



## THE LAWFULNESS OF AND CASE FOR COMBAT DRONES IN THE FIGHT AGAINST TERRORISM

---

**Heeyong Daniel Jang\***

### INTRODUCTION: COMBAT DRONES AGAINST TERRORISM

The recent proliferation of unmanned aerial vehicles (“UAVs”),<sup>1</sup> more commonly referred to as drones, have spawned intellectual debates on whether a country has the right under the international law to unilaterally deploy these remotely or autonomously controlled aircraft abroad for military purposes. An increasing number of countries—more than seventy—have access to this novel technology to fulfill various military objectives, including

---

\* Heeyong Daniel Jang is a graduate of Yale Law School and an associate at Paul, Weiss, Rifkind, Wharton & Garrison LLP in New York. Prior to law school, he served as a soldier in the South Korean army and as a peacekeeper for the United Nations in Lebanon. He would like to thank W. Michael Reisman for his guidance and input. He would also like to thank all editors of the *National Security Law Journal*, especially Jordan Fischetti, Olivia Seo, and Amy Shepard, for insightful comments. Errors, if any, and views expressed in this article are solely those of the author.

<sup>1</sup> For the purpose of this paper and reflecting the general usage, *combat drone* and Unmanned Combat Aerial Vehicle (“UCAV”) will be used interchangeably. *Drone* refers to both UAV and UCAV. UAVs are “operated remotely or fly autonomously based on pre-programmed flight paths or other systems designed to allow them to operate autonomously. UAVs are a category of aircraft, for they use aerodynamic forces to provide vehicle lift and are designed for sustained, level flight.” PROGRAM ON HUMANITARIAN POLICY & CONFLICT RESEARCH AT HARVARD UNIV., COMMENTARY ON THE HPCR MANUAL ON INTERNATIONAL LAW APPLICABLE TO AIR AND MISSILE WARFARE 54 (2010) [hereinafter COMMENTARY ON THE HPCR MANUAL], available at <http://ihlresearch.org/amw/Commentary%20on%20the%20HPCR%20Manual.pdf>.

surveillance, reconnaissance, and targeted killing.<sup>2</sup> The most controversial use of drones is that of unmanned combat aerial vehicles (“UCAVs”),<sup>3</sup> also known as combat drones, for striking terrorist suspects in a foreign country.

In the wake of the September 11, 2001 terrorist attacks, the U.S. government began to actively employ UCAVs to assassinate suspected terrorists abroad. Since taking office, President Obama has greatly increased the use of combat drones. In fact, President Obama “during his first year in office oversaw more drone strikes in Pakistan than occurred during the entire Bush presidency.”<sup>4</sup> According to *The Long War Journal*, an estimated 801 militant deaths in Pakistan occurred from U.S. drone strikes in 2010, which is significantly higher than the 195 drone-caused deaths from 2004 to 2007.<sup>5</sup> Drones are gradually evolving into the centerpiece of the U.S. counterinsurgency program. On August 8, 2009, General Stephen Lorenz, the commander of Air Education and Training Command, stated that the U.S. Air Force will train more UAV operators in that year than pilots to fly manned aircraft.<sup>6</sup> Such increasing reliance on UAVs is likely to continue, but not without apprehension. Critics argue that dreadful stories of civilian collateral damage belie assertions that drones afford greater precision than other weapons. For example, in an attack that targeted Baitullah Mehsud, an infamous leader of a Taliban umbrella group, twelve civilians in the

---

<sup>2</sup> According to the U.S. Government Accountability Office, the number of countries that possess drones has risen from forty-one to seventy-six since 2005. U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-12-536, NONPROLIFERATION: AGENCIES COULD IMPROVE INFORMATION SHARING AND END-USE MONITORING ON UNMANNED AERIAL VEHICLE EXPORTS 9 (2012), available at <http://www.gao.gov/assets/600/593131.pdf>.

<sup>3</sup> Unmanned Combat Aerial Vehicle refers to “unmanned military aircraft of any size which carries and launches a weapon, or which can use on-board technology to direct such a weapon to a target ... [It] may be remotely controlled and piloted.” COMMENTARY ON THE HPCR MANUAL, *supra* note 1, at 55.

<sup>4</sup> Robert Wright, Op-Ed., *The Price of Assassination*, N.Y. TIMES, Apr. 13, 2010, [http://opinionator.blogs.nytimes.com/2010/04/13/title-2/?\\_r=1](http://opinionator.blogs.nytimes.com/2010/04/13/title-2/?_r=1).

<sup>5</sup> Bill Roggio & Alexander Mayer, *Charting the Data for U.S. Airstrikes in Pakistan, 2004-2013*, LONG WAR J. (Sept. 5, 2013), <http://www.longwarjournal.org/pakistan-strikes.php>.

<sup>6</sup> Walter Pincus, *Air Force to Train More Remote than Actual Pilots*, WASH. POST, Aug. 11, 2009, [http://articles.washingtonpost.com/2009-08-11/politics/36824678\\_1\\_ground-troops-air-education-aircraft](http://articles.washingtonpost.com/2009-08-11/politics/36824678_1_ground-troops-air-education-aircraft).

vicinity also died.<sup>7</sup> The drone-launched missile strike on Aiman al-Zawahiri, Osama bin Laden's deputy, killed eighteen bystanders while altogether missing the intended target.<sup>8</sup> Unsurprisingly, people demand a legal justification for such killings.

The law in this instance has unfortunately fallen behind technical development. The law of armed conflict ("LOAC") is perhaps the clearest manifestation of this legal vacuum because the Hague Conventions,<sup>9</sup> the Geneva Conventions and Additional Protocols,<sup>10</sup> and other LOAC treaties are essentially *post factum* reactive initiatives to ameliorate earlier misconduct. Therefore, these rules often fail to regulate the use of the most current weaponry.

Despite their reactive nature, the Hague and Geneva Conventions embody the foundational normative framework applicable to evaluating the lawfulness of drones. For example, the

---

<sup>7</sup> Mary Ellen O'Connell, *Unlawful Killing with Combat Drones: A Case Study of Pakistan, 2004-2009*, at 10 (Notre Dame Legal Studies, Working Paper No. 09-43, 2010), available at <http://ssrn.com/abstract=1501144>.

<sup>8</sup> Gabriella Blum & Philip Heymann, *Law and Policy of Targeted Killing*, 1 HARV. NAT'L SEC. J. 145, 150 (2010).

<sup>9</sup> The Hague Conventions of 1899 and 1907 are a series of multinational treaties that aimed at regulating the conduct of warfare. See Hague Convention for the Pacific Settlement of International Disputes, *adopted* July 29, 1899, 32 Stat. 1779, 1 Bevans 230; Hague Convention for the Pacific Settlement of International Disputes, *adopted* Oct. 18, 1907, 36 Stat. 2199, 1 Bevans 577.

