomb sites in Kosovo alone probably covered about a square kilometer each, thus surpassing a hundred

term" as lasting merely a "period of months," not decades as the Protocol apparently requires. ICRC COMMENTARY, *supra* note 70, at 416; see Mark A. Drumbl, *International Human Rights, International Humanitarian Law and Environmental Security: Can the International Criminal Court Bridge the Gaps?* 6 ILSA J. INT'L & COMP. L. 305 (2000). ENMOD, however, is aimed at deliberately manipulating the environment to cause environmental damage such as creating floods, earthquakes, climate change, etc. See ICRC COMMENTARY, *supra* note 70, at 415-16. It would not appear to apply to dropping dud cluster bombs. In another vein, note that unexploded ordnance is being recognized as a domestic environmental problem. See Maj. Egan, *Management of Unexploded Ordnance, Munitions Fragments, and Other Constituents on Military Ranges*, ARMY LAW., Feb. 1999, at 42 (observing that the Environmental Protection Agency has indicated that Unexploded Ordnance on U.S. Bases and Ranges could become wastes regulated under the Resource Conservation and Recovery Act).

237. UNMACC asserted that by the end of 2001 "[w]hilst mines and UXO may still be encountered [in Kosovo] for some time to come, by and large they will not impede social and economic development or pose a serious threat to the local population." UNMIK, *Annual Report 2000*, *supra* note 110, available at http://www.un.org/Depts/dpko/mine/macc/downloads/reports/annual_2000.pdf. Yet given the capacity of cluster bombs to hide in underbrush, roofs, trees, water, and mud, this assertion should not be deemed completely reassuring to the inhabitants of the region. In any event, UNMIK confined its efforts only to the Kosovo Province and not to other parts of Serbia.

Note, however, that battlefield destruction is probably outside the scope of the prohibition. See BOTHE ET AL., *supra* note 124, at 346. If dud cluster bombs were considered battlefield destruction, then this Article would not apply. Such, however, would appear to be a strained interpretation, since the military actor launching cluster bombs knows that this type of environmental damage from duds "may be expected."

238. Cf. Rome Statute, *supra* note 4, art. 8(2)(b)(iv) (prohibiting "widespread, long-term and severe" damage to the natural environment but imposing criminal liability only where such damage is "clearly excessive" in light of the "concrete and direct overall military advantage anticipated"), available at <http://www.un.org/law/icc/statute/rome.htm>. For a discussion detailing the difficulties of bringing a criminal prosecution under the Rome Statute's environmental violation article, see Drumbl, *supra* note 236.

square miles.²³⁹ Certainly, the two articles could have been more precisely drafted. But given the difficulty of finding all the duds and the threat they pose over a long period of time, the better argument, though a close question, is that the fairly extensive use of cluster bombs in Kosovo and Serbia satisfied the “severe, widespread, and long-term” requirements for Articles 35(3) and 55 of the Protocol.²⁴⁰

C. NATO's Response to the Dud Cluster Bomb Question

NATO and the United States have helped in the reconstruction of Kosovo²⁴¹ and the United States authorized \$1.6 million for UXO clearance in 1999 and will probably authorize up to \$3.5 million in the following two years.²⁴² Unfortunately, however, NATO was initially slow to devote resources to clearing dud cluster bombs.²⁴³ As noted above, it has taken two and a half years to clear most cluster bombs from Kosovo.²⁴⁴ NATO also acted slowly in providing

239. A square kilometer equals 0.386 sq. miles. *See* AMERICAN HERITAGE DICTIONARY 778 (2d College ed. 1976). 350 sq. kilometers by 0.386 = 135.1 sq. miles.

240. Admittedly, reaching this result would, however, require a liberal interpretation of these articles of the Protocol.

241. All of NATO authorized \$1.2 billion in civil implementation aid for Kosovo in fiscal year 2000; the United States' share was \$169 million, or 13.9%. *See Developments in Kosovo: Congressional Testimony*, (2000) (testimony of James E. Pardew, Principal Deputy Special Advisor to the President and Secretary of State for Kosovo), *available at* 2000 WL 426085. The United States' share of humanitarian assistance has been “about 20%” the costs for UN peacekeeping has been 25% and through the Organization for Security and Cooperation in Europe from about 10% to 17%. *See id.* As of April 2000, the United States had provided “more than \$533 million in response to the Kosovo crisis since March 1998.” USAID, *Kosovo Crisis, Fact Sheet #144* (2000), *available at* http://www.usaid.gov/hum_response/ofda/kosofs144.html. In addition, the United States in fiscal year 2000, contributed \$25.5 million for global “Humanitarian Demining” efforts and an additional \$16.5 million for Humanitarian Research and Development. *See* Jim Garamone, *DoD Aids Global Demining Efforts*, AM. FORCES PRESS SERVICE, Feb. 9, 2000, *available at* http://www.defenselink.mil/news/Feb2000/n02092000_20002091.html (last visited Apr. 8, 2002).

242. *See State Dept. Briefing on Kosovo Landmine Problem*, June 25, 1999, at 3 (unofficial transcript) (statement of Robert Beercroft, Deputy Assistant Secretary of State) (noting that the United States is providing \$1.6 million for humanitarian demining operations in Kosovo in fiscal year 1999), *available at* <http://www.usembassy.it/file9906/alia/99062519.htm> (last visited Apr. 8, 2002) [hereinafter *State Dep't Briefing*]. Apparently, the U.S. increased its funding in fiscal year 1999 to almost \$3 million. *See* COL. MARK W. ADAMS, ADDRESS TO U.S. RESERVE OFFICERS ASSOC.: THE U.S. HUMANITARIAN DEMINING PROGRAM IN BOSNIA-HERZEGOVINA AND KOSOVO, Oct. 15, 1999, *available at* http://www.state.gov/www/policy_remarks/1999/991015_adams_demining.html (last visited Apr. 5, 2002).

243. *See* Evans, *supra* note 15, at 14 (noting that NATO is not clearing mines itself but leaving it to U.N. agency with limited staff to remove all the dud cluster bombs).

244. *See State Dep't Briefing, supra* note 242 (Donald Steinberg, U.S. Special Representative to the President and the Secretary of State for Global Humanitarian Demining, states that “regrettably, we estimate that mines and unexploded ordnance will be

photographs of the cluster bombs for safety campaigns and in providing detailed information about bombsites, which would have helped those organizations trying to clear Kosovo of dud cluster bombs and other unexploded ordnance.²⁴⁵ In fact, United Nations officials coordinating UXO clearance in Kosovo criticized NATO for failing to hand over information about cluster bomb sites and targets for nearly a year after the conflict ended.²⁴⁶ The director of the UN clearing effort said, "Sometimes the first time we knew there was an area [with unexploded bombs] was when there was a casualty reported."²⁴⁷ By the end of the Kosovo conflict in June 1999, about 150 Kosovar-Albanians had been maimed or killed by mines or other unexploded ordnance.²⁴⁸ About forty percent of these casualties have been caused by dud cluster bombs.²⁴⁹ Since the armed conflict ended, the Red Cross concluded that more than 50 civilians have died and more than 100 others have been injured from dud cluster bombs in Kosovo.²⁵⁰

an everyday fact of life for the Kosovar people for some three to five years."'). Special Representative Steinberg did not mention the length of time it would take to clear Serbia or any efforts that should be directed in those areas. He did note that the United States was allocating \$1.6 million for mine clearance efforts in Kosovo in 1999. *See id.* at 4. UNMACC, however, completed their clearance efforts by the end of 2001, approximately two and one half years from the end of the conflict. They are training local deminers to attempt to complete the job after UNMACC's pullout. *See UNMIK, supra* note 81, paras. 15, 18-25.

245. *See* Gall, *supra* note 87, at A3 (reporting that aid agencies were angry that NATO waited nearly two months before releasing photographs of the cluster bombs for safety campaigns). Although NATO countries, and particularly the United States, have helped in funding the effort, NATO has generally left responsibility for clearing mines and dud cluster bombs to private organizations. United States law prohibits American military personnel from serving to clear unexploded ordnance from foreign lands, except as part of "supporting a United States military operation." 10 U.S.C. § 491(4)(a) (2002). K-FOR "organizations," however, apparently cleared 7455 cluster munitions from Kosovo as of December 2001. *See UNMIK, supra* note 81, ¶ 9 n.1.

246. *See* Carlotta Gall, *U.N. Aide in Kosovo Faults NATO on Unexploded Bombs*, N.Y. TIMES, May 23, 2000, at 3 (quoting John Flanagan, program manager of the U.N. Mine Action Coordination Center).

247. *Kosovo Mine Expert Criticises NATO* (BBC News Europe television broadcast, May 23, 2000) (noting that the UN Mine Action Centre first asked K-FOR for information about the location of the bombs in August 1999, but it was not until April 2000 that the Centre learned it did not have the full details. The UN had to lobby NATO officials in Brussels and Washington before finally getting the information); *see* Evans, *supra* note 15, at 14 (noting that the U.N. Mine Action Clearing Centre is urging NATO to help with cluster bomb clearance in Kosovo).

248. *See* World Health Organization, *supra* note 105, at 1-2; *see also* Dan Eggen, *supra* note 104, at A01.

249. *See also* *Kosovo Mine Expert Criticises NATO*, *supra* note 247. Figures in Serbia have been more difficult to obtain.

250. Human Rights Watch, *Cluster Bombs in Afghanistan*, *supra* note 83, at 5, available at <http://www.hrw.org/background/arms/cluster-bck1031.htm> (last visited Apr. 20, 2001) (noting that the Red Cross found that between June 1999 and May 2000, alone, there were 151 casualties from dud cluster bombs in Kosovo, including 50 deaths). *See also* Col. John Flanagan, UNMACC, *Overview of Exit Strategy* (concluding that between

While Slobodan Milosevic was in power, the United States refused to authorize funding to Serbia to help in reconstruction. After the Yugoslav government committed to and arrested Milosevic, the United States agreed to partial funding of Serbia. The balance of the United States commitment was conditioned on the Federal Republic of Yugoslavia's extraditing Milosevic to The Hague for trial for war crimes.²⁵¹ Since his summary transfer to The Hague, the United States committed \$181 million for 2001 as part of the NATO countries' commitment of \$1.28 billion.²⁵² Other NATO Member States have provided economic assistance to Yugoslavia and since Milosevic's transfer have increased their commitment by another \$450 million.²⁵³ It is unclear, however, whether any of this funding has been earmarked for UXO and cluster bomb clearance.²⁵⁴

the end of the conflict in June 1999 and April 2001, eighty six people had died from dud cluster bombs and mines in Kosovo and that over 340 others had been wounded), *available at* http://www.mineaction.org/unmik_org/departments/hq/exit.htm (last visited Apr. 5, 2002); *see also* Col. Flanagan E-mail, *supra* note 80. He mentioned that there were fifteen civilians involved in cluster bomb explosions who escaped injury.

251. *See* Marlise Simons, *War Crimes Tribunal Expands Indictment*, N.Y. TIMES, June 30, 2001, at A7; Press Release, U.S. Agency for International Development, USAID Applauds Congress for Passing Foreign Assistance Bill (Oct. 27, 2000) (noting that Congress has authorized up to \$100 million for aid to Serbia). President Bush has authorized payment of half of this amount, making the remainder contingent upon Serbia extraditing Slobodan Milosevic to the ICTY at The Hague. More importantly, the United States apparently has decided that it will not block loans and other financial assistance from either the World Bank or from the International Monetary Fund. *See* R. Jeffrey Smith, *Prosecutors Say Milosevic May Face Treason Charge; Citing Cooperation, U.S. Lets Yugoslav Aid Continue*, WASH. POST, Apr. 3, 2001, at A14, *available at* 2001 WL 17617885. The day after Yugoslavia transferred Milosevic to The Hague, the NATO countries promised to give Yugoslavia \$1.2 billion in aid. *See* Marlise Simons, *Case Against Milosevic Is Not Simple to Prove*, N.Y. TIMES, July 2, 2001, at A8.

252. *See* Simons, *supra* note 251, at A7; Smith, *supra* note 251, at A14. The Congressional Research Service indicates that \$145 million has been allocated this year to help Serbia and Montenegro. *See* CURT TARNOFF, CONG. RES. SERVICE, THE FEDERAL REPUBLIC OF YUGOSLAVIA: U.S. ECONOMIC ASSISTANCE (2001), *available at* <http://www.globalsecurity.org/military/library/report/crs/rs20737.pdf> (last visited Apr. 10, 2002). None of the funds is earmarked for clearance of the cluster bombs or other UXO. *See id.* at 3.

253. *See* Simons, *supra* note 251, at A7. By mid-February, 2001 NATO countries gave Serbia (FRY) \$274 million; the United States ranked eighth on the list of donors "well behind the top three: Italy, Germany, and Greece." Paul Watson, *Power Struggle Dims Likelihood of Quick Arrest of Milosevic, Yugoslavia: Squabble Between Key Leaders Reduces Odds of Meeting a U.S. Deadline of Saturday*, L.A. TIMES, Mar. 30, 2001, at A8, *available at* 2001 WL 2474117. Given Serbia's need for electricity and for reconstruction, it is not known how much of this aid, if any, is going toward clearing cluster bombs and other UXO.

254. *See supra* notes 251, 253.

D. Whether Using Cluster Bombs to Bombard Large Areas Violates Additional Protocol I

Assuming for argument's sake that cluster bombs produced no duds, would their use violate the Protocol? Current humanitarian law, unfortunately, provides no clear answer to this question. First, Additional Protocol I reaffirms the customary rule that combatants must discriminate between civilians and military objects.²⁵⁵ Second, the Protocol reaffirms the customary international law rule that military actors must use reasonable care in identifying the target and in carrying out an attack so as to discriminate effectively between civilians and military objectives.²⁵⁶ The most specific rules,²⁵⁷ however, are set forth in subsection 5(a) of Article 51, which contains the first example of an indiscriminate attack: area

255. See Additional Protocol I, *supra* note 134, art. 48; see also GERMAN MINISTRY OF DEF., *supra* note 159, at 46, ¶ 454 ("It is prohibited in any circumstance to fire at or bombard civilians and military objects without *distinction*." (citations omitted) (emphasis in original)).

256. See Additional Protocol I, *supra* note 134, art. 57. In the *Kupreskic* Judgment, Case No. IT-95-16-T (Int'l Crim. Tribunal of Former Yugoslavia 2000), the ICTY Trial Chamber addressed the issue of proportionality as follows:

In the case of attacks on military objectives causing damage to civilians, international law contains a general principle prescribing that *reasonable care must be taken in attacking military objectives so that civilians are not needlessly injured through carelessness*. This principle, already referred to by the United Kingdom in 1938 with regard to the Spanish Civil War, has always been applied in conjunction with the principle of proportionality, whereby any incidental (and unintentional) damage to civilians must not be out of proportion to the direct military advantage gained by the military attack. *In addition, attacks, even when they are directed against legitimate military targets, are unlawful if conducted using indiscriminate means or methods of warfare, or in such a way as to cause indiscriminate damage to civilians*. These principles have to some extent been spelled out in Articles 57 and 58 of the First Additional Protocol of 1977. *Such provisions, it would seem, are now part of customary international law*, not only because they specify and flesh out general pre-existing norms, but also because they do not appear to be contested by any State, including those which have not ratified the Protocol. Admittedly, even these two provisions leave a wide margin of discretion to belligerents by using language that might be regarded as leaving the last word to the attacking party. Nevertheless this is an area where the "elementary considerations of humanity" rightly emphasized by the International Court of Justice in the *Corfu Channel*, *Nicaragua*, and *Legality of the Threat or Use of Nuclear Weapons* cases should be fully used when interpreting and applying loose international rules, on the basis that they are illustrative of a general principle of international law.

Id. at ¶¶ 524–35 (emphasis added); see *infra* notes 308–312 and accompanying text for a more detailed discussion of customary international law.