<sup>10</sup> The term *Geneva Conventions* refers to four conventions in 1949. See Geneva Convention (I) for the Amelioration of the Condition of the Wounded and the Sick in Armed Forces in the Field, *adopted* Aug. 12, 1949, 6 U.S.T. 3114, 75 U.N.T.S. 31; see also Geneva Convention (II) for the Amelioration of the Condition of Wounded, Sick and Shipwrecked Members of Armed Forces at Sea, *adopted* Aug. 12, 1949, 6 U.S.T. 3217, 75 U.N.T.S. 85; Geneva Convention (III) Relative to the Treatment of Prisoners of War, *adopted* Aug. 12, 1949, 6 U.S.T. 3316, 75 U.N.T.S. 135; Geneva Convention (IV) Relative to the Protection of Civilian Persons in Time of War, *adopted* Aug. 12, 1949, 6 U.S.T. 3516, 75 U.N.T.S. 287. Protocols were added to the Geneva Conventions in 1977 and 2005. See Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I), *adopted* June 8, 1977, 1125 U.N.T.S. 3; Protocol Additional to the Geneva Conventions of Aug. 12, 1949, and relating to the Protection of Victims of Non-International Armed Conflicts (Protocol II), *adopted* June 8, 1977, 1125 U.N.T.S. 609; Protocol Additional to the Geneva Conventions of Aug. 12, 1949, and relating to the Adoption of an Additional Distinctive Emblem (Protocol III), *adopted* Dec. 8, 2005, 2006 A.T.N.I.F. 6., 45 I.L.M. 558.

Martens Clause inserted in the Hague Conventions highlights “the rule of the principles of the law of nations” as a guiding principle to legally oversee technological development.<sup>11</sup> Indeed, “this law [of war] is not static, but by continual adaptation follows the needs of a changing world.”<sup>12</sup>

In short, the proper use of combat drones is not only lawful, but also necessary for its policy implications in an era of asymmetric warfare. A rigorously supervised UAV can satisfy the four-pronged *jus in bello* test—distinction, proportionality, necessity, and humanity.<sup>13</sup> Furthermore, the use of UAVs could successfully achieve five important and interrelated policy objectives in light of maintaining the global order against terrorism: (1) safeguard national security in an era of asymmetric warfare; (2) combat insurgents defiant of the law of war; (3) serve as a deterrent against non-state actors residing in ineffective states; (4) protect troops from improvised explosive devices (“IEDs”); and (5) prevent more costly military actions.

#### I. SCOPE OF APPLICABLE LAW: *JUS IN BELLO*, NOT *JUS AD BELLUM*

Scholars and government officials often conflate *jus ad bellum* and *jus in bello* in their analysis of the legality of drones.<sup>14</sup>

---

<sup>11</sup> According to Hague Convention IV:

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

Hague Convention IV Respecting the Laws and Customs of War on Land, preamble, Oct. 18, 1907, 36 Stat. 2277 [hereinafter 1907 Hague Convention IV].

<sup>12</sup> TRIAL OF THE MAJOR WAR CRIMINALS BEFORE THE INTERNATIONAL MILITARY TRIBUNAL, NUREMBERG, 14 NOVEMBER 1945 – 1 OCTOBER 1946, VOL. 1, at 221 (1947), available at [http://www.loc.gov/rr/frd/Military\\_Law/pdf/NT\\_Vol-I.pdf](http://www.loc.gov/rr/frd/Military_Law/pdf/NT_Vol-I.pdf).

<sup>13</sup> See Michael N. Schmitt, *Bellum Americanum: The U.S. View of Twenty-First Century War and Its Possible Implications for the Law of Armed Conflict*, 19 MICH. J. INT'L L. 1051 (1998).

<sup>14</sup> Both supporters and objectors of drones have discussed the validity of drones under *jus ad bellum*. See, e.g., Chris Jenks, *Law from Above: Unmanned Aerial*

Although it is important to evaluate whether the initiation of a particular military action conforms to the accepted principle of *jus ad bellum*, this question is irrelevant in assessing the lawfulness of a particular weapon. A lawful weapon used in an unlawful war is still lawful under *jus in bello*. Likewise, legitimacy under *jus ad bellum* can neither justify nor mitigate flagrant violations of *jus in bello*: “*In bello* rules and principles apply equally to all combatants, whatever each belligerent’s avowed *ad bellum* rationale for resorting to force.”<sup>15</sup> The discussion of lawfulness of a weapon should thus remain distinct from the law regulating the initiation of force because the qualification of the user has no effect on the lawfulness of the weapon itself. Whether the CIA has the legal authority to use combat drones is not only beyond the scope of this paper, but also irrelevant to establishing the lawfulness of drones.

Harold Koh, former Legal Advisor of the U.S. Department of State, conflated *jus in bello* with *jus ad bellum* when he justified the use of unmanned drones *vis-à-vis* targeted killing by saying that “the United States is in an armed conflict with Al Qaeda, as well as the Taliban and associated forces, in response to the horrific 9/11 attacks, [and the United States] may use force consistent with its inherent right to self-defense under international law.”<sup>16</sup> Regardless of the validity of Koh’s reasoning on whether the United States’ use of drones against terrorists and associated forces satisfies international law is correct, he fails to adequately defend the lawfulness of drones in general. There are two inherently different questions presented before him. First, can the United States be at war with a non-state actor as an act of self-defense? Debates on international and domestic legal authorizations, i.e., *jus ad bellum*, such as the U.N. Charter, self-defense, and the Authorization for Use of Military Force

---

*Systems, Use of Force, and the Law of Armed Conflict*, 85 N.D. L. REV. 649, 656 (2009); O’Connell, *supra* note 7, at 11.

<sup>15</sup> Robert D. Sloane, *The Cost of Conflation: Preserving the Dualism of Jus ad Bellum and Jus in Bello in the Contemporary Law of War*, 34 YALE J. INT’L L. 47, 49 (2009).

<sup>16</sup> Harold Hongju Koh, Legal Advisor, U.S. Dep’t of State, Speech at Annual Meeting of the American Society of International Law: The Obama Administration and International Law III.B. ¶ 2 (Mar. 25, 2010) (transcript available at <http://www.state.gov/s/l/releases/remarks/139119.htm>).

("AUMF")<sup>17</sup> only relate to whether a state can wage war against a non-state actor. These factors cannot be used to measure the lawfulness of drones. Second, can targeted killing using UCAV conform to the law of armed conflict, i.e., *jus in bello*? Harold Koh's response wrongly assumes that a positive answer to the *jus ad bellum* issue will vindicate the use of drones. The right for anticipatory, if not preemptory, self-defense cannot justify a particular weapon used in the armed conflict. Philip Alston, U.N. Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions, criticizes such a "robust form of self-defense," which "reflects an unlawful and disturbing tendency in recent times to permit violations of IHL [international humanitarian law] based on whether the broader cause in which the right to use force . . . is 'just,' and impermissibly conflates *jus ad bellum* and *jus [i]n bello*."<sup>18</sup>

Conflating *jus ad bellum* and *jus in bello* causes two detrimental consequences. First, the belligerent could perceive that no right arises from an illegal act—i.e., *ex injuria jus non oritur*. This notion is inimical to justice and antithetical to LOAC that emerged from eclectic treaties and customary international law. If all soldiers are equally liable in an unlawful war, motivation to respect LOAC plummets. Even an unlawful war triggers *jus in bello* responsibilities: "War victims need as much protection against the belligerent fighting in conformity with the [*jus*] *ad bellum* as against a belligerent who violated [*jus*] *contra bellum*."<sup>19</sup> For instance, the use of "dum-dum" bullets or poisonous gas—widely accepted as unlawful weapons either under the Hague Conventions or customary international law<sup>20</sup>—is unlawful in all circumstances. In other words,

---

<sup>17</sup> Authorization for Use of Military Force, Pub. L. No. 107-40, 115 Stat. 224 (2001) (codified at 50 U.S.C. § 1541 (2012)).

<sup>18</sup> Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions, *Study on Targeted Killings*, ¶ 42, U.N. Doc A/HRC/14/24/Add.6 (May 28, 2010) (by Philip Alston) [hereinafter Alston], available at <http://www.refworld.org/docid/4c0767ff2.html>.

<sup>19</sup> Marco Sassoli, *Ius ad Bellum and Ius in Bello – The Separation Between the Legality of the Use of Force and Humanitarian Rules to be Respected in Warfare: Crucial or Outdated*, in INTERNATIONAL LAW AND ARMED CONFLICT: EXPLORING THE FAULTLINES 241, 245 (Michael N. Schmitt & Jelena Pejic eds., 2007).

<sup>20</sup> See Hague Convention IV, Declaration III Concerning the Prohibition of the Use of Expanding Bullets, July 29, 1899, 26 Martens Nouveau Recueil (ser. 2) 1002, 187

---

LOAC dictates that even if a state or organization complied with *jus ad bellum*, individual violators of *jus in bello* should still be punished. On the other hand, a righteous soldier, who abided by all laws in an unlawful war, is free of liability.

The second detrimental consequence of conflation is the notion that the justness of war could absolve unlawful acts. Using illegitimate means to achieve a legitimate end is still unlawful. A country is barred from illicit conduct even if the aggression is necessary and proportional to achieve the goal authorized by the U.N. Charter. Even the most vocal critics of drones will concede that the use of UAVs is acceptable when there is overwhelming evidence for nuclear terrorism. Although such an argument might be appealing on the surface, it is fundamentally unsound because *jus in bello* imposes certain limits on the conduct of warfare. Surely, *jus in bello* prohibits the dropping of a biological weapon or other unlawful means to prevent nuclear terrorism.<sup>21</sup> Amidst the 1999 NATO bombing campaign against Yugoslavia, a Pentagon official defended an attack on the electricity system, saying, “[w]e are aware this will have an impact on civilians, but we are in the midst of a military operation against Slobodan Milosevic.”<sup>22</sup> The “noble” objective of ousting Milosevic, or the authority under *jus ad bellum*, is immaterial in justifying questionable conduct under *jus in bello*. If the conduct violates *jus in bello*, the behavior is unlawful at all times.

The discussion about the lawfulness of combat drones should focus strictly on the LOAC applicable after the hostility has

---

Consol. T.S. 459; 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 U.S.T. 571.

<sup>21</sup> Article I of the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction imposes an absolute ban on the possession of biological weapons: “Never under any circumstances to acquire or retain” biological weapons. Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction, Apr. 10, 1972, 26 U.S.T. 583, 587, 1015 U.N.T.S. 163, 166.

<sup>22</sup> Elizabeth Becker, *Crisis in the Balkans: Pentagon; NATO Calls Transformers a Key Target in War Plan*, N.Y. TIMES, May 25, 1999, at A16.

begun, regardless of how the hostility was initiated.<sup>23</sup> Hence, *jus in bello* will refer to relevant conventions and agreements, as well as customary international law on aerial warfare, mirroring the language of Article 31 of 1977 Geneva Protocol I that “[a] High Contracting Party is under an obligation to determine whether . . . employment [of a new weapon] would, in some or all circumstances, be prohibited by this Protocol or by any other rule of international law applicable to the High Contracting Party.”<sup>24</sup> In particular, the laws of air and missile warfare in both international and non-international armed conflicts are applicable considering the potential use of combat drones.<sup>25</sup>

## II. THE LAWFULNESS OF COMBAT DRONES

The technological innovation of drones is lawful and preferable to archaic weapons. During World War II, technological limitations wreaked havoc during the attempt by the United States to engage in precision targeting of Axis forces.<sup>26</sup> The embryonic state of the equipment combined with high altitude bombing, which was intended to maximize the safety of the aircraft, drastically

---

<sup>23</sup> See Legality of the Threat or Use of Nuclear Weapons, Advisory Op., 1996 I.C.J. 226, 263 (July 8) for how the International Court of Justice blurred the *ad bellum-in bello* distinction. This opinion not only undermined the effort towards nuclear disarmament as well as prohibition of weapons that cause unnecessary suffering, but also hinted that *ad bellum* necessity, e.g., self-defense, could render *jus in bello* extraneous. *Id* at 262.

<sup>24</sup> Protocol Additional to the Geneva Conventions of Aug. 12, 1949, and Relating to the Protection of Victims of International Armed Conflicts (Protocol I) art. 36, June 8, 1977, 1125 U.N.T.S. 5 (entered into force Dec. 7, 1978) [hereinafter Geneva Protocol I].

<sup>25</sup> “However, a missile fired from a drone is no different from any other commonly used weapon, including a gun fired by a soldier or a helicopter or gunship that fires missiles. The critical legal question is the same for each weapon: whether its specific use complies with IHL.” Alston, *supra* note 18, at ¶ 79.

<sup>26</sup> The United States was not the only country with problems associated with precision bombing: “The very first employment of modern missiles in warfare – that of the German V-1s and V-2s in World War II was an epitome of an indiscriminate attack. Since these missiles were technologically incapable of being aimed at a specific military objective, they were pointed in the general direction of a large metropolitan area and . . . violated the cardinal principle of distinction.” YORAM DINSTEIN, *THE CONDUCT OF HOSTILITIES UNDER THE LAW OF INTERNATIONAL ARMED CONFLICT* 128 (2010).



compromised the accuracy of the missile.<sup>27</sup> Precision only slightly improved by the Vietnam War.<sup>28</sup> Although the advent of precision-guided munitions (“PGMs”) contributed to a drastic increase in accuracy, early PGMs fell far short of satisfying the modern standard for precision bombing.<sup>29</sup> In order to minimize collateral damage, devices that can better satisfy the requirements of LOAC must replace outmoded weapons.

This section will illustrate how drones can exceptionally meet the *jus in bello* requirements. In fact, hi-tech weapons designed to improve precision and efficiency can be expected to fulfill a higher duty of care, and can actually increase the rigor of the test of lawfulness. Michael Schmitt, the Chairman of the International Law Department at the United States Naval War College, refers to this phenomenon as *normative relativism*—when more information is available, the *jus in bello* responsibility is higher.<sup>30</sup> Parties using drones have sufficient time to scrutinize the particulars of the target. Failure to exploit this extra opportunity for precision targeting should trigger legal responsibility under *jus in bello*. Therefore, the introduction of PGMs and advanced weapons platforms, such as combat drones, raises the legal threshold beyond those distinction, proportionality, necessity, and humanity tests of the past.<sup>31</sup>

---

<sup>27</sup> In WWII, only five percent of bombs fell within 1,000 feet of the target if the bomb was launched in excess of 27,500 feet. Nathan A. Canestaro, *Legal and Policy Constraints on the Conduct of Aerial Precision Warfare*, 37 VAND. J. TRANSNAT'L L. 431, 445 (2004).

<sup>28</sup> In the Vietnam War, “the destruction of the Paul Doumer Bridge in Hanoi required 113 sorties by USAF F-105 fighter-bombers during 1966 and 1967 and the use of 380 tons of bombs.” *Id.* at 448.

<sup>29</sup> In the 1991 Gulf War, “as many as eighty-five percent of PGMs reportedly hit within ten feet of their aim point.” *Id.* at 451.

<sup>30</sup> “The result [of technological disparity] is normative relativism—the high tech belligerent is held to higher standards *vis-à-vis* precautions in attack than its opponent.” Michael N. Schmitt, *War Technology and the Law of Armed Conflict*, in 82 INTERNATIONAL LAW STUDIES: THE LAW OF WAR IN THE 21ST CENTURY: WEAPONRY AND THE USE OF FORCE 137, 163 (Anthony M. Helm, ed., 2006).