257. Of course, a military actor violates international humanitarian law by targeting any weapon, including cluster bombs, at civilians. See Additional Protocol I, *supra* note 134, art. 51.

bombing in a populated place in which there are “separate[] and distinct” military objectives:

5. Among others, the following types of attacks are to be considered as indiscriminate:

(a) an attack by bombardment by any method or means which treats as a single military objective a number of clearly separated and distinct military objectives located in a city, town, village or other area containing a similar concentration of civilians or civilian objects;....²⁵⁸

This example outlaws “target area bombing” or “carpet bombing”²⁵⁹ practiced by the Allies in World War II,²⁶⁰ by Japan in China,²⁶¹ and by the United States in Vietnam.²⁶² “[This Article] means, in effect, that if in...[a populated] area, there are a number of different military objectives that are capable of being hit separately[,] then it is forbidden to treat the entire area in which they are situated as one large objective.”²⁶³ Bombing an entire city or a large populated area

258. *Id.* art. 51(5)(a).

259. Starting in 1942, the Allies embarked on an air campaign targeting cities and towns themselves: “The characteristic feature of the new program was its emphasis on *area bombing*, in which the centres of towns would be the points of aim for nocturnal raids.” ENCYCLOPEDIA BRITANNICA ONLINE, *Air Warfare, 1942-43*, at <http://search.eb.com/bol/topic?eu=118867&sctn=8#512073> (last visited Mar. 20, 2001) (emphasis added).

260. The development of target area bombing is credited to Sir Arthur Travers Harris, commander of the RAF in World War II:

As a firm believer in mass raids, Air Marshal Harris developed the “saturation” technique of mass bombing—that of concentrating clouds of bombers in a giant raid on a single city, with the object of completely demolishing it. He applied this method with great destructive effect on Axis-occupied Europe from 1942 to the end of World War II.

ENCYCLOPEDIA BRITANNICA ONLINE, *Sir Arthur Travers Harris*, at <http://search.eb.com/bol/topic?eu=40156&sctn=1#132424> (last visited on Mar. 2, 2001). The ICRC Commentary to Article 51(5)(a) notes that

[t]his provision is very important; it confirms the unlawful character of certain regrettable practices during the Second World War and subsequent armed conflicts. Far too often the purpose of attacks was to destroy all life in a particular area or to raze a town to the ground without this resulting, in most cases, in any substantial military advantages.

ICRC COMMENTARY, *supra* note 70, at 619. *But see* SPAIGHT, *supra* note 126, at 271–73 (defending target area bombing as the only effective means to destroy Germany’s war industries).

261. *See* SHALLER, *supra* note 168, at 50; *see also* BROWNLIE, *supra* note 168, at 113–14 (noting United States’ complaint regarding Japan’s indiscriminate bombing of China).

262. *See supra* note 19.

263. L. Doswald-Beck, *supra* note 111, at 156. The Committee of the Prosecutor to the ICTY discussed the requirements of the Protocol regarding the military’s obligation to distinguish between military objectives and the civilians and civilian objects:

to reach some military point targets within that area will probably kill or wound many civilians. Aiming at the specific military target—even within a city—will probably result in fewer civilian casualties. Although this example was undeniably included to ban target area bombing, the drafters intentionally omitted that term or the term “carpet bombing” because it might limit the application of the Article to a particular type of bombardment: “[T]he Working Group considered it unnecessary to refer to ‘massive’ bombardment, ‘target area’ bombardment, or ‘carpet bombing’, since all are covered by this prohibition, and *use of such expressions might be construed to restrict the protection of civilians from other types of bombardment.*”²⁶⁴

Like its paired subsection (5)(b) on the rule of proportionality, this subsection was also controversial. The main point in controversy was how far apart the military objectives had to be in order to render them “separate[] and distinct.”²⁶⁵ The language of the Article is silent on this point. The United States and other states, however, insisted that this be interpreted as some significant

One of the principles underlying international humanitarian law is the principle of distinction, which obligates military commanders to distinguish between military objectives and civilian persons or objects. The practical application of this principle is effectively encapsulated in Article 57 of Additional Protocol which, in part, obligates those who plan or decide upon an attack to “do everything feasible to verify that the objectives to be attacked are neither civilians nor civilian objects.” The obligation to do everything feasible is high but not absolute. A military commander must set up an effective intelligence gathering system to collect and evaluate information concerning potential targets. The commander must also direct his forces to use available technical means to properly identify targets during operations. Both the commander and the aircrew actually engaged in operations must have some range of discretion to determine which available resources shall be used and how they shall be used. Further, a determination that inadequate efforts have been made to distinguish between military objectives and civilians or civilian objects should not necessarily focus exclusively on a specific incident. If precautionary measures have worked adequately in a very high percentage of cases then the fact they have not worked well in a small number of cases does not necessarily mean they are generally inadequate.

REPORT TO THE PROSECUTOR, *supra*, note 23, ¶ 29.

264. LEVIE, RECORD OF PROCEEDINGS, *supra* note 131, at 159 (emphasis added); see Blix, *supra* note 129, at 145; see also LEVIE, RECORD OF PROCEEDINGS, *supra* note 131, at 126 (comments of Mr. Mirimanoff-Chilikine of the ICRC) (“[s]ince it was intended to preserve the civilian population from non-selective attacks, it would be impossible to leave aside the question of target area bombing”).

265. LEVIE, RECORD OF PROCEEDINGS, *supra* note 131, at 163–64 (French representative indicating that his country could not accept 5(b), because, among other things, “clearly separated and distinct military objectives...might prove unrealizable when such objectives were in small villages or in small towns.”).

distance so that independent targeting of the individual military objectives would be feasible.²⁶⁶

Cluster bombs are "area" weapons, designed to destroy personnel and light armor²⁶⁷ anywhere within a football field or more. The usual practice is to deploy several cluster bomb dispensers at once, often covering a square kilometer (nearly two-thirds of a mile square) (nearly nineteen football fields). Cluster bombs are thus an ideal weapon to carry out "target area bombing" or "carpet bombing." The "mischief" that subsection 5(a) is aimed at is the indiscriminate killing of civilians by bombing large areas.²⁶⁸ Given that fragmentation cluster bombs are anti-personnel weapons, namely, weapons designed, among other things, to kill people, they potentially embody the mischief²⁶⁹ that the ban on target area bombing was attempting to eliminate from air warfare.

Whether using cluster bombs amounts to proscribed target area bombing depends on the circumstances. The subsection prohibits area bombardment of separate and distinct targets "located in a city, town, village or other area containing a similar concentration of civilians or civilian objects...."²⁷⁰ Delivering such bombs against an enemy army in a desert presumably would *not* violate this subsection.²⁷¹ Presumably, a desert is not an area containing a "city, town, or village" or a "similar concentration of civilians or civilian objects." The "concentration of civilians," however, need not be great: a column of refugees, for example, fulfills the "concentration" requirement.²⁷²

266. The United States representative explained his positive vote on this subsection as follows: "[This subsection] refers not only to a separation of two or more military objectives which can be observed or which are visually separated, but also includes the element of significant distance. Furthermore, that distance must be at least sufficient to permit individual military objectives to be attacked separately." Blix, *supra* note 129, at 135, 147. "How far apart should the objectives be to require separate attacks? This question is not answered in the rule nor is it answered in the only military manual containing a provision on the matter, that of the Federal Republic of Germany." *Id.* at 135.

267. The BLU-97, the submunition in the CBU-87, can also penetrate up to seven inches of armor. See Leggette, *supra* note 42, at 25.

268. "[I]t is the business of the court to give such construction to the statute as to suppress the mischief and to advance the remedy." HAROLD W. HOROWITZ & KENNETH L. KARST, *LAW, LAWYERS AND SOCIAL CHANGE* 72 (1969) (quoting Justice Williams' opinion in *Jackson v. Bulloch*, 12 Conn. 39 (1837) (citing *Heydon's Case*, 76 Eng. Rep. 637 (1584))).

269. "Area weapons" are so named because of their dispersion characteristics. By virtue of the enormous territory they can cover, such weapons present a strong potential danger to noncombatants. An additional element of controversy stems from their classification as "antipersonnel weapons"—munitions that are effective primarily or solely against human beings.

270. Additional Protocol I, *supra* note 134, art. 51(5)(a).

271. Cf. J. Ashley Roach, *Humanitarian Law*, 1983 AM. SOC'Y INT'L L. PROC. 212, 238 ("The assumption that some weapons are inherently unlawful, particularly cluster bombs, is unacceptable to me because of its noncontextuality.").

272. LEVIE, *RECORD OF PROCEEDINGS*, *supra* note 131, at 161 (Report to Third Committee on the Work of the Working Group, Committee III, 9 May 1997, noting that "a

One of the uses of cluster bombs is to destroy point targets.²⁷³ For example, an anti-aircraft battery may be only eight feet by twenty feet (2.44 m. x 6.1 m.), a point target offering a very narrow profile.²⁷⁴ Such a target may be hard to hit using conventional unguided bombs. Cluster bombs, however, may be effective even if they miss the targeted spot: "The advantage of this type of warhead is that it gives a *wide area of coverage, which allows for a greater margin of error in delivery.*"²⁷⁵ The advantage for the military is a distinct disadvantage, however, for any civilians who happen to be within about a football field or more of the point target.²⁷⁶

It is the thesis of this Article that where there is a concentration of civilians in the neighborhood of a target, the use of area weapons violates Additional Protocol I. Because they cover huge areas, these weapons, when used in places "containing a concentration of civilians" in essence are ignoring the requirement "to treat as a single military objective a number of clearly separated and distinct military objectives."²⁷⁷ The United States has the capability of using smart bombs to eliminate point targets rather than using area weapons.²⁷⁸ A defender of cluster bombs might argue that even against point targets these weapons satisfy the Protocol. The side using the weapon is aiming at the point target. That civilians may be injured is unfortunate collateral damage. Cluster bombs may be used against a single target, not necessarily against two "separate and distinct" targets. Furthermore, there is no intent to needlessly take civilian lives.

This argument is flawed, however, because it fails to account for the purpose of Protocol section 51(5)(a). Indisputably, the drafters intended to ban

refugee camp or a column of refugees moving along a road" would constitute "a similar concentration of civilians"). Compare how the 1980 Third Protocol to the CCW defines this term: "Concentration of civilians" means any concentration of civilians, be it permanent or temporary, such as in inhabited parts of cities or inhabited towns or villages, or as in camps or columns of refugees or evacuees, or groups of nomads." CCW, Incendiary Weapons Protocol (Protocol III), *supra* note 192, art. 2, in 19 I.L.M. 1523-26 and DOCUMENTS ON THE LAWS OF WAR, *supra* note 27, at 485.

273. See Krepon, *supra* note 26, at 269.

274. See *id.*

275. See Federation of American Scientists, *Big Bullets for Beginners*, available at <http://www.fas.org/man/dod-101/sys/land/bullets/2.htm> (last visited Apr. 8, 2002); see also <http://search.cetin.net.cn/internet/DSTI/FAS/man/dod101/navy/docs/fun/part13.htm> (last visited May 30, 2001).

276. The ground crew can set the CBU-87 for wide dispersal or narrow dispersal. If set for narrow dispersal, the footprint of the CBU-87 may be much smaller. See Leggette, *supra* note 42, at 25. Even so, a single BLU-97 can be deadly at long distances even when set for a concentrated footprint.

277. Additional Protocol I, *supra* note 134, art. 51(5)(a).

278. Thirty-six percent of the bombs dropped on the former Yugoslavia during the Kosovo intervention were precision guided weapons, most of them employed by the United States. See Belt, *supra* note 24, at 115; see also Human Rights Watch, *Civilian Deaths*, *supra* note 20, at n.18 (citing General Clark's estimate of 35 percent).

target area bombing. They intended to do so because of the perceived abuses of the practice in World War II and in Vietnam. The goal was to protect civilians, not from all bombing, but from bombing large areas where civilians resided when the bombing could have accomplished the military objective by individually aiming solely at military targets. In essence, this provision approves of the early United States practice in World War II of bombing only military targets within cities, not cities themselves.²⁷⁹ It condemns (1) the British, German, and Japanese practice of bombing cities indiscriminately, regardless of the military objective, and (2) the practice of massively bombing a populated area when pinpoint bombing could have destroyed the military objective.

When dropped on or near a place where "a concentration of civilians" is found, cluster bombs mimic the abuses of the World War II target area bombings. As one pilot put it, using cluster bombs is "the shotgun school of bombing."²⁸⁰ It is a shotgun that scatters shot wider than any other. Such a defender of cluster bombs is using the weapon itself to redefine the issue. Cluster bombs by definition have a huge reach and can, under these circumstances, unduly endanger innocent civilians.

E. Additional Protocol I and NATO's Air Campaign

NATO's intervention against Yugoslavia was for the stated purpose of stopping Serbia's perceived widespread human rights abuses against Albanian-Kosovars. NATO conducted solely an air campaign, employing no ground forces until Milosevic surrendered. NATO commanders declared that from the start they did everything they could to keep civilian casualties to a minimum.²⁸¹ "All targets were 'looked at in terms of their military significance in relation to the collateral damage or the unintended consequences that might be there.' Then every precaution [was] made...so that collateral damage [was] avoided."²⁸² Lieutenant General Michael Short added that "collateral damage drove us to an extraordinary degree. General Clark committed hours of his day dealing with the allies on issues of collateral damage."²⁸³ Despite these stated concerns and efforts, NATO air operations did cause civilian casualties. Human Rights Watch (HRW) documented

279. See CRANE, *supra* note 125, at 10–11.

280. See PEACHEY & WIEBE, *supra* note 35, at 14 (quoting Capt. Dan Hampton, *New Strategy, New Fighter, New Challenges*, AIR FORCE MAG., July 1991, at 59).

281. See Human Rights Watch, *Civilian Deaths*, *supra* note 20, ¶ 9 (citing testimony of Gen. Henry Shelton, of the U.S. House Armed Services Committee, Apr. 14, 1999 and testimony of Lt. Gen. Michael Short before the Senate Armed Services Committee Hearing on Lessons Learned from Military Operations and Relief Efforts in Kosovo, Oct. 21, 1999), available at <http://www.hrw.org/hrw/reports/2000/nato/index.htm>, Operation Allied Force Attacks (last visited June 15, 2001).

282. *Id.*

283. *Id.*; see also CLARK, *supra* note 16, at 201.

ninety confirmed incidents in which civilians died from NATO bombing.²⁸⁴ HRW estimated that “as few as 489 and as many as 529 Yugoslav civilians” were killed in these incidents.²⁸⁵ NATO has not disputed the Human Rights Watch figures.²⁸⁶ The Committee of the Prosecutor of the International Criminal Tribunal for the former Yugoslavia (ICTY) has likewise accepted the HRW civilian casualty figures.²⁸⁷

Roughly 90 to 150 of the civilian casualties are attributed to cluster bombs, not counting those who died from dud cluster bomb explosions after the conflict. Human Rights Watch confirmed seven incidents involving cluster bomb deaths and considers five additional incidents likely.²⁸⁸ Perhaps the most significant is the bombing of the Serbian city of Nis.²⁸⁹ There cluster bombs landed at midday in several places within the city, namely,

near the Pathology building of the Nis Medical Center in southeast Nis; in the town center near the Nis University Rector’s Office, including the area of the central city market place, the bus station near the Nis Fortress, and the ‘12 February’ Health Center; and near a car dealership and the ‘Nis Express,’ a parking lot across the river from the fortress.²⁹⁰

About fourteen people were killed and another thirty wounded.²⁹¹

In this incident, NATO stated that its target was the airfield in the Nis Airport, which is about a mile (1.5 kilometers) away from the market and even further from the other locations.²⁹² According to NATO officials, the cluster bomb

284. See Human Rights Watch, *Civilian Deaths*, *supra* note 20, available at <http://www.hrw.org/reports/2000/nato/index/htm#TopOfPage>, Operation Allied Force Attacks.