<sup>31</sup> See *infra* Part II.A–D.

The Rome Statute of the International Criminal Court (“ICC”) promulgates violations of *jus in bello* as war crimes.<sup>32</sup> Despite the reluctance of major military superpowers to ratify the statute,<sup>33</sup> the establishment of the ICC was a major step forward to hold violators of *jus in bello* accountable. Article 8 of the Rome Statute pronounces that the intentional actions to cause indiscriminate, disproportionate, unnecessary, and inhumane injury constitute war crimes and that the perpetrators of such actions fall under the jurisdiction of the ICC.<sup>34</sup> Assessed in light of *normative relativism*, greater reliance on advanced weapons platforms not only diminishes the chance of launching unlawful attacks, but also revolutionizes the framework in which the lawfulness is measured. Since the relevant law can be applied more rigorously due to the input of greater information, controversial attacks that were exonerated in the past due to inadequate technology can now be condemned as a war crime.

Without speculating about other potentially illegitimate usage, this article assumes that combat drones continue to fire only PGMs. Drones are advanced weapons platforms, hence, the lawfulness of the system also depends on the equipped weapon. That is, the legal status of UCAVs upends if an unlawful weapon is employed. The evaluation proceeds with the premise that only variations of PGMs, specifically designed for targeting limited areas, are used. If so, UCAVs are lawful and their use must be encouraged as substitutes for old-fashioned weapons to induce better compliance with the LOAC.

#### A. *Distinction*

The principle of distinction is a cardinal element of LOAC that transcends technological advancement. Article 51 of Geneva

---

<sup>32</sup> Rome Statute of the International Criminal Court art. 8, July 17, 1998, 2187 U.N.T.S. 90, 94-96, *available at* <http://treaties.un.org/doc/publication/UNTS/Volume%202187/v2187.pdf>.

<sup>33</sup> The United States, China, and Russia have not ratified the Rome Statute. *Id.* at 4-6.

<sup>34</sup> *Id.* at 90-96.

Protocol I stipulates that civilians may not be “the object of attack.”<sup>35</sup> This protocol prohibits both deliberate attacks against civilians and indiscriminate attacks that are not premeditated, but indifferent to the injury on civilian populations.<sup>36</sup>

Whenever possible, countries must not use out-of-date indiscriminate munitions such as unguided rockets in situations where aerial bombing is necessary. Instead, they should deploy the high-tech PGMs that can verify a target with greater precision. Contemporary war has no explicit geographical and temporal limits. Thus, unlike in earlier wars, physical distance of the aggressor from the target is no longer germane and cannot be the subject of criticism.<sup>37</sup> The crux of the debate must focus on whether, despite being controlled from Langley, Virginia, or elsewhere, drones can meet the distinction test in the battlefield.

LOAC affords special protection to certain groups of people. For instance, Articles 15, 41, and 79 of Geneva Protocol I immunize from attack civilian medical and religious personnel, belligerents recognized as *hors de combat*, and journalists, respectively.<sup>38</sup> Mortar shelling and high-altitude bombardment—among other haphazard means—are ill-equipped for distinguishing these special categories of participants entitled to protection. On the other hand, direct

---

<sup>35</sup> “States must never make civilians the object of attack.” Geneva Protocol I, *supra* note 24, art. 51(2), 51(4). See also The Hague Rules of Air Warfare art. 22, Dec. 1922 – Feb. 1923 [hereinafter 1923 Hague Rules of Aerial Warfare], available at [http://lawofwar.org/hague\\_rules\\_of\\_air\\_warfare.htm](http://lawofwar.org/hague_rules_of_air_warfare.htm).

<sup>36</sup> Geneva Protocol I, *supra* note 24, art. 51(2), 51(4).

<sup>37</sup> Philip Alston fears that the physical distance could engender a “Playstation” mentality to killing—i.e., haste and injudicious targeting practice based upon unreliable information. See Alston, *supra* note 18, at ¶ 84. Similarly, critics argue that the use of drones dehumanizes the war and makes the act of killing easier. Such criticisms are speculative at best. Drone operators demur at such ungrounded assertions; in reality, these professionals are frequently traumatized by the experience. See also *Remote-control Warriors Suffer War Stress*, ASSOCIATED PRESS, Aug. 7, 2008 [hereinafter *Remote-control Warriors*], <http://www.nbcnews.com/id/26078087/#.Ulwb4Ra9Rbw>. Such a psychologically troubling task of killing—however remotely operated—combined with comprehensive rules of engagement enables further deliberation prior to launching the missile.

<sup>38</sup> Geneva Protocol I, *supra* note 24, art. 15, 41, 79.

participation in hostilities (“DPH”) by civilians strips them of their protected status, which allows them to be targeted.<sup>39</sup>

The current technological state of UCAVs guarantees enhanced ability to distinguish combatants from noncombatants. Two types of combat drones—the MQ-1B Predator and the MQ-9 Reaper—are widely deployed in targeting missions. According to the U.S. Air Force, one of the more salient features of these cutting-edge aircraft is the Multi-Spectral Targeting System (“MTS-B”), which integrates an infrared sensor, a color/monochrome video camera, an image-intensified video camera, a laser designator, and a laser illuminator to maximize precision.<sup>40</sup> The laser-guided AGM-114 Hellfire missiles employed in these drones further ensure the accuracy of targeting with minimum collateral damage.<sup>41</sup> Thus, UCAVs, unlike outmoded weapons platforms, allow for discriminate targeting. The operator can visually corroborate the target to conclude if a civilian has converted himself into a belligerent, or if a soldier is incapacitated or intends to surrender.<sup>42</sup>

The drone operators have a visual sight of the target over a prolonged time until its death or destruction is verified. Although these drones are not entirely fail-safe, they are far more discriminate than the vast majority of aerial or artillery bombardments, let alone ground soldiers acting hastily in life-threatening situations. According to Colonel Chris Chambliss, commander of the 432<sup>nd</sup> Wing at Creech Air Force Base, Nevada, drone operators are disposed to psychological trauma precisely due to the clarity of video:

---

<sup>39</sup> See Geneva Protocol I, *supra* note 24, art. 50(3); see also Michael N. Schmitt, *Deconstructing Direct Participation in Hostilities: the Constitutive Elements*, 42 N.Y.U. J. INT’L L. & POL. 697, 705-12 (2010) (discussing who qualifies as civilian DPH).

<sup>40</sup> U.S. AIR FORCE, FACT SHEET: *MQ-9 Reaper*, (Aug. 18, 2010) [hereinafter *MQ-9 Reaper*], <http://www.af.mil/AboutUs/FactSheets/Display/tabid/224/Article/104470/mq-9-reaper.aspx>; U.S. AIR FORCE, FACT SHEET: *MQ-1B Predator*, (July 20, 2010) [hereinafter *MQ-1B Predator*], <http://www.af.mil/AboutUs/FactSheets/Display/tabid/224/Article/104469/mq-1b-predator.aspx>.

<sup>41</sup> *MQ-9 Reaper*, *supra* note 40.

<sup>42</sup> See *id.*

“You have a pretty good optical picture [from drones] of the individuals on the ground. The images can be pretty graphic, pretty vivid, and those are the things we try to offset. We know that some folks [drone pilots] have, in some cases, [psychological] problems.”<sup>43</sup>

Several countries are reluctant to accept the Geneva Protocol I in part due to its elaborate rules on discrimination.<sup>44</sup> Articles 48 to 67 of the Geneva Protocol I “caused concern in certain states because of fears that commanders might be subject to accusations of war crimes not based on an understanding of the fact that in war commanders have to take action on the basis of imperfect information.”<sup>45</sup> Such concerns are unwarranted withUCAVs because the detailed live video feed and outstanding information-gathering capacity of drones enable the operator to constantly verify the target to confirm utmost accuracy. While information can never be perfect, a clear visual sighting of the enemy can drastically reduce the chance of wrongfully targeting civilians:

UAVs can be a useful asset in complying with the obligation to take feasible precautions in attack. UAVs with on-board sensors will contribute to verification that an intended target is a lawful target. . . . Hence, if available and when their use is feasible, UAVs ought to be employed in order to enhance reliability of collateral damage estimates (especially when this can be done in real-time).<sup>46</sup>

Such accessibility and clarity of information demand a higher duty of care to fulfill the distinction requirement. Failure to satisfy the elevated duty of care standard should automatically create liability. The designatedUCAV operator responsible for each targeting mission should be relatively easy to identify. That is, compared with locating the source of guns and mortars from chaotic barrage fires, the drone pilot who launched the missile at a particular time is traceable with reasonable effort. If a violation of the rules of engagement or indiscriminate targeting occurs, the operator could be

---

<sup>43</sup> *Remote-control Warriors*, *supra* note 37.

<sup>44</sup> ADAM ROBERTS & RICHARD GUELFF, DOCUMENTS ON THE LAWS OF WAR 420 (Oxford Univ. Press, 3rd ed. 2000) (1982).

<sup>45</sup> *Id.*

<sup>46</sup> COMMENTARY ON THE HPCR MANUAL, *supra* note 1, at 135.

tracked down and court-martialed. Such a high bar of responsibility will encourage meticulous selection and authentication of lawful targets. For instance, it would be more difficult to defend the U.S. bombing of the Chinese embassy in Belgrade as an accident if the official had a higher duty of care owing to the availability of clear visual information. Thus, when such information is available, the official engaged in unlawfully targeting civilians is more likely to be found liable under international law.<sup>47</sup> This is a distinct advantage of utilizing combat drones to ensure conformity with *jus in bello*:

Thus, as a factual matter, those employing precision weapons will have greater difficulty shielding themselves from allegations of indiscriminate attack than those who do not. Similarly, those with advanced [intelligence, surveillance and reconnaissance (“ISR”)] will have a much more difficult time convincing others that an attack striking civilians and civilian objects was a case of mistaken identity rather than an indiscriminate act of recklessness (or intent).<sup>48</sup>

Through increased accountability, the use ofUCAVs supports cautious targeting. Of course, even the most state-of-the-art weapon can violate the principle of distinction when fired blindly. The United States needs to work on trainingUCAV operators and implementing strict guidelines for distinguishing combatants from noncombatants, which remains largely classified.<sup>49</sup> In any event, shortcomings of the operator and the targeting procedure are

---

<sup>47</sup> Michael N. Schmitt, *Precision Attack and International Humanitarian Law*, 87 INT’L REV. RED CROSS 445, 455 (2005). Although the use of drones raises the duty of care standard and improves the chance of prosecution, noUCAV operator has been convicted for violating *jus in bello* by an international tribunal. The likelihood of an international trial and meaningful punishment against a responsible officer in the near future is slim considering (i) the absence of an effective criminal tribunal on the subject, (ii) jurisdictional limits, and (iii) the possibility of state immunity.

<sup>48</sup> *Id.*

<sup>49</sup> Tara McKelvey, *Inside the Killing Machine*, NEWSWEEK MAG. (Feb. 13, 2011), <http://mag.newsweek.com/2011/02/13/inside-the-killing-machine.html> (quoting Michael Scheuer, who used to be in charge the CIA’s Osama bin Laden Unit, “[The dossier with information on targeting suspects] would go to the lawyers, and they would decide. They were very picky. . . . Very often this caused a missed opportunity. The whole idea that people got shot because someone has a hunch – I only wish that was true. If it were, there would be a lot more bad guys dead.”).

unrelated to the *just in bello* lawfulness of UCAVs, which are uniquely suited to uphold the principle of distinction. The probability of accidentally targeting a civilian with a PGM from a UCAV is drastically lower than the probability of accidentally targeting a civilian with outmoded weapons. Therefore, UCAVs used under a carefully proscribed protocol not only comply with but also act as a catalyst to uphold the distinction requirement.

### B. Proportionality

The right of belligerents to adopt means of injuring the enemy is not unlimited and the principle of proportionality is an essential consideration. *In bello* proportionality prohibits the use of weapons that cause “excessive [civilian collateral damage] in relation to the concrete and direct military advantage anticipated.”<sup>50</sup> The definition proposes a balancing test between lawful collateral damage and anticipated benefits. The former refers to “reasonable” civilian injury or death, and the latter “need not be confined to the time-frame of the attack or to the locale of its object.”<sup>51</sup> Hence, the term proportionality is cognizant of the reality that a certain degree of civilian casualty is inevitable in wartime. Reasonable incidental injury accompanying combat drones is acceptable if the target poses a sufficient, not necessarily imminent, threat.<sup>52</sup>

The visual information transmitted from combat drones opens up the possibility of conducting systematic cost-benefit analysis to satisfy the proportionality test. Traditionally, unsteadiness of surrounding conditions, along with imprecision, impaired the accuracy of air bombing.<sup>53</sup> Before the invention of

---

<sup>50</sup> Geneva Protocol I, *supra* note 24, art. 57(2)(1)(iii).

<sup>51</sup> See DINSTEIN, *supra* note 26, at 133-38.

<sup>52</sup> As discussed in *Commentary on the HPCR Manual*:

In the context of the law of international armed conflict, harm to civilians and civilian objects that the attacker did not expect is not collateral damage included in proportionality calculations, so long as the lack of expectation of harm was reasonable in the circumstances. The key question with regard to such harm is whether there is compliance with the requirement to take feasible precautions in attack.

COMMENTARY ON THE HPCR MANUAL, *supra* note 1, at 33 (citation omitted).

<sup>53</sup> DINSTEIN, *supra* note 26, at 118.

UCAVs, target identification could be “detrimentally affected by poor visibility as a result of inclement weather, effective air defense systems, failure of electronic devices (sometimes because of enemy jamming), sophisticated camouflage, etc.”<sup>54</sup> The advent of drones largely removed these inadequacies. Unlike other conventional weapons used in air warfare, UCAVs allow ample opportunity to properly calculate proportionality, taking into account real-time changes and the projected civilian injury with much accuracy.<sup>55</sup> For example, the MQ-9 Reaper has four sensors that cover six square miles,<sup>56</sup> an area far broader than that affected by precision targeting. With adequate internal procedures for targeting, the data transmitted from sensors and cameras will translate into increased precaution. Although the ratio of civilian deaths per militant killed by UCAVs varies by count to count, the number is evidently more proportionate than attacks using kinetic weapons and the vast majority of conventional arms.<sup>57</sup>

Drones are already demonstrating their ability to launch highly proportionate attacks and the future advances of the technology are even more promising. With increased speed, maneuverability, and precision, UCAVs boast superior capacity to limit collateral damage in the vicinity of the target, unimpaired by

---

<sup>54</sup> *Id.*

<sup>55</sup> Schmitt, *supra* note 47, at 457 (“The ISR upon which precision depends offers greater understanding of the target, the likely effect of the strike on the civilian population, and the need for restrike.”).