285. *Id.* Fifty-five of these incidents occurred in Serbia, three in Montenegro, and thirty-two in Kosovo: “But between 279 and 318 of the dead—between 56 and 60% of the total number of deaths—were in Kosovo. In Serbia 201 civilians were killed and eight died in Montenegro.” *Id.*

286. See NATO, *Kosovo Crisis: The Conduct of the Air Campaign*, ¶ 8, available at <http://www.nato.int/kosovo/repo2000/conduct.htm> (last modified Oct. 30, 2000).

287. See REPORT TO THE PROSECUTOR, *supra* note 23, ¶ 10.

288. See Human Rights Watch, *Civilian Deaths*, *supra* note 20, ¶ 5, available at http://www.hrw.org/reports/2000/nato/Nat6m200.htm#P88_14845.

289. See E-mail from Dragana Jesic, Mayor’s Cabinet, Nis City Assembly, to Thomas Michael McDonnell, Associate Professor of Law, Pace University School of Law (May 7, 2001) (on file at Pace Law School Library) (estimating Nis population at 300,000).

290. See Human Rights Watch, *Civilian Deaths*, *supra* note 20, available at http://www.hrw.org/reports/2000/nato/Natbm200-01.htm#P425_113389.

291. See AMNESTY INT’L, *supra* note 23, at 46; see also Katarina Kratovac, *Cluster Bombs Hit Hospital Complex and Market, Devastating Nis*, ASSOCIATED PRESS, May 7, 1999 (“At the market, where nine people were killed, one old woman was hit in the head, her body partially dismembered. Just a few steps away, a stream of blood trickled away from the body of a young man who had been blown to pieces.”).

292. See AMNESTY INT’L, *supra* note 23, at 46.

dispenser released its submunitions too early, resulting in their wide dispersal.²⁹³ However, the area immediately around the airport can be considered “urban.”²⁹⁴ Consequently, NATO and specifically the U.S. used the cluster bomb in an area where there was “a concentration of civilians.” Even had the bomb reached its intended target, NATO would have violated the Protocol.²⁹⁵ Furthermore, NATO may have violated its obligations under Article 57 to take precautions to avoid civilian casualties. Nis is a major industrial city. Planners can predict that any mistakes in launching a cluster bomb in or near a populated area could cause substantial civilian casualties. Thus by choosing to use cluster bombs, NATO member states may not have “take[n] all feasible precautions in the choice of means or methods of attack with a view toward avoiding and in any case minimizing incidental loss of civilian life....”²⁹⁶

In other incidents, civilians died as a result of NATO cluster bomb attacks in areas with a concentration of civilians,²⁹⁷ suggesting that NATO member states

293. See Michael Dobbs, *A War-Torn Reporter Reflects*, WASH. POST, July 11, 1999, at B01; see also CLARK, *supra* note 16, at 196 (stating that the target was Serb helicopters on the Nis airport’s airfield and that the dispenser “functioned” at excessive altitude, scattering the bomblets short of their target and resulting in civilian deaths and injuries.”). As the altitude at which the dispenser releases the bomblets increases, the “wider will be the dispersal radius of the submunitions, and the greater, therefore, the potential risk to nonmilitary targets.” *Ticking Time Bombs*, *supra* note 55, ¶ 10 n.15, available at http://www.hrw.org/reports/1999/nato2/nato995-01.htm#P65_8106. “Moreover at higher altitudes, pilots have a reduced capability to make sighting corrections. Finally at greater altitudes the bomblets do not necessarily have the opportunity to fuse properly, and the dud rate is therefore likely to be higher.” *Id.* at 3.

294. See Human Rights Watch, *Civilian Deaths*, *supra* note 20, ¶ 82, available at <http://www.hrw.org/reports/2000/nato/index/htm#TopOfPage>.

295. After the Nis cluster bomb attack, President Clinton issued an executive order suspending the use of cluster bombs by United States aircraft. Great Britain, however, did not observe the suspension, and continued using cluster bombs. The United States ultimately ended the suspension, but the suspension probably saved civilian lives. See PEACHEY & WIEBE, *supra* note 35, at 15 (quoting a letter from Lieutenant General Fulford to Representative Dennis Kucinich that the use of cluster bombs was “temporarily halt[ed]” during the Kosovo air campaign); Human Rights Watch, *Civilian Deaths*, *supra* note 20, ¶ 84, available at http://www.hrw.org/reports/2000/nato.htm#P65_8106; cf. Belt, *supra* note 24, at 158 (noting the general practice of NATO to use precision guided munitions in urban areas and unguided gravity bombs on battlefields, such as “mountainous areas in Kosovo and Serbia”).

296. Additional Protocol I, *supra* note 134, art. 57(2)(b).

297. Some believed that NATO planes dropped heat seeking cluster bombs (CBU-97s) on a column of Albanian refugees on April 14, 1999 (between Djakovica and Decane). See Human Rights Watch, *Civilian Deaths*, *supra* note 20, ¶¶ 6–7, available at <http://www.hrw.org/reports/2000/nato.Natbm200-01.htm#P202.47195>; Paul Watson, *Cluster Bombs May Be What Killed Refugees*, L.A. TIMES, Apr. 17, 1999, at A1. The heat seeking cluster bombs apparently cannot distinguish the heat of a tractor from that of a tank. Clearance crews, however, have not uncovered evidence that CBU-97s had been used in the conflict. See PEACHEY & WIEBE, *supra* note 35, at 22 (citing an interview with the Information Officer at the U.N. Mines Action Coordination Centre, held in Pristina, Kosovo). Approximately seventy-three people were killed and another thirty-six were

breached the Protocol in these instances as well.²⁹⁸ As noted above, Human Rights Watch estimates that cluster bombs killed 90 to 150 civilians during the conflict,

injured. See Watson, *supra*, at A1; see also Brian Bender, *Weapon Additional to the Use of Cluster Bombs*, JANE'S DEF. WEEKLY, Apr. 7, 1999 (indicating that U.S. Air Force was "likely" to use the CBU-97 in the conflict), available at 1999 WL 7270134. There is a conflict in the evidence as to whether civilians were mixed with military vehicles and troops. NATO also denies using cluster bombs in this attack. See *supra* note 40. Amnesty International criticized NATO's 15,000-ft. minimum altitude rule:

NATO's accounts do not suggest that its aircraft believed that the convoys of displaced civilians were being used to shield Serb military. Rather they [the NATO pilots] mistook the convoy for a military column. The mistake stemmed from a failure to institute sufficient precautions to be able to distinguish between civilians and military objectives [by flying at a minimum altitude of 15,000 ft.].

See AMNESTY INT'L, *supra* note 23, at 37. See *supra* note 69 for a more detailed discussion of the 15,000-ft. altitude rule and its effect on civilian casualties generally and in this incident. See also CLARK, *supra* note 16, at 254-55 (describing NATO's taking responsibility for civilian casualties).

298. See Human Rights Watch, *Civilian Deaths, Appendix A*, *supra* note 20, ¶¶ 6, 8, 9, 10, 13, 14, 17, 18, available at <http://www.hrw.org/reports/2000/nato/index/htm#TopOfPage>. Note also that the Prosecutor for the International War Crimes Tribunal for the former Yugoslavia (ICTY) appointed a committee to examine alleged war crimes committed by the NATO bombing campaign. The Committee identified what it considered key incidents of civilian casualties caused by the NATO bombing. The incidents possibly involving cluster bombs are indicated; HRW's interpretation is in brackets:

b. the attack on the Djakovica Convoy—14/4/99—70-75 civilians killed, 100 or more injured, [HRW details this attack as #19 in its report. See Human Rights Watch, *Civilian Deaths*, *supra* note 20]

...

f. the attack on Hotels Baciste and Putnik—13/4/99—1 civilian killed, [HRW details this attack as #22 in its report; a person died trying to clear a cluster bomb. See *id.*]

...

k. the attack on a bus at Pec—3/5/99—7 civilians killed, 44 injured, [HRW details this attack as #46 in its report; HRW received photo documentation of cluster bomb use; NATO denied responsibility for the attack. On the following day, one person was allegedly injured from a delayed submunition exploding. HRW #47. See *id.*]

l. the attack at Korisa village—13/5/99—48-87 civilians killed, [UN High Commissioner for Human Rights concludes that 80 were killed. HRW details this attack as #57 and confirms a cluster bomb attack, but NATO has denied using cluster bombs in this incident. See *id.*]

...

[the] attack on Nis City Centre and Hospital—7/5/99—13 civilians killed, 60 injured, [HRW details this attack as #48, confirms a cluster bomb attack, concluding that 14 civilians were killed and 87 were injured. See *id.*]

fifteen to twenty-six percent of all civilian deaths although the cluster bombs dropped represent only six percent of the weapons expended in the war.²⁹⁹

...

[the]attack on journalists convoy Prizren-Brezovica Road—31/5/99—1 civilian killed—[HRW has no corresponding incident number but confirms that on that date there was a casualty from a British cluster bomb. *See id.*]

REPORT TO THE PROSECUTOR, *supra* note 23, ¶ 9. Aside from the attacks on the Report to the Prosecutor's list, HRW confirms cluster bomb attacks on Merdare and Mirovac, killing five and injuring three on April 10, 1999 (incident #14); three British cluster bomb attacks causing civilian casualties on May 17, June 3, and June 4. *See* Human Rights Watch, *Civilian Deaths*, *supra* note 20, ¶ 38, available at http://www.hrw.org/reports/2000/nato.Natbm200.htm#P116_24514. HRW lists as possible cluster bomb attacks: (a) April 14, 1999, Pavlovac south of Vranje, two killed, at least one injured, from attack on unidentified bridge or military convoy (incident #20); April 17, 1999, attack on Batajnica airfield, killing three injuring one. *See id.*

The Yugoslav government claimed cluster bomb attacks on the following dates and HRW commented as indicated: (a) May 1, 1999, Jablanica, two killed, sixteen injured; three children and two adults. HRW noted that the Yugoslav government provided forensic detail of the incident in its White book (incident #42), *id.*; (b) April 12, 1999, Djakovica-Klina road, five killed. HRW noted that it could find no authoritative source identifying the dead; (c) April 17, 1999, Kamena Glava, three injured, two die on 4/18/99; HRW made no comment on this alleged attack, incident #26; (d) April 15, 1999, Rajan, three killed; HRW made no comment, incident #21. *See id.* HRW could find no support for the following claimed attacks by the Yugoslav government: (a) April 2, 1999, Orahovac, four killed; twelve injured (incident #3); (b) May 11, 1999, Nis Airfield, killing two and injuring four. Cluster bombs are reported as having been used, but Nis officials disputed this allegation, stating that eleven weapons, ten missiles and one unexploded bomb were dropped on Nis on that date. *Id.*

299. *See* Human Rights Watch, *Cluster Bombs Memorandum*, *supra* note 203, available at <http://www.hrw.org/about/projects/arms/memo-cluster.htm>. Some argue that Additional Protocol I does not prohibit the cluster bomb, at least when military actors aim at a military target. *See* Capati, *supra* note 94, at 227 (calling for a ban on cluster bombs, but apparently not considering whether Additional Protocol I sharply restricts their use); Roach, *supra* note 271, at 238 ("The assumption that some weapons are inherently unlawful, particularly cluster bombs, is unacceptable to me because of its noncontextuality."); *cf.* Carnahan, *supra* note 144, at 713 (arguing that laser blinding weapons did not cause "unnecessary suffering" either under Additional Protocol I (art. 35) or under customary international law). The Protocol was not intended to ban any weapon but rather to restrict the manner in which all weapons are used. Furthermore, the international community apparently felt it necessary to develop a treaty to ban anti-personnel land mines, even though the language of the Protocol would appear to require, if not their complete ban, at least immediately removing them from the ground absent reliable self-destruct mechanisms or clearly marking and fencing off mine covered areas. *See* Additional Protocol I, *supra* note 134, art. 51; Ottawa Convention, *supra* note 138. The landmine problem had grown worse in the last quarter of the twentieth century, prompting the call for the ban. The Ottawa Convention defines "anti-personnel mine" as a "mine designed to be exploded by the proximity or contact of a person and that will incapacitate, injure, or kill one or more persons." *Id.* art. 1. It probably would be a strained interpretation to conclude that cluster bombs fall within this language. In fact the Ottawa Convention expressly rejected the following "effects-based" definition of land mines: "[An

F. United States, a Signatory, but Not a Party to the Protocol—Is the U.S. Nonetheless Bound Under a Territoriality Theory or Under Customary International Law?

Never having ratified Additional Protocol I, the United States could argue that it is not bound by its terms. However, Great Britain, Belgium, Germany, Netherlands, Spain, and the other NATO countries, except France and Turkey, however, are parties to the Protocol. As members of the alliance and centrally involved in the military planning and in the carrying out of the mission over Kosovo,³⁰⁰ they helped the United States in this effort and had the purpose, along with the United States, of having the bombing raids succeed.³⁰¹ Knowing the weapons the United States and British aircraft were using, these States can be charged with violating the Protocol, as aiders and abettors. Given the central planning that NATO undertook and the extensive coverage of the war over Kosovo, none of these States can claim lack of knowledge of the kinds of bombs the United States and Britain were dropping.³⁰²

International law recognizes the doctrine of complicity.³⁰³ Under “generally principles of law recognized by civilized nations,” an individual bears

antipersonnel landmine is] any device or piece of ordnance which, although its primary purpose or design may be other than [to explode on contact, presence, or proximity of a person] can be deployed in a manner to achieve this effect without modification or through specific design feature.” Wiebe, *supra* note 32, at 116 (quoting Foster, *supra* note 81, ¶ 6, available at http://www.Ploughshares.ca/content/MO_NITOR/mons99c.html (Sept. 1999)). Additional Protocol I does not specifically proscribe cluster bombs, mines, or, for that matter, any weapon or weapon system. Nonetheless one does not have to engage in the teleological method of treaty interpretation to conclude that any military actor, including NATO, that uses cluster bombs, may, under most circumstances, violate Additional Protocol I.

300. See CLARK, *supra* note 16, at 114, 270–71; NATO, *Policy and Decision-Making*, THE NATO HANDBOOK, ch. 7, available at <http://www.nato.int/docu/handbook/2001/index.htm> (last modified Jan. 29, 2002).

301. See NATO, *supra* note 300, ch. 12.

302. See, e.g., AFTER-ACTION REPORT, *supra* note 35, at 20–24.

303. See Jordan J. Paust, *My Lai and Vietnam*, 57 MIL. L. REV. 99, 165 (1972) (noting that the Nuremberg Tribunal recognized complicity as a legitimate doctrine in determining criminal liability, apparently coming in under the “general principles” of legal systems, codified in the Statute of the ICJ). One tribunal defined complicity where troops “were found to have known the purpose of their assembly in the woods was to kill prisoners of war and civilian detainees. Paust, *supra*, at 165 (quoting The Alamo Trial, 1 L.R.T.W.C. 35, 43 (1947)). The report on the trial stated that under the circumstances: “If people were all present together at the same time, taking part in a common enterprise which was unlawful, each one in their own way assisting the common purpose of all, they were equally guilty in law.” *Id.* Furthermore it is “no excuse that those who commit the actual injury are allies when the crime of complicity has been committed.” *Id.* at 169. The Ad Hoc International Criminal Tribunal for former Yugoslavia devised the following test for complicity in genocide: “[A]n accused is an accomplice in genocide if he knowingly aided and abetted or provoked a person or persons to commit genocide, knowing that this person or persons were committing genocide.” JORDAN J. PAUST ET AL., INTERNATIONAL CRIMINAL LAW 42 (2d ed. 2000) (quoting *Prosecution v. Jean-Paul Akayesu*, ¶ 46 (I.C.T.Y. 1998)).

criminal responsibility for aiding and abetting a primary perpetrator in committing an international crime.³⁰⁴ Likewise, states that act together in violating international law bear a "reparation obligation," namely, multiple state responsibility.³⁰⁵ The doctrine of joint liability can also be considered part of international law as "general principles of law."³⁰⁶ Civil liability can be imposed under customary international law, general principles of international law, or directly under Additional Protocol I.³⁰⁷

Although not a party to the Protocol, the United States may nonetheless be bound under customary international law.³⁰⁸ Of the 189 U.N. member states,

(No. ICTR-9694-T), available at <http://www.un.org/ictt> (last visited Apr. 10, 2002)); see also KRIANGSAK KITTICHAISAREE, *INTERNATIONAL CRIMINAL LAW* 236-47 (2001); Kai Ambos, *Individual Criminal Responsibility in International Criminal Law: A Jurisprudential Analysis—From Nuremberg to the Hague*, in I SUBSTANTIVE AND PROCEDURAL ASPECTS OF INTERNATIONAL CRIMINAL LAW 5, 8-11 (Gabrielle Kirk McDonald & Olivia Swaak-Goldman eds., 2000).