<sup>56</sup> Pincus, *supra* note 6.

<sup>57</sup> The ratio of civilian death per militant killed by UCAV is approximately 1 to 19.21, which is far superior to non-drone U.S. operations in Pakistan with a ratio of 1 to 0.375, as well as the estimated world armed combat average ratio of 1 to 0.125. Brian G. Williams et al., *New Light on the Accuracy of the CIA’s Predator Drone Campaign in Pakistan*, TERRORISM MONITOR, Nov. 11, 2010, at 8, available at [http://www.jamestown.org/uploads/media/TM\\_008\\_500185.pdf](http://www.jamestown.org/uploads/media/TM_008_500185.pdf). But there are limitations and criticisms to this data, such as its assumption that all children under thirteen years of age and women were assumed to be civilian. Others have estimated that between 31 and 33 percent of all casualties from drone strikes are civilians. Alexander Mayer, *Predators, Taliban, and Civilians*, THREAT MATRIX: A BLOG OF LONG WAR J. (Oct. 21, 2009, 10:16 AM), [http://www.longwarjournal.org/threat-matrix/archives/2009/10/predators\\_taliban\\_and\\_civilian.php](http://www.longwarjournal.org/threat-matrix/archives/2009/10/predators_taliban_and_civilian.php).



human error.<sup>58</sup> In terms of reconnaissance, UCAVs could ensure further prudence because of improved agility to perform prolonged scouting.<sup>59</sup> Subsequently gathered information will permit due diligence to ascertain proportionality in every attack; miscalculated orders can be rescinded as soon as more information is available. While UCAVs are not a panacea, the current and future capabilities of these innovations are exceptional in their competence to satisfy the proportionality test.<sup>60</sup>

Because combat drones bestow a definite military advantage in terms of time and breadth of available information, operators should be held to a higher legal standard of responsibility. Indeed, greater accountability promotes proportionate targeting. The NATO bombing of Yugoslavia in 1999 was marked by a large-scale air campaign at high altitudes to ensure the safety of the pilot at the cost of an increased number of civilian casualties.<sup>61</sup> Whether the strategic

---

<sup>58</sup> See U.S. DEP'T OF DEF., FY2009-2034 UNMANNED SYSTEMS INTEGRATED ROADMAP 18, 19, 30 (2009) [hereinafter UNMANNED SYSTEMS INTEGRATED ROADMAP], available at <http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA522247> ("Precision Air Drop/Firefighting UAS . . . with autonomous airdrop capability that, if required, can recognize a visual target and self-navigate to the target for precision air drop within 25 meters . . . Precision Acquisition and Weaponized System (PAWS) [currently in research and development stage] . . . Provide tactical UAV with limited collateral damage weapon . . . UAS are evolving into multi-role platforms able to provide both ISR "persistent stare" at targets over a large area and quick reaction strike at targets of opportunity. They can be rapidly and dynamically re-tasked to other areas with a higher priority . . .").

<sup>59</sup> *Id.* at 8 ("In the future, technology will enable mission endurance to extend from hours to days to weeks so that unmanned systems can conduct long endurance persistent reconnaissance and surveillance in all domains.").

<sup>60</sup> Gabe Starosta, *MQ-9 to Provide Full HD Video by 2015 after Two-Phased MTS Upgrade*, INSIDE THE AIR FORCE, Jan. 20, 2012, available at <http://defensenewsstand.com/Inside-the-Air-Force/Inside-the-Air-Force-01/20/2012/menu-id-290.html> ("The Air Force expects the targeting systems used by the service's MQ-1 Predators and MQ-9 Reapers to have full high-definition electro-optical imagery capabilities by 2014, and the Reaper should have an additional high-definition infra-red capability just a year later, part of a continuing upgrade on the Raytheon-built Multi-Spectral Targeting System.").

<sup>61</sup> In a letter to then-NATO Sec'y Gen. Javier Solana, Human Rights Watch questioned the lawfulness of NATO's "decision to have most of its pilots fly at high altitudes (above 15,000 feet) to avoid anti-aircraft missiles and fire . . . [which was a decision] to elevate the protection of its pilots over all consideration of the potential

nature of air bombing in Yugoslavia was lawful under *jus in bello* is contentious, but the use of drones would have guaranteed greater compliance with the proportionality test without endangering the safety of NATO pilots. The danger of the battlefield hardly ever jeopardizes the remotely positioned operators, since drones do not have a traceable standardized trajectory.

During the Gulf War, a bunker used as an air-raid shelter for civilians was targeted, causing hundreds of civilian deaths.<sup>62</sup> Despite such an excessive civilian casualty, the bombardment was deemed lawful nonetheless:

The Americans relied on intelligence evidence indicating that the bunker was serving as a command and control center, and denied any knowledge of its concurrent use as an air-raid shelter for civilians. Based on that subjective information, there is scarcely any doubt that the bunker could be considered “a military objective and hence a lawful target.”<sup>63</sup>

Such an aerial attack might have satisfied the proportionality test in the past due to both lack of information and a lower standard, but the advent of UCAVs has forever changed the paradigm. In retrospect, if the United States had used drones to obtain clear intelligence that a significant number of civilians resided in the bunker, and, they were not placed there to protect the target,<sup>64</sup> then the attack could have been disproportionate. The proportionality yardstick for combat drones is set at a higher bar, elevating the applicable standard to a much stricter, yet achievable, level.

---

harm to civilians.” Letter from Kenneth Roth, Exec. Dir., Human Rights Watch, to Javier Solana, Sec’y Gen., NATO (May 13, 1999), available at <http://ess.uwe.ac.uk/Kosovo/Kosovo-Current%20News176.htm>.

<sup>62</sup> Yoram Dinstein, *The Laws of Air, Missile and Nuclear Warfare*, 27 ISRAEL Y.B. ON HUM. RTS. 1, 8 (1998) (citing United States: Department of Defense Report to Congress on the Conduct of the Persian Gulf War – Appendix on the Role of the Law of War, 31 I.L.M. 612, 626-27 (1992)).

<sup>63</sup> *Id.*

<sup>64</sup> Jenks, *supra* note 14, at 669 (“To the extent that the ‘civilians’ that the Pakistan Taliban live and operate among are considered voluntary human shields, then they are considered to be directly participating in hostilities. As a result, they could be permissibly targeted outright . . . [hence] not be considered collateral damage.”).

### C. Necessity

Another essential component of *jus in bello* is military necessity. The Hague Rules of Aerial Warfare stipulate that “aerial bombardment is legitimate only when directed at a military objective, that is to say, an object of which the destruction or injury would constitute a distinct military advantage to the belligerent.”<sup>65</sup> Only military targets, as opposed to civilian or neutral buildings, can lawfully be targeted for a perceived military gain. It is not an easy task to determine when an object becomes a lawful target, but the belligerent must act in good faith and “take into account all available information.”<sup>66</sup> For instance, religious sites are not normally considered military objectives, yet “if the church steeple is used by snipers, the same object becomes a military objective by use and the evaluation of military advantage is altered.”<sup>67</sup> UCAVs can spot and respond to such subtle and versatile information.

*In bello* necessity entails a reciprocal duty, first by the belligerent to ascertain within reason that the target remains a military objective, and, second by the besieged to undertake precautionary measures to display signs on protected targets or areas to avoid bombing. Indeed, to err is human, and, similarly, machines are imperfect. The doctrine of military necessity reflects such practical deficiencies by espousing a reasonableness standard:

In case of doubt as to whether an object which is ordinarily dedicated to civilian purposes is being used for military purposes, it may only be attacked if, based on all the information reasonably available to the commander at the

---

<sup>65</sup> 1923 Hague Rules of Aerial Warfare, *supra* note 35, art. 24(1); Geneva Protocol I, *supra* note 24, art. 52(2) (“In so far as objects are concerned, military objectives are limited to those objects which by their nature, location, purpose or use make an effective contribution on military action and whose total or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage.”).

<sup>66</sup> Oscar Schachter & Frits Kalshoven, *Implementing Limitations on the Use of Force: The Doctrine of Proportionality and Necessity*, 86 AM. SOC’Y OF INT’L LAW 39, 44 (1992) (remarks by Frits Kalshoven).

<sup>67</sup> DINSTEN, *supra* note 26, at 8 (citing B. A. Wortley, *Observation on the Revision of the 1949 Geneva “Red Cross” Conventions*, 54 BRITISH Y.B. OF INT’L LAW 143, 154 (1983)).

time, there are reasonable grounds to believe that it has become and remains a military objective.<sup>68</sup>

The aforementioned reasonableness standard for determining when a civilian site has been converted into a military one is very useful in judging the underlying principle of *in bello* necessity. The commander is permitted to make a determination on military necessity “based upon information reasonably available . . . at the time of his decision.”<sup>69</sup> Therefore, in order to promote caution, and, if necessary, to charge legal liability, it is important to relay as much data as possible *ex ante*. The range of feasible precautions are substantially broader for drones than manned military aircraft, which are susceptible to onsite human error resulting from a dearth of information, rushed action, or fatigue.

UCAVs are well-equipped to perform such precautionary measures via visual identification until the target is hit. In fact, UCAVs employ “on-board technology to direct . . . a weapon to a target,”<sup>70</sup> upon visual verification that the target remains a military objective. Up-to-date records of suspicious conduct or vehicle movement and the location of civilians or civilian objects<sup>71</sup> along with other subtle information can be used by drone operators to assess whether targeting is militarily necessary within a reasonable margin of error.

However naïve it is to expect insurgents to abide by the laws of war, *jus in bello* urges the attacked to “take the necessary measures to render the special signs referred to sufficiently visible.”<sup>72</sup> There are internationally recognized emblems for cultural property, hospitals,

---

<sup>68</sup> COMMENTARY ON THE HPCR MANUAL, *supra* note 1, at 87. This reasonableness standard (for determining when a civilian site has been converted into a military one) is commonly referred to as the Rendulic Rule. See generally Brian J. Bill, *The Rendulic ‘Rule’: Military Necessity, Commander’s Knowledge, and Methods of Warfare*, 12 Y.B. OF INT’L HUMANITARIAN L. 119 (2009).

<sup>69</sup> U. S. ARMY, JUDGE ADVOCATE GENERAL’S OPERATION LAW HANDBOOK 11 (2010).

<sup>70</sup> COMMENTARY ON THE HPCR MANUAL, *supra* note 1, at 55.

<sup>71</sup> See *id.* at 54.

<sup>72</sup> 1923 Hague Rules of Aerial Warfare, *supra* note 35, art. 25; see 1907 Hague Convention IV, *supra* note 10, art. 27.

prisoner-of-war camps, civilian internment camps, and NGOs.<sup>73</sup> Although the need to ensure *in bello* necessity does not dissipate simply because of the failure to display such signs, all parties to the conflict have a proactive duty to ensure that non-military objects are identifiable.<sup>74</sup> If terrorists abide by these rules, the belligerent must have adequate means to recognize the signs of neutrality or protected status. Conversely, even when such signs are nonexistent, reasonable precaution is vital to ascertain the lawfulness of the target.UCAVs are uniquely suited to perform their needed task, while enabling the adroit operator to notice deception or perfidy with greater accuracy.<sup>75</sup> Thus, the exceptional capacity ofUCAVs in discharging the necessity requirement of *jus in bello* should be emphasized in future warfare.

#### D. Humanity

The fourth facet of LOAC is the prohibition of weapons that cause “superfluous injury or unnecessary suffering.”<sup>76</sup> Humane war is an oxymoron; nonetheless, LOAC seeks to unearth every bit of decency amidst the bloodshed. As a first step, the doctrine of humanity prohibits weapons that are (i) outright banned by various conventions and customary international law<sup>77</sup> and (ii) utilized to “cause injuries that serve no military purpose.”<sup>78</sup> The former deals with weapons that are inherently unlawful and the latter with conduct that causes a weapon to be unlawful. For the majority of weapons falling outside the scope, no objective equation exists to calculate when the suffering becomes illegitimate. Somewhere between regular gunfire and the dropping of a heinous chemical bomb, there is a point in which the conduct of hostility rises to the

---

<sup>73</sup> See ROBERTS & GUELF, *supra* note 44, Appendix I at 731-32.

<sup>74</sup> Geneva Protocol I, *supra* note 24, art. 66.

<sup>75</sup> See JEAN-MARIE HENCKAERTS & LOUISE DOSWALD-BECK, CUSTOMARY INTERNATIONAL HUMANITARIAN LAW VOLUME I: RULES 119-26 (2009) [hereinafter CUSTOMARY INTERNATIONAL HUMANITARIAN LAW], available at <http://www.icrc.org/eng/assets/files/other/customary-international-humanitarian-law-i-icrc-eng.pdf>.

<sup>76</sup> Geneva Protocol I, *supra* note 24, art. 35(2).

<sup>77</sup> Examples include the use of poison, certain projectiles, non-detectable fragments, and blinding laser weapons, amongst conventional weapons. In terms of weapons of mass destruction, chemical and biological weapons are strictly prohibited. See DINSTEIN, *supra* note 26, at 67-83.

<sup>78</sup> COMMENTARY ON THE HPCR MANUAL, *supra* note 1, at 66.

level of violating the principle of humanity. There are two preliminary questions relevant to start the assessment: (1) “[i]s a less injurious weapon available?” and (2) “is the alternative sufficiently effective in achieving the intended military purpose?”<sup>79</sup>

Weapons equipped in combat drones—precision-guided munitions, such as Hellfire missiles—are designed to eliminate the enemy within a limited radius in furtherance of the specific military objective. Lockheed Martin Corporation, the manufacturer of a series of AGM-114 Hellfire missiles, emphasizes that the product offers “precision-strike lethality” intended for a single target with anti-armor capability.<sup>80</sup> The multi-purpose warhead is designed for “a highly accurate, low-collateral damage, anti-armor and anti-personnel engagement,” which is suited for precision targeting that minimizes suffering and wide area damage.<sup>81</sup> In other words, the primary purpose and function of PGMs is to accurately take out a limited number of selective targets as opposed to inflicting unnecessary pain or transgenerational genetic damage over a large area. The relatively small warhead intended to conduct laser-guided precision targeting is therefore particularly suited to further the humanity prong of *jus in bello*. Although reckless use could theoretically render these missiles to be inhumane, their intended purpose is undoubtedly humane. True, there could occasionally be a less injurious alternative to achieve the same military objective. Such occasions, nevertheless, do not undermine the lawful nature of the weapon. Rather, the focus should be on how to implement strict rules of engagement to minimize cruelty. When used with discretion, UCAVs, as advanced weapons platforms, are sufficiently capable of satisfying the humanity principle.