304. See Statute of the International Court of Justice, June 26, 1945, art. 38(1)(c), U.S.T.S. 993, 59 Stat. 1031 (entered into force Oct. 25, 1945); see also Control Council Law No. 10, from the Nuremberg Tribunals, "Any person...is deemed to have committed a crime as defined in paragraph 2 of this Article, if he was (a) a principal or (b) was an accessory to the commission of any such crime or ordered or abetted the same or (c) took a consenting part herein...." Cf. MODEL PENAL CODE § 2.06 (2000) (imposing criminal liability on individuals who aid and abet).

305. John E. Noyes & Brian D. Smith, *State Responsibility and the Principle of Joint and Several Liability*, 13 YALE J. INT'L L. 225, 226 (1998).

306. BROWNLEE, *supra* note 168, at 189. Although noting that state practice is not as clear as the general rules might otherwise suggest, he observes that if an "invasion were unlawful the existence of a joint responsibility would be undoubted [if more than one state participated]." *Id.* at 192. Presumably the same reasoning would apply to a joint invasion when one state's armed forces, with the knowledge and acquiescence of the other state's commanders use a prohibited means or method of warfare.

307. Additional Protocol I's article on responsibility derives "almost verbatim" from Article 3 of the 1907 Hague Convention No. IV, and provides as follows: "A Party to the conflict which violates the provisions of the Conventions or of this Protocol shall, if the case demands, be liable to pay compensation. It shall be responsible for all acts committed by persons forming any part of its armed forces." Additional Protocol I, *supra* note 134, art. 91. This Article imposes duties both on the victor and on the defeated party, but does not include any details; it "says nothing" about when compensation is due, leaving that question open. See BOTHE ET AL., *supra* note 124, at 547.

308. Of course, the United States could claim that by refusing to ratify the treaty, it has registered its objection to the formation of any custom. It thus would not be bound, unless the custom had achieved the status of *jus cogens*. Bombing civilians as such might possibly have achieved that status, but the proscriptions contained in Article 51(5)(a) and (b) probably have not. In any event, however, the United States accepts Article 51 as custom. See Robert G. Goldman, *The Legal Regime Governing the Conduct of Operation Desert Storm*, 23 U. TOL. L. REV. 363, 380 (1992) (citing Symposium, *6th Annual American Red Cross-Washington College of Law Conference on International Humanitarian Law: 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.

159 have ratified Additional Protocol I.³⁰⁹ While some of the Protocol's articles have not yet reached the level of customary international law, others may have, such as "Article 51, prohibiting attacks against civilians, including target area bombardment and other indiscriminate attacks that violate the rule of proportionality."³¹⁰ One commentator suggests that Article 51(5)(a), prohibiting target area bombing, "probably reaffirms" customary international law if the words "clearly separated" means separated by a "significant distance."³¹¹ "[T]he principles behind Article 51 have long appeared in international conventions and now enjoy almost universal (if only superficial) acceptance as custom."³¹² While it is probably fair to say that the general rules contained in Article 51 have achieved customary status, whether all the ramifications of the Article have done so is more open to question.

President Ronald Reagan opposed ratification of Additional Protocol I, mainly because of fears that Articles 1(4) and 96 would have given "prisoner-of-war privileges...to the Palestine Liberation Organization and [would have] promote[d] various liberation movements to state or quasi-state status."³¹³ Such fears, however, proved unfounded. No liberation movement has invoked Article 96, probably because such a rebel movement would have difficulty "accepting and carrying out all the obligations stated in the Protocol and could thus expose its members to war crimes prosecutions."³¹⁴

The United States accepts that certain articles of the Protocol have become customary international law. Among other articles, the United States accepts the following as custom: Article 35(1) & (2) (limiting methods and means of warfare, including methods and means producing superfluous injury) but *not*

& POL'Y 419 (1987) (Remarks of Michael J. Matheson, Deputy Legal Advisor, U.S. Department of State)).

309. See Int'l Comm. of the Red Cross, *Geneva Conventions of 12 August 1949 and the Additional Protocols of 8 June 1977: Ratifications, Accessions, and Successions*, available at <http://gvalnwb2.icrc.org/icrceng.nsf/5cacfd48ca698b641256242003b3295/600d2bd30d7b93e64125624b00402ebb?OpenDocument&Highlight=2,ratify#7> (last modified Apr. 8, 2002).

310. George H. Aldrich, *Violations of the Laws or Customs of War*, in I SUBSTANTIVE AND PROCEDURAL ASPECTS OF INTERNATIONAL CRIMINAL LAW, *supra* note 303, at 97, 103 (Judge Aldrich headed the United States delegation to the 1974-1977 Geneva Conference, which produced the 1977 Additional Protocols to the Geneva Conventions of 1949).

311. Robert G. Goldman, *The Legal Regime Governing the Conduct of Operation Desert Storm*, 23 U. TOL. L. REV. 363, 380 (1992).

312. Matthew C. Waxman, *Siegecraft and Surrender: The Law and Strategy of Cities as Targets*, 39 VA. J. INT'L L. 353, 416 (1999). But see Waldemar Solf, *Protection of Civilians Against the Effects of Hostilities Under Customary International Law*, 1 AM. U. J. INT'L L. & POL'Y 117 (1986).

313. Meron, *supra* note 167, at 175. For additional details on U.S. objections, see Adriane L. DeSaussure, *The Role of the Law of Armed Conflict in the Persian Gulf War, an Overview*, 1994 A.F. L. REV. 41, 49-51.

314. Meron, *supra* note 167, at 184.

Articles 35(3) or 55 (protecting the environment); Article 51 (protecting civilians) except subsection 6 (prohibiting reprisals against the civilian population); and Articles 73–89 (establishing, among other things, criminal responsibility for grave breaches of the Protocol).³¹⁵ Consequently, except for the provisions protecting the

315. See U.S. ARMY, OPERATIONAL LAW HANDBOOK (Capt. Jeanne M. Meyer & CDR Brain J. Bill eds., 2002), ch. 2, p. 11, available at [http://www.jagcnet.army.mil/JAGNETInternet/Homepages/AC/TJAGSAWeb.nsf/8f7edfd448e0ec6c8525694b0064ba51/3edb3e018696910b85256ab9005979b8/\\$FILE/Chapter%202.pdf](http://www.jagcnet.army.mil/JAGNETInternet/Homepages/AC/TJAGSAWeb.nsf/8f7edfd448e0ec6c8525694b0064ba51/3edb3e018696910b85256ab9005979b8/$FILE/Chapter%202.pdf) (last visited Apr. 19, 2002). The Operational Law Handbook states as follows:

The U.S. views the following articles of Additional Protocol I as either legally binding as customary international law or acceptable practice though not legally binding: [art.] 5 (appointment of protecting powers); [art.] 10 (equal protection of wounded, sick, and shipwrecked); [art.] 11 (guidelines for medical procedures); [arts.] 12–34 (medical units, aircraft, ships, missing and dead persons); [art.] 35(1) & (2) (limiting methods and means of warfare); [art.] 37 (perfidy prohibitions); [art.] 38 (prohibition against improper use of protected emblems); [art.] 45 (prisoner of war presumption for those who participate in the hostilities); [art.] 51 (protection of the civilian population, except para. 6, reprisals); [art.] 52 (general protection of civilian objects); [art.] 54 (protection of objects indispensable to the survival of the civilian population); [arts.] 57–60 (precautions in attack, undefended localities, and demilitarized zones); [art.] 62 (civil defense protection); [art.] 63 (civil defense in occupied territories); [art.] 70 (relief actions); [arts.] 73–89 (treatment of persons in the power of a party to the conflict; women and children; and duties regarding implementation of GP I). The U.S. specifically objects to article 1(4) (on . . . the applicability of [Protocol I] to certain types of armed conflicts—wars of national liberation from "colonial domination," "alien occupation," and "racist regimes"); [art.] 35(3) (environmental limitations on means and methods of warfare); [art.] 39(2) (limits on the use of enemy flags and insignia); [art.] 44 (expansion of definition of combatants, relaxing of requirement to wear fixed distinctive insignia recognizable at a distance; reducing threshold of lawful combatant status to requirement to carry arms openly during military engagement or in military deployment preceding an attack; when visible to an adversary); [art.] 47 (non-protection of mercenaries); [art.] 55 (protection of the natural environment); and [art.] 56 (protection of works and installations containing dangerous forces).

Id. (emphasis in original). See also Department of Defense, CONDUCT OF THE PERSIAN GULF CONFLICT, AN INTERIM REPORT TO CONGRESS 12–3 (July 1991). After quoting Article 48, which requires, among other things, that combatants "shall at all times distinguish between the civilian population and combatants," the Report goes on to say:

For military, political, and humanitarian reasons, the United States in 1987 declined to become a party to Protocol I; nor was Protocol I in effect during the recent conflict, as Iraq is not a party to that treaty. However, the language of Article 48 quoted above is regarded as a codification of the customary practice of nations, and therefore binding on all nations.

Id. at 13–3; see also Michael J. Matheson, 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'Y 419–20 (1987); Human Rights Watch, *Civilian Deaths*, supra note 20, ¶ 36 n.44 (quoting ICRC COMMENTARY, supra note 70, at 626: "The idea has also been put forward that even if they are very high, civilian losses and damages may be justified if the military advantage at stake is of great importance. This idea is contrary to the fundamental rules of the Protocol.... The Protocol does not provide any justification for attacks that cause extensive civilian losses or damage. Incidental losses and damage should never be extensive."), available at <http://www.hrw.org/reports/2000/>

environment, the United States accepts as customary international law most of the relevant articles. On the other hand, it is doubtful whether the United States accepts as custom interpretations of the Protocol to relatively new situations, namely, that cluster bombs with substantial dud rates amount to blind, indiscriminate weapons, or that they constitute prohibited target area bombing when dropped in areas with a "concentration of civilians."³¹⁶

Aside from customary international law, the United States is a signatory to the First Protocol. As a signatory, it is obliged under the Vienna Convention on the Law of Treaties to do nothing to defeat the treaty's object and purpose.³¹⁷ Using an indiscriminate weapon is arguably so inconsistent with the treaty as to defeat its object and purpose. The United States, for the reasons set forth below, would be "responsible," at least in the civil law sense, for such a breach.

Lastly, the United States and its armed forces may be bound to the extent that they commit their actions on the territory of States that have ratified the Protocol. Under standard conflict of law rules, the law of the territory in which the act takes place governs.³¹⁸ The former Yugoslavia ratified the first Protocol on June 11, 1979. Under general rules of international law, treaties negotiated by prior governments are binding on successor governments.³¹⁹ The United States may argue that, as an international conflict, the war over Kosovo cannot be governed by one state's law. Though possibly true, the law in question is the law of its allies as well as the law of the territory in which the acts took place. The international character of the conflict derives primarily from the humanitarian intervention itself. If such an intervention is legal, the intervening parties must at a minimum abide by

nato.Natbm200-01.htm# P 2 3 2 _57126. The Defense Department has established that "[t]he law of war obligations of the United States are observed and enforced by DoD components," presumably including all armed forces of the United States. See DoD Directive 5100.77 of December 9, 1998, ¶ 4.1.

316. See *supra* note 35.

317. The Vienna Convention on the Law of Treaties, May 23, 1969, art. 18(a), U.N. Doc. A/CONF 39/27, 8 I.L.M. 679 (1969) (entered into force on Jan. 27, 1980). The United States government could argue, however, that it never ratified the Vienna Convention on the Law of Treaties either, so it is not bound by a treaty it has not ratified. Various United States governmental bodies have declared that the Convention is, however, declaratory of custom or has become custom through recognition and practice. See, e.g., *Chubb & Sons, Inc. v. Asiana Airlines*, 214 F.3d 301, 308 n.5 (2d Cir. 2000); see also *Maria Frankowska, The Vienna Convention on the Law of Treaties Before United States Courts*, 28 VA. J. INT'L L. 281 (1988).

318. Cf. Rome Statute, *supra* note 4, art. 12 (conferring jurisdiction on the court when the alleged criminal acts take place in the territory of a state party to the ICC, presumably applying even to nationals of states that have neither signed nor ratified the Convention establishing the ICC). But see Guy Roberts, *Assault on Sovereignty: The Clear and Present Danger of the New International Criminal Court*, 17 AM. U. INT'L L. REV. 35, 61 (2001) (sharply criticizing the ICC's asserting jurisdiction over non party nationals and characterizing this territorial basis as a radical expansion of traditional notions of jurisdictions).

319. See, e.g., LOUIS HENKIN ET AL., INTERNATIONAL LAW CASES AND MATERIALS 530, 1043 (3d ed. 1993).

strict respect for human rights contained both in human rights treaties and guaranteed by custom and general principles of international law.

IV. CLUSTER BOMBS, WAR CRIMES, AND REPARATION

A. Prosecution Under Additional Protocol I

Do any of these asserted violations of the Protocol constitute a war crime? The high *mens rea* requirement for the War Crimes article of the Protocol suggests not. The relevant language of the war crimes article is as follows:

3. In addition to the grave breaches defined in Article 11, the following acts shall be regarded as grave breaches of this Protocol, when *committed willfully*, in violation of the relevant provisions of this Protocol, and causing death or serious injury to body or health:

(a) Making the civilian population or individual civilians the object of attack;

(b) launching an *indiscriminate attack affecting the civilian population* or civilian objects *in the knowledge* that such attack will cause *excessive* loss of life, injury to civilians or damage to civilian objects, as defined in Article 57, paragraph 2 (a)(iii); ...

5. Without prejudice to the application of the Conventions and of this Protocol, *grave breaches* of these instruments shall be regarded as *war crimes*.³²⁰

In the original draft, the ICRC made any violations of the Protocol a war crime.³²¹ The United States and other states strenuously objected, insisting on including strict culpability requirements.³²² The express language of the war crimes article requires that the actor “commit” the grave breach “willfully.” Under Anglo-Saxon jurisprudence, “willfully” means at least knowingly and often is construed as meaning “knowingly violating a legal duty.”³²³ The drafting history of this Article suggests that the drafters intended to make the culpability requirement high, so it is at least reasonable to believe that the stricter interpretation of willfully is the intended interpretation.

Not only must the actor willfully commit the grave breach, he or she must “launch[] an *indiscriminate attack affecting the civilian population* or civilian objects *in the knowledge* that such attack will cause *excessive* loss of life, injury to

320. Additional Protocol I, *supra* note 134, art. 85 (emphasis added).

321. See LEVIE, RECORD OF PROCEEDINGS, *supra* note 131, at 185, 194–95.

322. See *id.*

323. See, e.g., *United States v. Cheek*, 498 U.S. 192 (1991). But see *Bryan v. United States*, 524 U.S. 184 (1998) (over vigorous dissent of Justice Scalia, holding that “willfully” did not mean knowing of the legal duty).

civilians or damage to civilian objects....”³²⁴ In the context of the two alleged violations of the Protocol here, the prosecutor would have serious difficulty in proving a “grave breach.” Assume that delivering dud cluster bombs except in the most isolated areas imaginable is indiscriminate, because such duds are blind as to time, weapons in essence that do not permit the attacker to discriminate between civilians or troops. To be held criminally liable, the actors—from the pilot all the way up the chain of command—(a) would have to know that delivering a cluster bomb violated a legal duty, and (b) would have to deliver the bombs “in the *knowledge* that such attack will cause *excessive* loss of life, injury to civilians or damage to civilian objects.” Aside from the fact that the latter standard is vague (what is excessive to you may not be excessive to me), a prosecutor would have to prove that the actor was subjectively aware of the excessiveness. Only in the most egregious cases would a prosecutor be able to make such a showing.

The United States and Russia maintain that using cluster bombs does not violate international law.³²⁵ Although ignorance of the law is generally not an excuse, the strictest standard of willfulness does provide a defense for mistake of law. If that is the standard, front line actors such as the pilot and crews would probably be able to successfully assert such a defense. Even those higher up the chain of command may be able to successfully defend on this ground.

Aside from proving willfulness, showing that the actor knew the attack caused excessive loss of life and injury, as noted above, would be quite difficult. The discussion above demonstrates that leaving dud cluster bombs on the ground violates the rule of proportionality—since after the conflict no military objective exists to balance against civilian casualties. While this point may be demonstrated

324. The intent requirement is considerably higher than that necessary for a simple violation of the Protocol:

It is not sufficient that the will to launch an indiscriminate attack exists. In addition the person taking the action has to have the knowledge that certain consequences still follow. ... The attack is already illegitimate if it may be expected to cause such losses [excessive loss of civilian life considering the ‘concrete and direct military advantage anticipated’]. A high degree of precaution is required. A grave breach on the other hand presupposes more: the knowledge (not only the presumption) that such an attack will cause excessive losses in kind.

BOTHE, *supra* note 124, at 516; *see also* ICRC COMMENTARY, *supra* note 70, at 994 (defining *willfully* as follows: “[T]he accused must have acted consciously and with intent, i.e., with his mind on the act and its consequences, and willing them (‘criminal intent’ or ‘malice aforethought’); this encompasses the concepts of ‘wrongful intent’ or ‘recklessness,’ viz., the attitude of an agent who, without being certain of a particular result, accepts the possibility of it happening; on the other hand, ordinary negligence or lack of foresight is not covered, i.e., when a man acts without having his mind on the act or its consequences (although failing to take necessary precautions, particularly failing to seek precise information constitutes culpable negligence punishable at least by disciplinary sanctions)...”). Note, however, that the ICRC Commentary definition rejects the mistake of law interpretation and concludes that acting “recklessly” satisfies the “willfully” requirement.

325. *See supra* note 35.

objectively, it is quite another thing to prove that the actor knew of this calculus before dropping the cluster bombs. The “knowingly” standard requires that the actor be subjectively aware or at the very least consciously disregard a high risk that a fact exists.³²⁶ Reasonable minds can differ as to whether dropping dud cluster bombs causes “excessive loss of life, injury to civilians or damage to civilian objects.” Thus, to prove the actor knew the dud cluster bombs caused such excessive civilian casualties would be thus that much harder.

A prosecutor could argue that after the Persian Gulf War, NATO commanders certainly were aware of the risks to civilians posed by dud cluster bombs. While true, the commanders could defend, claiming lack of willfulness and that they did not know that dropping duds caused “excessive” civilian casualties.

The same arguments apply to the second type of violation, using cluster bombs on military targets where there is a concentration of the civilian population. Assuming that an independent investigation confirmed NATO’s explanation of the cluster bomb falling on Nis, then there would not appear to be a basis for a war crime. NATO admitted from the start that this bombing was a mistake, and it appears to have been a mistake.³²⁷ The center of Nis was not targeted; an airfield approximately a mile away was. NATO stated that the dispenser released its submunitions prematurely, causing them to spread over a much wider distance, straying from the target.³²⁸ Neither the pilots nor the crews apparently acted

326. Article 30 of the Rome Statute for the International Court defines “knowingly” strictly:

2. For the purposes of this Article, a person has intent where:

(a) In relation to conduct, that person means to engage in the conduct;
 (b) In relation to a consequence, that person means to cause that consequence or is aware that it will occur in the ordinary course of events.

3. For the purposes of this Article, “knowledge” means awareness that a circumstance exists or a consequence will occur in the ordinary course of events. “Know” and “knowingly” shall be construed accordingly.”

Rome Statute, *supra* note 4, art. 30. See also Yoram Dinstein, *Defenses*, in I SUBSTANTIVE AND PROCEDURAL ASPECTS OF INTERNATIONAL CRIMINAL LAW, *supra* note 303, at 367, 371–78 for a discussion of the *mens rea* requirements established by the ICC for war crimes and crimes against humanity. The ICC statute apparently does not include a willful blindness provision, a lower standard for proving knowledge. Compare MODEL PENAL CODE § 2.02(7) (2000) (“*Requirement of Knowledge Satisfied by Knowledge of High Probability*: When knowledge of the existence of a particular fact is an element of an offense, such knowledge is established if a person is *aware of a high probability of its existence*, unless he actually believes that it does not exist.”) (emphasis added). See *United States v. Jewell*, 532 F.2d 697 (9th Cir. 1976) (Kennedy, J., dissenting) (the then Circuit Court of Appeals Judge Kennedy provides an informative gloss on this section, which codifies the “willful blindness doctrine”).

327. See CLARK, *supra* note 16, at 196

328. See *id.*

willfully nor in the knowledge that they would cause excessive civilian casualties.³²⁹

On the other hand if, for example, the U.S. Air Force failed to equip the CBU-87B with a Doppler altitude detector, the prosecutor might argue that such a failure amounts, at the very least, to reckless indifference to civilian lives. The bombing of Nis was apparently caused by the CBU-87B dispenser opening prematurely. The Department of Defense has yet to release information as to what caused the premature release. A Doppler altitude detector was readily available, standard optional equipment for the CBU-87B. Kosovo and Serbia are mountainous regions and fairly densely populated.³³⁰ Errors in delivery of cluster bombs could be foreseen. Failure to use a piece of equipment that would have prevented such errors or at least limited them amounted to reckless disregard, because the commanders were aware of the central facts, namely, the risks posed by cluster bombs to civilians and the errors inherent in aerial bombing. If and only if the cluster bomb dispenser in question was not equipped with a Doppler radar sensing device would this be an issue.³³¹

Even assuming a prosecutor could make such a showing, the command could still defend, claiming a lack of willfulness and that they never acted "in the knowledge" that failure to equip CBU-87B with the Doppler altitude sensor would cause "excessive" civilian casualties. The same argument would apply to NATO's targeting the Nis Airport in the first place, an area with a concentration of civilians. Commanders and pilots could assert that they did not know dropping cluster bombs on this presumed military target violated humanitarian law, and, even if they did, prosecutors could not prove that these military actors knew that dropping the cluster bombs on the Nis Airport would cause excessive civilian casualties.

The prosecution thus bears a very heavy burden in proving war crimes, grave breaches of the Protocol:

[P]aragraphs 3(b) and (c) are drawn so narrowly that they limit application of Article 85 to only a few situations in which the rule of proportionality would be breached. Specifically the attack must be launched 'in the knowledge that' it will cause excessive civilian

329. The conclusion here is necessarily tentative because neither NATO nor the Department of Defense has made available the results of any investigation of the incident. The ICTY Prosecutor should have demanded that such an investigation be made. *But see* Robert M. Hayden, Woodrow Wilson Int'l Centre for Scholars, *U.N. War Crimes Tribunal Delivers a Travesty of Justice* (concluding that NATO had committed a war crime in dropping cluster bombs on Nis just as the ICTY had concluded that the Serb Milan Martić had committed a war crime in shelling Zagreb with cluster bombs), *available at* <http://www.wvics.si.edu/NEWS/haydsen.htm> (last visited Apr. 10, 2002).

330. Yugoslavia has a population density of 269 persons per sq. mile (104 persons per sq. km.). *See* MICROSOFT 98 ENCARTA ENCYCLOPEDIA, *Yugoslavia, Land and Resources* (1998).

331. There may, in fact, be other issues concerning the bombing of Nis. Unless the Department of Defense publishes the results of a full investigation of the incident, it is impossible to render a definitive judgment.

casualties or damage to civilian objects. This makes most violations of obligations such as that found in Article 57, subparagraph 2(a)(iii) mere breaches of Protocol I. It also results in the conclusion that very few weapons violations will be grave breaches under Protocol I unless the weapon is used to violate some other proscription such as making civilians the object of attack.³³²

Under the current available evidence, prosecuting actors in NATO for delivering cluster bombs should fail.

B. Prosecution Under the Rome Statute of the International Criminal Court

In July 1998, the vast majority of countries of the world agreed to create an International Criminal Court, and in fact, the Court appears to becoming a reality.³³³ Although not in effect during the Kosovo intervention, the ICC may ultimately be a major judicial body for interpreting and enforcing international human law. The individuals and parties involved in the NATO air campaign in Serbia and the Kosovo province were obviously not covered by the ICC. Yet, as the most recent expression of international humanitarian law, the Rome Statute establishing the ICC could provide guidance on the legality of cluster bombs. The ICC, however, focuses exclusively on criminal prosecution, not necessarily on protection of civilians. The *mens rea* and *actus reus* requirements are actually somewhat harder for a prosecutor to meet under the ICC than under the Protocol.

Under Article 8 of the ICC, an individual is guilty of a war crime when he or she.³³⁴

332. Maj. William G. Schmidt, *The Protection of Victims of International Armed Conflicts: Protocol I Additional to the Geneva Conventions*, 1984 A.F. L. REV. 189, 242-43.

333. See Rome Statute, *supra* note 4. On April 11, 2002, ten countries deposited their ratifications with the Secretary General of the United Nations, raising the number of ratifications to sixty-six and thereby enabling the Statute of the Court to come into force. Barbara Crossette, *War Crimes Tribunal Becomes Reality, Without U.S. Role*, N.Y. TIMES, Apr. 11, 2002, at A3. As of that date, 139 countries had signed this Convention. See United Nations, *The Rome Statute Establishing an International Criminal Court, Signatures, Ratifications, and Accessions*, available at <http://www.un.org/law/icc/statute/romefra.htm> (last visited Apr. 11, 2002). Although President Clinton signed the ICC Statute, President Bush's administration adamantly opposes the ICC and will not send the Statute to the Senate for approval, which would presumably be difficult to obtain in any event. See Crossette, *supra*, at A3. President Bush is also considering nullifying President Clinton's signing the Statute of the ICC. See *id.*; Elizabeth A. Neuffer, *U.S. to Back Out of World Court Plan Envoy: Bush Team May 'Unsign' Treaty*, BOSTON GLOBE, Mar. 29, 2002, at A22, available at 2002 WL 4119306.

334. Article 8 also criminalizes the following:

- (b) Other serious violations of the laws and customs applicable in international armed conflict, within the established framework of international law, namely, any of the following acts:
 - (i) Intentionally directing attacks against the civilian population as such or against individual civilians not taking direct part in hostilities;

Intentionally launch[es] an attack in the knowledge that such attack will cause incidental loss of life or injury to civilians or damage to civilian objects or widespread, long-term and severe damage to the natural environment which would be *clearly* excessive in relation to the concrete and direct *overall* military advantage anticipated[.]³³⁵

The language resembles that of Article 85 of Additional Protocol I, which imposes criminal liability for grave breaches.³³⁶ ICC's Article uses the language "[i]ntentionally launches an attack," arguably similar to the Protocol's language,³³⁷

(ii) Intentionally directing attacks against civilian objects, that is, objects which are not military objectives;

(iii) Intentionally directing attacks against personnel, installations, material, units or vehicles involved in a humanitarian assistance or peacekeeping mission in accordance with the Charter of the United Nations, as long as they are entitled to the protection given to civilians or civilian objects under the international law of armed conflict....

See Rome Statute, *supra* note 4, art. 8.

335. Rome Statute, *supra* note 4, art. 7(iv) (emphasis added).

336. A cluster bomb attack directed against civilians could also be prosecuted as a crime against humanity, defined in Article 7 of the ICC:

For the purpose of this Statute, "crime against humanity" means any of the following acts when committed as part of a widespread or systematic attack directed against any civilian population, with knowledge of the attack: (a) Murder;...(h) Persecution against any identifiable group or collectivity on political, racial, national, ethnic, cultural, religious, gender as defined in paragraph 3, or other grounds that are universally recognized as impermissible under international law, in connection with any act referred to in this paragraph or any crime within the jurisdiction of the Court; (i) Enforced disappearance of persons;...(k) Other inhumane acts of a similar character intentionally causing great suffering, or serious injury to body or to mental or physical health.

Id. at art. 7; *cf. supra* notes 352–54 and accompanying text for a discussion of the Martić case (defendant indicted by ICTY for allegedly launching a cluster bomb attack on a city).

The ICC defines "attack" as follows: "For the purpose of paragraph 1: (a) 'Attack directed against any civilian population' means a course of conduct involving the multiple commission of acts referred to in paragraph 1 against any civilian population, pursuant to or in furtherance of a State or organizational policy to commit such attack...." Rome Statute, *supra* note 4, art. 7(2). To establish a crime against humanity, the prosecution will have to show that the defendant targeted the civilian population, a heavy burden. In most situations, the accused will be able to point to some military objective at which the cluster bombs were aimed. The crime against humanity article only applies in egregious cases.

337.

In addition to the grave breaches defined in Article 11, the following acts shall be regarded as grave breaches of this Protocol, when committed willfully, in violation of the relevant provisions of this Protocol, and causing death or serious injury to body or health:

(a) Making the civilian population or individual civilians the object of attack;

(b) Launching an *indiscriminate attack affecting the civilian population* or civilian objects *in the knowledge* that such attack will cause *excessive*

requiring the defendant to have “willfully” committed the violation.³³⁸ Both the ICC and the Protocol require that the defendant act “in the knowledge” of the key facts the attack will bring about, for example, under the ICC “injury to civilians or damage to civilian objects or widespread, long-term and severe damage to the environment.” Additional Protocol I codifies the proportionality principle as a basis for criminal liability.³³⁹ That Article incorporates by reference language from another Article, which prohibits: “launching any attack 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*....”³⁴⁰

The ICC waters down Additional Protocol I’s language in two ways. First it adds the word, “clearly” to “excessive.” The prosecutor has to prove that defendant knew that the attack would cause not merely “excessive” civilian casualties but rather “*clearly* excessive” civilian casualties. What this means in practice remains to be seen. As pointed out above, a prosecutor would probably be able to prove a violation of the Protocol’s proportionality rule only in absolutely egregious cases. So even under Additional Protocol I, the prosecution will, in fact, be able to meet that element of the offense only where in fact the attack caused “clearly” excessive civilian deaths and injuries. On the other hand, the tribunal could reasonably assume that the parties to the Conference intended “clearly” to convey some meaning, presumably to make the prosecutor’s burden a heavier one: “The use of the word ‘clearly’ ensures that criminal responsibility would be entailed only in cases where the excessiveness of the incidental damage was obvious.”³⁴¹

Second, the ICC also qualifies “direct military advantage anticipated” by adding the one word, “overall.”³⁴² Under the ICC’s version of the proportionality rule, the civilian casualty side of the scale is balanced against the weight of the “concrete and direct *overall* military advantage anticipated.”³⁴³ This proposal renewed a debate in the ICRC Conference establishing the First Additional

loss of life, injury to civilians or damage to civilian objects, as defined in Article 57, paragraph 2 (a)(iii)....

Additional Protocol I, *supra* note 134, art 85(3).

338. The Prosecutor could argue that “willfully” may denote a mistake of law defense whereas “intentionally” does not. Consequently in this respect the ICC’s *mens rea* requirement is less strict than the Protocol’s. See *supra* notes 299–301 and accompanying text for a more detailed discussion of this point.

339. Thus, defendant is criminally liable when he or she “(b) launch[es] an *indiscriminate attack affecting the civilian population* or civilian objects *in the knowledge* that such attack will cause *excessive* loss of life, injury to civilians or damage to civilian objects, as defined in Article 57, paragraph 2 (a)(iii).” Additional Protocol I, *supra* note 134, art. 85(3)(b).

340. *Id.* art. 57(2)(iii) (emphasis added).

341. REPORT TO THE PROSECUTOR, *supra* note 23, ¶ 21 (relying on the Rome Statute, *supra* note 4, art. 7(a)(iv) as “evolving customary international law”).

342. See Rome Statute, *supra* note 4, art. 7(a)(iv) (emphasis added).

343. *Id.* (emphasis added).

Protocol. Instead of examining whether attacking a particular target caused excessive casualties, the “overall military advantage” language can be interpreted to mean whether in examining the entire battle, if not the entire conflict, the tribunal determines whether the attack on this particular target caused excessive civilian casualties. Proponents of this view lost in the ICRC Conference, because the majority of the conference delegates believed this proposal would unreasonably weaken the already weak proportionality rule, leaving civilians largely unprotected.³⁴⁴

As previously observed,³⁴⁵ NATO commanders and pilots will not be found to have violated the proportionality rule under the Protocol for using cluster bombs in Kosovo and Serbia. Consequently even had the ICC been in force in Yugoslavia, they could not be found to have violated the less stringent proportionality rule in Article 7 of the ICC for using cluster bombs.

C. Prosecution Under the International Criminal Tribunal for the Former Yugoslavia

Interestingly, the Kosovo intervention came under the jurisdiction of one of two currently existing international criminal tribunals, the Ad Hoc International Criminal Tribunal for the Former Yugoslavia, (ICTY).³⁴⁶ A Canadian law professor and others drafted a complaint naming President Clinton, Madeline

344. See ICRC COMMENTARY, *supra* note 70, at 683: “This Article [on proportionality] like Article 51 ‘(Protection of the civilian population)’ is not concerned with strategic objectives but with the means used in a specific tactical operation.” On the other hand, defendants before the ICC could argue that the word “overall” changes the test from examining a “specific tactical operation” to examining “strategic objectives” of at least the entire battle if not the entire conflict. It must be noted that some NATO members who are parties to Additional Protocol I attached reservations or declarations on this point. The Federal Republic of Germany’s is typical: “In applying the rule of proportionality in Article 51 and Article 57, ‘military advantage’ is understood to refer to the advantage anticipated *from the attack considered as a whole* and not only from isolated or particular parts of the attack.” Federal Republic of Germany, *Declaration Made at Ratification of Additional Protocol I*, ¶ 5 (1991), available at <http://www.icrc.org/ihl.nsf/677558c021.../3f4d8706b6b7ea40c1256402003fb3c7?OpenDocumen> (emphasis added). The following NATO countries have made similar reservations or declarations: Belgium, *Declaration at Time of Ratification*, ¶ 5; Canada, *Statement of Understanding concerning Articles 51(2) and 57(2)(a)(iii)*; Italy, *Declarations Made at Time of Ratification*; Netherlands, *Declaration Made at Time of Ratification*, ¶ 5; Spain, *Declarations Made at Time of Ratification*; United Kingdom, *Reservations*, ¶ 1, available at <http://www.icrc.org/ihl.nsf/677558c021.../0a9e03f0f2ee757cc1256402003fb6d2?OpenDocmen> (last visited June 2, 2001).

345. See *supra* notes 321–29 and accompanying text.

346. The ICTY was established by the U.N. Security Council to impose the rule of law on those responsible for “ethnic cleansing” in the former Yugoslavia, especially in Bosnia and Croatia. The Tribunal is empowered to adjudge guilt or innocence and impose appropriate sentences on those convicted of war crimes and crimes against humanity. S.C. RES. 817, May 25, 1993.

Albright, Tony Blair and other NATO leaders as defendants.³⁴⁷ Among other charges, the complaint alleged that the defendants violated the Protocol by using cluster bombs in civilian areas. Members of the Russian Parliament and legal experts apparently also met with the ICTY Prosecutor's predecessor, urging an investigation of NATO's bombing campaign.³⁴⁸ The Prosecutor, however, refused to initiate an investigation into the allegations and refused to indict any NATO leaders or military personnel.³⁴⁹

After receiving the complaint, the Prosecutor did appoint a committee to look into the allegations informally. It concluded that cluster bombs do not currently violate humanitarian law. The Committee first found that anti-personnel landmines do not yet violate customary international law although "there is a strong trend in that direction."³⁵⁰ In any event, the Committee then concluded that "[t]here is...no general legal consensus that cluster bombs are, in legal terms, equivalent to antipersonnel landmines."³⁵¹ The Committee acknowledged that the Prosecutor's office had previously indicted a Serb, Milan Martić, for allegedly ordering cluster bomb attacks upon the Croatian city of Zagreb, resulting in seven civilian deaths.³⁵² The Prosecutor's Committee distinguished the Martić case from NATO's use of cluster bombs, noting in that case "the Chamber stated there was no formal provision forbidding the use of cluster bombs as such (para. 18 of judgment) but it regarded the use of the Orkan rocket with a cluster bomb warhead in that particular case as evidence of the intent of the accused to deliberately attack the civilian population because the rocket was inaccurate, it landed in an area with no military objectives nearby, it was used as an antipersonnel weapon launched against the city of Zagreb, and the accused indicated he intended to attack the city as such...."³⁵³ Neither NATO nor the United States has publicly disclosed the

347. See Michael Mandel et al. (Osgoode Hall Law School), *Request that the Prosecutor [Justice Louise Arbour] Investigate Named Individuals [William J. Clinton, Madeline Albright, William S. Cohen et al.] for Violations of International Humanitarian Law and Prepare Indictments Against them Pursuant to Articles 18.1 and 18.4 of the Tribunal Statute*, JURIST, available at <http://jurist.law.pitt.edu/icty.htm> (visited on Apr. 10, 2002). Other individuals also submitted requests to investigate NATO leaders in connection with the Kosovo bombing campaign. See, e.g., Alexander Kykourzof (Greece), *Request to Investigate*, available at <http://balkanpeace.org/lan/greece.html> (last visited Mar. 30, 2002); Glen Rangwala (University of Cambridge), *Request to Investigate*, <http://balkanpeace.org/lan/INDEX.HTM> (last visited Mar. 30, 2002).

348. Steven Lee Myers, *Kosovo Inquiry Confirms U.S. Fears of War Crimes Court*, N.Y. TIMES, Jan. 3, 2000, at A6.

349. See Barbara Crossette, *U.N. War Crimes Prosecutor Declines to Investigate NATO*, N.Y. TIMES, June 3, 2000, at A4.

350. REPORT TO THE PROSECUTOR, *supra* note 23, ¶ 27.

351. *Id.*

352. See *id.* ¶ 27 (citing ¶¶ 23–31 of the Martić judgment); see also Prosecutor v. Martić, ¶¶ 5–6 (I.C.T.Y. 1996) (No. IT 95-11-R61), available at <http://www.un.org/icty/transe11/960227IT.txt>; Christopher Lockwood, *Zagreb Bombing Was Criminal Act*, ELECTRONIC TELEGRAPH, Feb. 28, 1996, available at <http://www.telegraph.co.uk/et/ac=05274126916657&rtmo=3HYHxB3M&atmo=rrrrrrq&pg=/et/96/2/28/wserbs28.html>.

353. REPORT TO THE PROSECUTOR, *supra* note 23, ¶ 27.

results of any investigation into the Nis attack. The Committee concluded that "based on the information presently available," NATO did not use cluster bombs "in such a fashion."³⁵⁴ The Committee neither called on NATO or the United States to investigate this incident nor did the Committee recommend to the Prosecutor that she do so.

Furthermore, the Committee did not directly address whether NATO's use of cluster bombs violated Article 51(5)(a) & (c) of the Protocol, that dud cluster bombs are inherently indiscriminate in violation of the Protocol's ban on indiscriminate weapons. Nor did the Committee address whether NATO's use of cluster bombs in some populated areas constituted prohibited target area bombing. In any event, the Committee recommended against investigating NATO for a possible violation of humanitarian law on this or other grounds.³⁵⁵

The Prosecutor followed the Committee's recommendation.³⁵⁶ At least with regard to NATO's employing cluster bombs,³⁵⁷ the Committee reached the correct result on the available evidence, but on the wrong grounds. As pointed out above, dud cluster bombs, if anything, pose greater risks to civilians than unmarked anti-personnel mines. Dud cluster bombs act like extraordinarily

354. *Id.*

355. See Charles Trueheart, *U.N. Tribunal Rejects Calls for Probe of NATO; No Kosovo War Crimes Found*, WASH. POST, June 3, 2000, at A09 (noting, however, that the Prosecutor's informal review "stoked fury in Congress and among military leaders in Washington, who were angry that U.S. leaders were being scrutinized for war crimes comparable to those widely ascribed to Yugoslav President Slobadan Milosevic"). The Tribunal's Statute does not expressly ban indiscriminate attacks on civilians or target area bombing as does Additional Protocol I. Thus, it may not be surprising that the Committee did not discuss a treaty that was not directly binding on the Tribunal. Nonetheless, the Statute of the ICTY does authorize it to

prosecute persons violating the laws or customs of war...includ[ing], but not limited to...(b) wanton destruction of cities, towns or villages, or devastation not justified by military necessity; (c) attack, or bombardment, by whatever means, of undefended towns, villages, dwellings, or buildings....

Statute of the International Tribunal (for the Prosecution of Persons Responsible for Serious Violations of Humanitarian Law Committed in the Territory of the Former Yugoslavia), May 3, 1993, art. 3, reprinted in 32 I.L.M. 1159 (1993), available at <http://www.un.org/icty/basic/I-b-ens.htm#> (last visited Apr. 8, 2002) (emphasis added). Many of the Articles of Additional Protocol I, including Article 51, have assumed the status of customary international law. See *supra* notes 308-16 and accompanying text.

356. See Trueheart, *supra* note 355, at A09.

357. Note that Amnesty International concluded that the bombing of the RTS Television Station constituted a war crime. See AMNESTY INT'L, *supra* note 23, at 46. But see Human Rights Watch, *Civilian Deaths*, *supra* note 20 (questioning the bombing of the station but implying that it did not rise to the level of a war crime), available at <http://www.hrw.org/reports/2000/nato/index.htm#TopOfPage>, The Civilian Deaths; Human Rights Watch, *Arms, Weapons and the Conduct of War, World Report 2000*, ¶ 1 (2000) ("NATO violated international humanitarian law, but did not commit war crimes."), available at <http://www.hrw.org/wr2k1/arms/arms5.html>.

powerful anti-personnel landmines.³⁵⁸ They fall under Article 51(5)(c) of the Protocol, because once on the ground, a dud cluster bomb cannot be aimed so as to distinguish between civilian and military targets. Since, however, the *mens rea* requirements for war crimes were not met, NATO commanders and pilots are apparently not criminally responsible under humanitarian law.³⁵⁹ The Committee, however, should have insisted that either the Prosecutor herself or at a minimum NATO and the United States carry out an investigation of the Nis attack. Clearing NATO of war crimes on the bald assertion by the side in question that a cluster bomb dispenser opened prematurely exposes the ICTY to charges of bias.³⁶⁰

D. NATO's Obligation to Make Reparation

Any state that violates international law must make reparation: "The juridical consequences of the breach of *any* international obligation is the creation of a duty to make reparation."³⁶¹ The Permanent Court of International Justice discussed this duty, noting that "reparation must, as far as possible, wipe out all the consequences of the illegal act and reestablish the situation which would, in all probability, have existed if that act had not been committed."³⁶² Reparation may take the form of restitution, compensation, or satisfaction, or any combination of these three remedies.³⁶³

For the reasons set forth above, NATO member states have the obligation to make reparation for delivering cluster bombs. It is a thesis of this Article that any armed force using cluster bombs has at a minimum the obligation to make

358. See *supra* notes 70–98 and accompanying text for a detailed discussion of this issue.

359. See *id.*

360. See, e.g., Hayden, *supra* note 329; Obradovic, *supra* note 16; Steve Erlander, *The Handover of Milosevic*, N.Y. TIMES, June 29, 2001, at A12 (quoting Aleksa Djilas, a Serb historian, complaining that only Milosevic and neither NATO commanders nor any commanders from the KLA or from Croatia who engaged in war crimes and crimes against humanity are being prosecuted). See also Wiebe, *supra* note 32, at 142 (noting that the distances between the areas in Nis in which cluster bomb submunitions were reported to have landed by Human Rights Watch "is larger than even the largest footprint reported for a CBU-87 (a square kilometer [.62 sq. mile])").

361. Noyes & Smith, *supra* note 305, at 238 (emphasis in original) (citing Chorzow Factory Case (Merits) (Germ. V. Pol.), 1928 P.C.I.J. (ser. A) No. 17, at 47; accord, e.g., Opinion in the *Lusitania* Cases (U.S. v. Ger.) 7 R. Int'l Arb. Awards 32, 35 (1923)).

362. *Id.* at 238 (quoting the Chorzow Factory Case, *supra* note 361, at 47).

363. See *id.* at 238. For an illustration of a combination of compensation and satisfaction, see BROWNIE, *supra* note 168, at 238 (noting that in responding to Switzerland's claim against Germany for violating Swiss neutrality from 1914–1916, Germany "expressed regret, punished or transferred the aviators responsible, and offered an indemnity"). Although restitution is often said to be the preferred remedy in international law, compensation is the preferred remedy in practice. See *id.* at 211; CHRISTINE GRAY, JUDICIAL REMEDIES IN INTERNATIONAL LAW 12 (1990).

restitution, “rectification of harm already caused by the illegal act,”³⁶⁴ namely, to clear dud cluster submunitions from the territory on which they were dropped. A military actor violates Protocol I, “[u]nless all feasible precautions, such as...*mine removal*, are taken to reduce the danger to civilians....”³⁶⁵ Given that dud cluster bombs operate just as mines, with the exception that cluster bombs are far more destructive and cannot be as accurately recorded, mapped, or marked to warn the community of their presence, the minimum obligation of a force using such weapons is to “remov[e]” them after the conflict is over. To avoid indiscriminate injury to civilians, the military force has the related duty immediately to provide the location of bombing sites and estimated delivery points to both enemy and friendly authorities to help warn civilians and to aid in clearing dud cluster bombs.³⁶⁶

364. GRAY, *supra* note 363, at 13.

365. BOTHE ET AL., *supra* note 124, at 308.

366. As noted above, a problem with dud cluster bombs is that the force that dropped them will usually be unable to know where all of them landed and thus even acting in good faith will be unlikely to be able to remove them all.

This interpretation is similar to the Convention on Conventional Weapons, *supra* note 192, Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and other Devices (Protocol II), *reprinted in* DOCUMENTS ON THE LAWS OF WAR, *supra* note 27, at 479. (Protocols I & II ratified by the United States on Mar. 24, 1995) [hereinafter Mine Protocol]. The Mine Protocol defines “mine” as “any munition placed under, on or near the ground or other surface area and designed to be detonated or exploded by the presence, proximity or contact of a person or vehicle,” and “remotely delivered mine” as “any mine so defined delivered by artillery, rocket, mortar or similar means or dropped from an aircraft.” *Id.* art. 2(1). This Protocol prohibits “remotely-delivered mine[s]” unless they have self-destruct mechanisms or can be “accurately recorded.” *Id.* art. 5(1).

Although dud cluster bomblets are not mines per se, they are “placed...on or near the ground.” Although not expressly “designed...[to] explode[] by the presence, proximity or contact of person or vehicle,” their designers were aware of the substantial dud rate and of the sensitivity of the bomblet’s fuze. The designers knew that the dud cluster bombs can explode in the presence of a slight vibration, however caused. A broad interpretation of the second Protocol could fit dud cluster bombs within the definition of mine, and in particular “remotely delivered mine,” since cluster bombs are “delivered by artillery, rocket...or dropped from an aircraft.” Since they lack self-destruct mechanisms and since their precise landing cannot be accurately recorded, their use would violate the Mine Protocol, to which the United States is a party.

On the other hand, cluster bombs were in existence at the time the Protocol was entered into. If the parties intended to ban them or to ban dud cluster bombs, one would think they would have done so expressly. Furthermore, the third Protocol of the CCW dealing with incendiary weapons was entered into at the same time as the Mine Protocol. The Incendiary Weapon Protocol expressly excludes from the ban “combined-effects munitions,” such as the CBU-87B bomblet. Convention on Conventional Weapons, *supra* note 192, Protocol on Prohibitions or Restrictions on the Use of Incendiary Weapons (Protocol III), art. 1(1)(ii), *reprinted in* DOCUMENTS ON THE LAWS OF WAR, *supra* note 27, at 484. Since the parties expressly refused to ban cluster bombs from the Incendiary Weapons Protocol, the Parties presumably did not impliedly ban them in the adjoining Protocol.

Nonetheless, dud cluster bombs and remotely delivered mines endanger civilians in virtually the same way: they can explode at the slightest touch; absent self-destruct

Additional Protocol I provides that the parties to the Protocol and to the conflict “shall without delay take all necessary measures for the execution of their obligations under the Conventions and this Protocol.”³⁶⁷ Furthermore, the Protocol provides that parties to the conflict “shall give orders and instructions to ensure observation of the Conventions and this Protocol, and shall supervise their execution.”³⁶⁸ The Protocol goes further than Article 1 of the Hague Convention of 1907, which only covered instructions to armed forces.³⁶⁹ The Protocol “includes orders or instructions issued by civilian authorities and addressed to civilians as well.”³⁷⁰ Ordering military and civilian personnel to map, mark, and clear dud cluster bomb sites falls within the express language here of “supervising” and “giv[ing] orders and instructions to ensure observation of the Conventions and this Protocol.”

Mapping, marking, and removing may be difficult, if not impossible, while the hostilities are on-going or where the adversary party limits or denies physical entry onto the territory it holds. Consequently, mapping, marking, and removing mitigate, but do not completely purge the violation of the Convention.³⁷¹ Additional Protocol I also requires a breaching party to pay compensation.³⁷² The

mechanisms and precise marking, neither can discriminate between civilian or military targets. Consequently, the use of dud cluster bombs violates the spirit if not the letter of the Mine Protocol to the CCW. Of course if states possessing cluster bombs equipped them with reliable self-destruct mechanisms and destroyed stockpiles of currently outfitted cluster bombs, neither the letter nor the spirit of the Mine Protocol would be violated. *But see* Ekberg, *supra* note 104, at 149 (criticizing the Landmine Protocol for not adequately addressing remotely delivered mines with *unreliable* self-destruct mechanisms and arguing for a complete ban).

367. Additional Protocol I, *supra* note 134, art. 80(1).

368. *Id.* art. 80(2).

369. Article 3 of the 1907 Hague Convention (IV) Respecting the Laws and Customs of War on Land, art. 3, provides as follows: “A belligerent party which violates the provisions of the said Regulations shall, if the case demands, be liable to pay compensation. It shall be responsible for all acts committed by persons forming part of its armed forces.” Hague Convention (IV) Respecting the Laws and Customs of War on Land, *opened for signature* Oct. 18, 1907 (entered into force on Jan. 26, 1910), *reprinted in* THE HAGUE CONVENTIONS AND DECLARATIONS OF 1899 AND 1907 100–27 (J.B. Scott ed., 3d ed. 1918), *and in* DOCUMENTS ON THE LAWS OF WAR, *supra* note 27, at 52.

370. BOTHE ET AL., *supra* note 124, at 492.

371. Developing self-destruct bomblets would greatly reduce the hazard and possibly eliminate this violation. *See infra* notes 380–84 and accompanying text discussing the United States and Great Britain’s initiative in this direction.

372. Article 91 sets forth the civil liability of a breaching party: “A Party to the conflict which violates the provisions of the Conventions or of this Protocol shall, if the case demands, be liable to pay compensation. It shall be responsible for all acts committed by persons forming part of its armed forces.” Additional Protocol I, *supra* note 134, art. 91.

In addition, the Draft Articles on State Responsibility provide in relevant part, that

[a] State, which has committed an internationally wrongful act, shall: (a) discontinue the act, release and return the persons and objects held through such act, and *prevent continuing effects of such act*; and

relevant Article providing an obligation to pay compensation was considered to be declaratory of customary international law.³⁷³ Consequently, the United States would be obligated to pay compensation if it violated customary international law or if it was otherwise bound by Additional Protocol I.³⁷⁴ The United States

(b)...apply such remedies as are provided for in, or admitted under, its internal law; and (c) *re-establish the situation as it existed before the breach*. 2. To the extent that it is materially impossible for the State to act in conformity with the provisions of paragraph 1 of the present Article, it shall pay a sum of money to the injured State, corresponding to the value which a fulfillment of those obligations would bear.

Draft Articles on the Content, Forms, and Degrees of International Responsibility (part 2 of the Draft Articles) Proposed by Special Rapporteur Riphagen, 2 Y. B. INT'L L. COMM. (Part 1) 100-101 (emphasis added); see also Michael Bachrach, *The Protection and Rights of Victims under International Criminal Law*, 34 INT'L LAW. 7, 10 (2000) (quoting Van Boven's principles of compensation and reparation, namely, that reparation and compensation should "re-establish the situation that existed prior to the violations of human rights and humanitarian law"); The Administration of Justice and the Human Rights of Detainees, Revised Set of Basic Principles and Guidelines on the Right to Reparation for Victims of Gross Violations of Human Rights and Humanitarian Law Prepared by Mr. Theo van Boven Pursuant to Sub-Commission Decision 1995/117, U.N. ESCOR Comm'n on Human Rights, 48th Sess., Agenda Item 10, U.N. Doc. E/CN.4/Sub.2/1996/17 (1996)); Irwin Cotler, *Holocaust, Thefticide, and Restitution: A Legal Perspective*, 20 CARDOZO L. REV. 601 (1998). Note that the Security Council Resolution establishing the ICTY provides that the criminal responsibility imposed by the ICTY Statute does not preclude the victims from seeking compensation: "[T]he work of the International Tribunal shall be carried out without prejudice to the right of the victims to seek, through appropriate means, compensation for damages incurred as a result of violations of international humanitarian law..." S.C. Res. 827, U.N. SCOR, 48th Sess., 3217th mtg. at 2, ¶ 7, U.N. Doc. S/RES/827 (1993).

373. The official comment in the *travaux préparatoires* to Article 91, which imposes civil liability on breaching parties, states in relevant part as follows: "The article adds nothing to humanitarian law applicable in international armed conflict." LEVIE, RECORD OF PROCEEDINGS, *supra* note 131, at 473; see also Yvonne Park Hsu, "Comfort Women" from Korea: Japan's World War II Sex Slaves and the Legitimacy of Their Claims for Reparations, 2 PAC. RIM L. & POL'Y J. 97, 116 (1993); Michael J. Reisman, *The Lessons of Qana*, 22 YALE J. INT'L L. 381, 392 (1997), describing the purposes of compensation for violations of humanitarian law:

[First,] belligerents must compensate injured noncombatants or their survivors promptly, in proportion to the degree to which each caused the injuries suffered.... The issue is not absolute liability, for a state may substantially reduce, if not eliminate, liability by using more discriminating (and hence more operator-vulnerable) weapons, thereby "internalizing" what would otherwise be collateral damage.... Second, compensation should also be conceived of as a sanction for violations of treaty terms—in short, an international expiation for criminal responsibility.

374. The United States has paid compensation for damages caused by aerial warfare but did so as a so-called "act of grace," denying that it had any responsibility to do so. See Act of July 3, 1956, Pub. L. No. 84-656 (1956) (authorizing the payment of \$964,199.35 for damages by aerial bombing of the Papal Domain of Castel Gandolfo in World War II); H.R. 10766, 84th Cong. (1956); SENATE FOREIGN REL. COMM., 84TH CONG.,

acknowledges that Additional Protocol I does state some principles of custom, but it may be a stretch to conclude that using cluster bombs, except directly against civilians, violates customary international law at this point.³⁷⁵ The sixteen of the nineteen NATO countries that are state parties to Additional Protocol I, however, have the obligation to pay compensation (1) for the cost of (a) marking, (b) warning *and* educating the public, (c) clearing dud cluster bombs, if NATO is not going to perform this obligation itself, and (2) for civilian deaths and injuries caused by dud cluster bombs or by cluster bombs dropped on military targets in areas “with a concentration of civilians.”³⁷⁶

In Kosovo, NATO funded the clearing of mines and cluster bombs, most of which have now been cleared from Kosovo, if not from Serbia proper.³⁷⁷ NATO, however, failed to provide detailed information on the air strikes that apparently dropped over 1400 cluster bomb dispensers with over 265,000 cluster bombs on the Kosovo Province alone until nearly a year after the conflict ended.³⁷⁸ Furthermore, it is not yet clear whether the United States or other NATO member states will be directly funding the clearance of cluster bombs in Serbia (outside of

REP. 2292 (1956); ALWYN V. FREEMAN, RESPONSIBILITY OF STATES FOR UNLAWFUL ACTS OF THEIR ARMED FORCES 35 n.4 (1957).

375. Since United States’ development of this weapon in Vietnam, cluster bombs have proliferated. *See* Wiebe & Peachey, *supra* note 49, ¶¶ 6–9 (observing that cluster bombs have been used by the Soviet Union in Afghanistan, by the Taliban and their opponents in that country, by Angola, by Azerbaijani, by Bosnian Serbs, by Russia in Chechnya, by a drug cartel in Colombia, by Ethiopia, by Georgia, by Israel, by Nicaragua, by Sierra Leone, and by Turkey). That is not a complete list, but it is enough to show that there is scant state practice suggesting that states have either banned or strictly limited their use of cluster bombs. *But see* Belt, *supra* note 24, at 173 (arguing that a customary rule of international law requiring the use of precision bombing in areas with a “concentration of civilians” is emerging.) Irrespective of customary international law, the United States may be bound to make reparation under the other grounds set forth in *supra* notes 317–19 and accompanying text.

States are not responsible for damages inflicted by their armed forces in another state as long as the armed forces in question are engaged “in legitimate military operations in time of war.” FREEMAN, *supra* note 374, at 31. When states conduct military operations in violation of international humanitarian law, causing injury to a subject of a foreign state, the subject aggrieved has the basis of an international claim. *Id.* at 32.

376. *See supra* note 272.

377. Special Representative Donald Steinberg on Humanitarian Demining Assistance states that the United States is paying between \$3.5 million to \$4 million to aid in mine and UXO clearance in Kosovo. *Press Conference given by Special Representative Steinberg*, AFR. NEWS SERVICE, Sept. 21, 1999; *see also State Dep’t Briefing*, *supra* note 242, at 8 (quoting Special Representative Steinberg as saying, “The cluster bombs that are on the ground are a particularly dangerous element. They are, in some cases, small balls that are silver; in other cases they look almost like soda cans painted orange, in many cases, or yellow. They, unfortunately, are very attractive to young children....[T]here is, in general, a dud rate that goes from five percent on upward, and this will indeed be one very heavy focus of not only our mine awareness program, but our unexploded ordnance priorities”).

378. *See* Gall, *supra* note 87, at 3; *supra* note 84.

Kosovo). The obligation of restitution and compensation is not limited to Kosovo, but extends to all places in which cluster bombs were dropped, including Serbia itself.

Rarely have victors who have committed international humanitarian law violations compensated the vanquished. A treaty of peace typically waives such claims.³⁷⁹ Such a waiver may form a noteworthy example of “victor’s justice.” States carrying out a humanitarian intervention, on the other hand, ought to adhere to the strictest norms of international law. Consequently, they should make reparation, including restitution and compensation, for any international law violations their armed forces commit.

V. CONCLUSION

A. Responding to Criticism

As a result of the criticism concerning its use of cluster bombs in Kosovo, the Pentagon has announced the beginning of its efforts to formulate a policy to limit unexploded ordnance, particularly from dud cluster bombs. On January 10, 2001, then-U.S. Secretary of Defense William Cohen issued a memorandum stating: “It is the policy of the DoD [Department of Defense] to reduce overall UXO [unexploded ordnance] through a process of improvement in submunition system reliability—the desire is to field future submunitions with a 99% or higher functioning rate.”³⁸⁰ Those assigned to accomplish this objective have acknowledged that “the technology to take reliability to that level is going to be very tough.”³⁸¹

379. See FREEMAN, *supra* note 374, at 34.

380. Human Rights Watch, *Cluster Bombs in Afghanistan*, *supra* note 83, ¶ 31 (quoting Memorandum to the Secretaries of the Military Departments: DoD Policy on Submunition Reliability from William Cohen (Secretary of Defense, Jan. 10, 2001)), available at <http://www.hrw.org/background/arms/cluster-bck1031.htm>. Secretary Cohen added that the “[s]ubmunition functioning rates may be lower under operational conditions due to environmental factors such as terrain and weather....” *Id.*

381. Robert Wall, *Criticism Forces Bomb Upgrade*, AVIATION WK. & SPACE TECH., Nov. 27, 2000, at 37 (quoting Navy Captain Robert Wirt); see also David C. Isby, *AGM-154B JSOW Will Carry Improved Submunitions*, JANE’S MISSILES & ROCKETS, Mar. 1, 2001, available at LEXIS, News Library, Cumws File (noting that AGM-154B will employ a new submunition, the BLU-108 P3I, which will have three separate self-destruct mechanisms, primarily, however, acting as a sensor fuzed weapon); Rupert Pengelley, *Close Fire Munitions Shoot Ahead—Projectile Developers Pursue Price, Precision and Utility Goals*, INT’L DEF. REV. ¶ 18, Aug. 1, 2000, available at LEXIS, News Library, Cumws File (noting new efforts towards developing self-destruct bomblets yet “despite many years of effort the US devoted to the development of a reliable self-destruct fuze for bomblet rounds, none has so far been applied to its 155mm ICM stockpile ... consist[ing] of M483A1 and M864 projectiles, respectfully filled with 88 and 72 M42/M46 grenades, which have been known to exhibit dud rates as high as 15%. The situation is no better with the Multiple-Launch Rocket System (MLRS) and ATACMS missile stockpiles”). In 2000, the Air Force began equipping its fighters and bombers with new guidance kits to improve

A possible solution would be to include a battery with each submunition, causing it to explode within a set time after impacting the ground.³⁸² Assuming such a self-destruct mechanism is built, the Navy, which is the armed service leading this effort, has not yet decided whether to retrofit existing BLU-97 bomblets.³⁸³ Under former Secretary Cohen's directive, the Services "may retain 'legacy' submunitions until employed or superseded by replacement systems...."³⁸⁴ In Afghanistan, however, the United States continued to use CBU bomblets without self-destructive devices.³⁸⁵

Such a technological fix, however, presents problems of its own. Self-destruct mechanisms in other weapons systems have not proven to be completely reliable.³⁸⁶ Attempts to build in additional secondary fuzing systems may increase the instability of dud bomblets, because when such a system fails, it "has a tendency to be especially sensitive to any disturbance or movement."³⁸⁷ Substantially increasing the costs of these weapons,³⁸⁸ such an effort should cut down but not eliminate live duds: "The problem of duds will always be with us

the accuracy of cluster bombing. *See US Air Force starts fitting smart bomb kits*, JANE'S DEF. WEEKLY ¶ 1, Nov. 15, 2000, available at http://www.janes.com/defence/air_forces/news_briefs/jdw001115_02.shtml (last visited Apr. 5, 2002) [hereinafter *US Air Force*]. Critics have questioned whether the kits saved any civilian lives in Afghanistan. *See* Watson, *supra* note 83, at A1.

382. *See US Air Force*, *supra* note 381, ¶ 1.

383. *See US Air Force*, *supra* note 381. Britain has apparently decided to keep current models of cluster bombs in its inventory. *See Calls for Cluster Bomb Ban* (BBC television broadcast, Aug. 8, 2000) (stating that the Royal Air Force has decided that "it is not going to remove cluster bombs from its inventory"), available at http://news.bbc.co.uk/1/hi/english/uk/newsid_870000/870644.stm (last visited Apr. 10, 2002); *see also* Robert Wall and David A. Fulghum, *Upgrades Planned for Existing Cache*, AVIATION WK. & SPACE TECH., Sept. 25, 2000, at 90 ("Military planners recognize they will have to rely on existing munitions as their stable in future conflicts, even as researchers focus their attention on the next generation of weapons" including a self-destruct mechanism on the sensor fuzed weapon, the CBU-108.). Great Britain apparently has decided to move away from cluster bombs toward smart unitary warheads. *See* Richard Norton-Taylor, *Smart Missiles to Replace RAF's Dumb Bombs*, GUARDIAN, July 25, 2000, at 1.

384. *See* Human Rights Watch, *Cluster Bombs in Afghanistan*, *supra* note 83, available at <http://www.hrw.org/background/arms/cluster-bck1031.htm>.

385. *See id.* Some controversy arose when it was observed that the food packages that the U.S. dropped had the same yellow color as the bomblets. *See supra* note 83.

386. *See* Ekberg, *supra* note 104, at 152-53 (noting that many mines specially equipped with self-destruct mechanisms continued to remain live).

387. Wiebe, *supra* note 32, at 118 (quoting RAE MCGRATH, *THE MILITARY EFFECTIVENESS & IMPACT ON CIVILIANS OF CLUSTER MUNITIONS* 18-23 (2000)).

388. The DP/ICM grenade assembly "typically costs less than \$3, depending on the year of manufacture, the applicable inflation factor and the quantity procured per contract." Kennedy & Kincheloe, *supra* note 51, at 29. The unit cost list price for the CBU-87B is \$13,941. *See* FAS, *Bombs for Beginners*, *supra* note 36, available at <http://www.fas.org/man/dod-101/sys/dumb/bombs.htm>.

even though the dud rate itself may be reduced by incorporation in the mine or bomb fuse of either [a] self-destruct or self-sterilization mechanism.”³⁸⁹

In addition, creating self-destructing bomblets does nothing to restrict the one-to-five football-field-size footprint of a single cluster bomb. Assume for argument sake that the self-destruct mechanisms would be reliable. The cluster bomb would, at least in urban areas, still kill and wound civilians indiscriminately.

B. The Cluster Bomb and Humanitarian Intervention

NATO dropped cluster bombs in this, its first war, which it justifies principally on the grounds of humanitarian intervention.³⁹⁰ The doctrine of humanitarian intervention is controversial. The plain text of the U.N. Charter permits countries to use force, absent Security Council consent, only for self-defense.³⁹¹ None of the NATO countries had been attacked by the Federal Republic of Yugoslavia nor were any under an imminent threat of such an attack. China and Russia presumably would have vetoed any Security Council Resolution calling upon a U.N. military intervention into the former Yugoslavia.³⁹² Only a teleological interpretation of the Charter, an interpretation the Vienna Convention on the Law of Treaties rejects, would permit an ad hoc intervention.³⁹³

389. Kennedy & Kincheloe, *supra* note 51, at 29.

390. See CLARK, *supra* note 16, at 157, 160–61.

391. Article 2 of the U.N. Charter requires members to “refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state.” See U.N. CHARTER, June 26, 1945, art. 2(4), 59 Stat. 1031, 3 Bevans 1153 (entered into force Oct. 24, 1945). The Article requires states to settle their international disputes “by peaceful means,” *Id.* art. 2(3), only permitting intervention in another state by the Security Council under its Chapter VII authority. See *id.* art. 2(7). States may otherwise only use force in individual or collective self-defense. See *id.* art. 51. The Charter also prohibits regional agents from using force without Security Council permission: “[N]o enforcement action shall be taken under regional arrangements or by regional agencies without the authorization of the Security Council.” *Id.* art. 53(1). See Cassese, *supra* note 12, at 24 (citing OSCAR SCHACHTER, *INTERNATIONAL LAW IN THEORY AND PRACTICE* 129 (1991) for the proposition that humanitarian intervention absent Security Council authorization violates international law).

392. See Cassese, *supra* note 12, at 25.

393. See *id.* at 25–27 (concluding that the NATO intervention violated international law but that it was not only ethically justifiable but also that it may “gradually lead to the crystallization of a general rule of international law authorizing armed counter-measures for the exclusive purpose of putting an end to large-scale atrocities amounting to crimes against humanity and constituting a threat to peace”). Small countries usually reject the doctrine of humanitarian intervention, because, as a practical matter, large, powerful countries are exempt from it. Russia has killed far more Chechen civilians than the Milosevic regime killed Albanian-Kosovars, yet no one is seriously calling on the world community to intervene militarily in Russia. See Emil Pain, *The Second Chechen War: The Information Component*, 80 MIL. REV. 59, available at 2000 WL 16594676 ¶ 52 (“In the last war at least 30,000 civilians died.”); *Europe: Russia’s Chechen war reaches crisis point*, JANE’S INTELLIGENCE REV., Oct. 1, 2000, available at 2000 WL 11960900 ¶ 2 (“Chechen casualties, civilian and guerrillas, cannot be reliably calculated but must total

On the other hand, the world community can no longer stand idly by while a government grossly abuses its citizens' human rights. The Charter itself suggests that the human rights of all persons within a government's borders must be respected and that a government does not have absolute sovereign power to deprive its citizens of these rights.³⁹⁴ A few noted scholars and jurists have recognized the doctrine of humanitarian intervention under sharply defined conditions, firstly, that "widespread and grave international crimes as [defined in the ICC] are being committed in the state, that the state supports them, acquiesces in them or cannot control them."³⁹⁵ All alternative means to ending such abuses must have been exhausted, the Security Council must have refused to act, and the intervenors must use only that degree of force necessary to stop the human rights abuses from recurring.³⁹⁶

Since using force under these circumstances is not expressly authorized by the U.N. Charter or by other international agreements or clearly permitted under international custom, the intervenors must strictly adhere both to the letter and the spirit of humanitarian law. Strict observance is all the more necessary because such

several thousand deaths." *But see* Alvi Zakriyev, *Russians battle Chechens for south as civilian casualties rise*, AGENCE FRANCE-PRESSE, FEB. 15, 2000, available at 2000 WL 2733910 ¶ 13 (Since the start of Russian bombings in the republic, Chechen spokesmen have claimed some 15,000 civilians have been killed. Officials in Moscow have put the figure at "several hundred"); David Briscoe, *Chechen Leader Doesn't Want US Aid*, ASSOCIATED PRESS ONLINE, Jan. 13, 2000, available at 2000 WL 3305974 ¶ 7 (estimating 10,000 Chechen civilian casualties from the conflict with Russia).

394. See U.N. CHARTER, *supra* note 391, art. 2(7) ("Nothing contained in the present Charter shall authorize the United Nations to intervene in matters which are essentially within the domestic jurisdiction of any state or shall require the Members to submit such matters to settlement under the present Charter; but this principle shall not prejudice the application of enforcement measures under Chapter VII.") (emphasis added). See also *id.* arts. 55(c) & 56 (member states pledging to promote universal respect for human rights).

395. See Charney, *supra* note 12, at 1244.

396. See *id.*; see also Cassese, *supra* note 12, at 27 (in addition to the stated criteria, requiring that a group of states, not a single hegemonic power, conduct the intervention and that a majority of the members of the United Nations do not oppose the intervention); Falk, *supra* note 12, at 856 (suggesting a five prong test authorizing humanitarian intervention: "[1] there is a strong burden of persuasion associated with the rejection of the United Nations framework of legal restraint on the use of force; [2] this burden can be initially met if there is a credible prospect that a humanitarian catastrophe will otherwise occur; [3] such a burden cannot be discharged fully if diplomatic alternatives to war have not been fully explored in a sincere and convincing manner; [4] the humanitarian rationale is also sustained or undermined by the extent to which the tactics of warfare exhibit sensitivity to civilian harm, and the degree to which the intervenors avoid unduly shifting the risks of war to the supposed beneficiaries of the action so as to avoid harm to themselves; and [5] the humanitarian rationale is also weakened if there were less destructive means to protect the threatened population than those relied upon").

an intervention marks the intersection between human rights law and humanitarian law.³⁹⁷

While some may claim that “[t]he law speaks too softly to be heard among the din of arms,”³⁹⁸ the Nuremberg, Yugoslavia, and Rwanda tribunals and the surprisingly broad endorsement of the International Criminal Court testify to the world community’s outrage about governments and their militaries flouting international humanitarian law. If an armed force intervenes in another country to stop gross human rights abuses, that armed force sows the seeds for future human rights abuses if it violates humanitarian law in the process.

Armed conflict has afflicted the Balkan Peninsula for over 600 years.³⁹⁹ World War I began there over ethnic rivalry.⁴⁰⁰ World War II pitted ethnic groups against each other.⁴⁰¹ The communist era further aggravated ethnic tensions while keeping a lid on them.⁴⁰² Each ethnic group in the former Yugoslavia appears to have well-documented historical claims to much of the same land, each with at first glance legitimate grievances against the other, each with scores decades or centuries old to settle.⁴⁰³ Given the ethnic hatred and their history of ethnic warfare, the intervening force needed to comply strictly with the letter and the spirit of international humanitarian law to avoid further inflaming centuries-old resentments.

397. Mary Robinson, the United Nations High Commissioner for Human Rights, was concerned about the civilian casualties of the NATO air campaign and stated, “if there is to be a military campaign with humanitarian purposes, it must be very targeted as a military campaign on military targets...[and that the NATO air campaign] is seen as being too indiscriminate in relation to civilian casualties....” *U.N. Human Rights Chief Airs Concerns on Indiscriminate NATO Campaign*, AGENCE FRANCE PRESSE ¶¶ 7, 9, May 14, 1999; see Christine M. Chinkin, *Kosovo: A “Good or Bad War,”* 93 AM. J. INT’L L. 841, 847 (1999) (“Does not humanitarian intervention entail a responsibility to ensure that the methods used are appropriate for the achievement of the objectives sought?”); Falk, *supra* note 12, at 856 (“[T]he humanitarian rationale is also sustained or undermined by the extent to which tactics of warfare exhibit sensitivity to civilian harm....”).

398. Caius Marius, c.157–86 B.C., *quoted in* THE QUOTABLE LAWYER 321 (David Shrager & Elizabeth Frost eds., 1986).

399. See KAPLAN, *supra* note 14, at 35–37 (noting that the Turks conquered the Serbs in Kosovo in 1389); NOEL MALCOLM, KOSOVO 81–92 (1999) (documenting the troubled history of Kosovo and the Balkans). Ironically, Vidovan, June 28, 1389, which the Serbs celebrate as their glorious defeat by the Turks, is also the date that Gavrilo Princep, a Serb nationalist, assassinated the Archduke Ferdinand in 1914; it is also the date that Slobodan Milosevic gave his fiery nationalistic speech to the Serbs in Kosovo in 1989; and it is also the date that the Serbian authorities summarily transferred Milosevic to the Hague in 2001. See Erlander, *supra* note 360, at A12.

400. See BARBARA TUCHMAN, THE GUNS OF AUGUST 91 (1962) (noting that the Austrian heir apparent, Archduke Franz Ferdinand, was assassinated by Serbian nationalist Gavrilo Princep on June 28, 1914).

401. See MALCOLM, *supra* note 399, at 289–313.

402. See KAPLAN, *supra* note 14, at 38–39; MALCOLM, *supra* note 399, at 314–33.

403. See KAPLAN, *supra* note 14, at 29–48.

NATO did go to great lengths to avoid civilian casualties. "Collateral damage" could have been far greater. Yet NATO's use of cluster bombs, at least to some extent, undermined the moral and legal principles upon which the intervention was based. During the NATO intervention, at least 135 to 195 civilians were killed by cluster bombs, and almost certainly many more were injured; after the hostilities ended, dud cluster bombs in Kosovo alone caused a significant number of deaths and injuries.⁴⁰⁴ Like most military forces' use of cluster bombs, NATO's violated the 1977 Additional Protocol I to the Geneva Conventions of 1949. Dud cluster bombs are indiscriminate weapons, creating fear in the populus and endangering civilians, particularly children. When dropped in populated areas, cluster bombs also violate the Protocol as the modern equivalent of banned target area bombing, putting civilians at too great a risk.

The United States' nascent efforts to develop cluster bombs with self-destruct mechanisms are to be commended. If the United States has the political and moral will to destroy current stockpiles of cluster bombs and if it equips bomblets with highly reliable self-destruct devices, one objection might, to a great extent, be eliminated. The other objection, however, remains. That a single cluster bomb can shower as many as five and a half football fields with deadly shrapnel and that a typical multiple launch cluster bomb footprint covers nearly nineteen football fields demonstrate this weapon's potential for carrying out banned target area bombing. Using this weapon in a remote desert might enable one to avoid the strictures of the First Protocol. The cluster-bomb-shot-gun approach to bombing will not do, however, in cities or towns, where most military targets tend to be located. Finally, the horrific nature of this weapon, the grievous wounds it causes, resulting in death and amputation for many, further undercuts the moral imperative of an armed force carrying out a humanitarian intervention. These objections are not lost on the Serbians.⁴⁰⁵ Given the strife in the Balkans and in particular in the former Yugoslavia, any attempt to bring stability to that area of the world may have been made more difficult by NATO's having employed the cluster bomb.

This Article argues that the First Protocol prohibits the use of the cluster bomb in areas with "a concentration of civilians" and in other less concentrated areas where people may be injured by dud cluster bombs. Even under the broadest interpretation, the Protocol does not ban this weapon. Furthermore, it is difficult to enforce Protocol I standards that require subjective judgment. How many civilians does it take to make a "concentration of civilians"? What dud rate is required before the weapon producing the duds becomes indiscriminate? Line drawing is not easy here. As a practical matter, given the limited situations in which the cluster bomb may legitimately be used, steps toward banning the weapon entirely

404. See Human Rights Watch, *Civilian Deaths*, *supra* note 20, ¶ 5; Human Rights Watch, *Cluster Bombs in Afghanistan*, *supra* note 83, at 5; Flanagan, *supra* note 250, at 4.

405. See Obradovic, *supra* note 16.

should be considered.⁴⁰⁶ A ban would also presumably render the use of the cluster bomb a war crime and thus serve as a greater deterrent. A ban is easier for the military to implement and for the media, other parties to the conflict, and ultimately the International Criminal Court to help enforce. Lastly, a ban of a weapon that has such an inherent potential to cause brutal injuries and deaths of both civilians and combatants may help stem support for terror groups in the lands of the aggrieved and the dispossessed.

406. The Second Review Conference on the Convention on Certain Conventional Weapons has “established a group of governmental experts to discuss ways and means to address the issue of ‘explosive remnants of war’ (ERW), which presumably would include dud cluster bombs.” See Int’l Comm. of the Red Cross, *Second Review Conference of the Convention on Certain Conventional Weapons Ends; Convention Framework Amended* ¶ 7 (2001), available at <http://www.icrc.org/irceng.nsf/5cacfd48ca698b641256242003b3295/f90257fb46c54df8c1256b29005471de?OpenDocument> (last visited Apr. 5, 2002). Among other items for consideration are developing self-destruct mechanisms, the adequacy of existing humanitarian law to reduce post conflict risks of ERW both to civilians and military, warning the civilian population and clearing the ERW. *Id.* ¶ 8. Unfortunately, it is doubtful that this Conference will go far enough. See Peter Herby & Ann R. Nuiten, Int’l Comm. of the Red Cross, *Explosive Remnants of War: Protecting Civilians through an Additional Protocol to the 1980 Convention on Certain Conventional Weapons* (2001), available at <http://www.icrc.org/irceng.nsf/bdbc6ea35567c6634125673900241f2e/801dd51d65186c96c1256a45002d7cea?OpenDocument> (last visited Apr. 5, 2002).