---

<sup>79</sup> *Id.*

<sup>80</sup> AGM-114R Multi-Purpose HELLFIRE II, LOCKHEED MARTIN, <http://www.lockheedmartin.com/content/dam/lockheed/data/mfc/pc/hellfire-ii-missile/mfc-hellfire-ii-pc.pdf> (last visited Feb. 12, 2014).

<sup>81</sup> See *MQ-9 Reaper*, *supra* note 40. Hellfire missiles are designed for long-range precision targeting against people hiding behind fixed structure facilities, armored vehicles, or bunkers. See also Press Release, Lockheed Martin, Lockheed Martin’s New Multi-Purpose HELLFIRE II Missile (Aug. 30, 2010), <http://www.lockheedmartin.com/us/news/press-releases/2010/august/LMsNewMulti-PurposeHELLFI.html>.

---

### III. THE CASE FOR COMBAT DRONES

The growth of militarily powerful non-state actors engaging in terrorism is a fatal tumor affecting the entire world. In a globalized society, no country is insulated from the terror threat, which warrants a collective effort to address insurgents incubated in the absence of the rule of law. The problem is further amplified by the presence of weapons that can instantaneously inflict mass destruction. While the cost of indecisiveness can be catastrophic, excessive countermeasures can jeopardize individual human rights and the lives of civilians. The Supreme Court of Israel, the highest judicial authority of a country routinely victimized by terrorism, offered a valuable insight when it proclaimed that the act of targeting terrorists is “a necessary means from the military standpoint . . . [despite the] harm and even death to innocent civilians . . . [if] made within the framework of the law.”<sup>82</sup> In addition, Israel maintains the official policy position that targeted killing operations are granted only if there is no reasonable chance of capturing the suspect,<sup>83</sup> which reflects the quandary of ineffective states. Since the use of lethal force to curb terrorism is sometimes inevitable, countries must endeavor to use the least damaging weapon without relinquishing efficacy and lawfulness.

UCAVs are not just lawful, but also offer five critical and effective ways to counter challenges in contemporary war. First, the framework of analysis must reflect the unique features of combat drones in light of maintaining public order against the emergence of asymmetric warfare. Second, insurgents do not abide by the conditions for lawful combatancy. Third, insurmountable force is no longer a deterrent against irrational non-state actors that defy the existing paradigm. Combat drones can supersede or supplement the traditional threat of nuclear deterrence. Fourth, beyond the rubric of law, UCAVs prevent friendly forces from being exposed to IEDs. Finally, drones can provide a substitute for the costly alternative modes of waging a large-scale war against ineffective states where law

---

<sup>82</sup> HCJ 769/02 *The Public Committee Against Torture in Israel v. The Government of Israel* ¶ 61 [2005], available at [http://elyon1.court.gov.il/Files\\_ENG/02/690/007/A34/02007690.A34.pdf](http://elyon1.court.gov.il/Files_ENG/02/690/007/A34/02007690.A34.pdf).

<sup>83</sup> Blum & Heymann, *supra* note 8, at 152.

enforcement techniques are futile and there is a growing threat level arising from nuclear terrorism. Such complementary features reinforce the need for UAVs in preserving world order.

### A. *Asymmetric Warfare*

The dawn of U.S. military hegemony, coupled with globalization and technological development, introduced a new form of asymmetric war where insurgents resort to using unprecedented and irregular means, including the attempt to acquire and use weapons of mass destruction (“WMD”), “transcend[ing] the state’s physical as well as virtual borders.”<sup>84</sup> The growth of the military power of ambitious non-state actors became even more evident after the September 11 attacks. These groups are constantly seeking opportune moments to inflict indiscriminate and disproportionate harm against states. Surely, planning effective and lawful countermeasures to protect national security has become one of the most important priorities for exposed countries. In an era of globalized asymmetric warfare, flexible military tactics customized for non-state actors, who often have limited technological resources, are indispensable.

Terrorists engaged in an asymmetric warfare have aggrandized their influence by taking advantage of the nearby

---

<sup>84</sup> Uros Svete, *Asymmetrical Warfare and Modern Digital Media*, in *THE MORAL DIMENSION OF ASYMMETRICAL WARFARE: COUNTER-TERRORISM, DEMOCRATIC VALUES AND MILITARY ETHICS* 381, 386 (Ted A. Baarda & Desiree E. Verweij eds., 2009). Other characteristics of asymmetry include:

[A]cting, organizing, and thinking *differently* than opponents in order to maximize one’s own advantages, exploit an opponent’s weaknesses, attain the initiative, or gain greater freedom of action. It can be *political-strategic*, *military-strategic*, *operational*, or a *combination* of these. It can entail different *methods*, *technologies*, *values*, *organizations*, *time perspectives*, or some *combination* of these. It can be *short-term* or *long-term*. It can be *deliberate* or *by default*. It can be *discrete* or pursued in *conjunction with* symmetric approaches. It can have both *psychological* and *physical* dimensions.

STEVEN METZ & DOUGLAS V. JOHNSON II, *ASYMMETRY AND U.S. MILITARY STRATEGY: DEFINITION, BACKGROUND, AND STRATEGIC CONCEPTS* 1, 5-6 (2001), available at <http://www.strategicstudiesinstitute.army.mil/pubs/display.cfm?pubID=223>.



civilian communities, often engaging in concealment tactics.<sup>85</sup> Taliban and Al Qaeda members deliberately hide amongst the civilian population, creating a diversion to complicate targeting by the opponent. As explained earlier, concealment warfare is prone to a high degree of collateral injury without precision targeting accompanied by accurate and persistent surveillance.<sup>86</sup> Terrorists, either defined as unlawful combatants or civilian DPH, are by their nature hardly distinguishable from civilians.UCAVs enable the party to examine belligerent vehicle movements and patterns of conduct to ascertain legitimate targets and minimize civilian casualty.<sup>87</sup>

Accurate intelligence and the ability to immediately react to red flags are essential to defending against terrorism and ensuring national security. The strength of traditional armed forces is futile without such capacity:

In this environment [i.e., asymmetric warfare] . . . [o]perating inside an opponent's OODA [observe-orient-decide-act] loop requires: the ability to locate and accurately identify enemy forces quickly and reliably; weapon systems that are immediately available; sufficient command and control assets to monitor and direct fast-paced, changing engagements; and the capacity to conduct reliable battle damage assessment to determine if restrike is needed. Slowing the enemy's reaction

---

<sup>85</sup> "Concealment tactics used by the adversary in Afghanistan [during Operation Enduring Freedom] resulted in a number of collateral damage incidents." Jefferson D. Reynolds, *Collateral Damage on the 21st Century Battlefield: Enemy Exploitation of the Law of Armed Conflict, and the Struggle for a Moral High Ground*, 56 A.F. L. REV. 1, 41 (2005).

<sup>86</sup> Concealment tactics caused a number of civilian casualties. As many as thirty-five Afghan civilians were killed in the attack of Chowkar-Karez, and twenty-three civilians were killed in Thori, the Hutala bombing by the United States. A-10 attack aircraft led to the death of nine children playing marbles in a field, and the attack by a U.S. AC-130 gunship in a wedding in Deh Rawud killed "dozens" of civilians. *Id.* at 41-42.

<sup>87</sup> See David S. Cloud, *CIA Drones Have Broader List of Targets*, L.A. TIMES, May 6, 2010, available at <http://articles.latimes.com/2010/may/05/world/la-fg-drone-targets-20100506>.

time and blocking or distorting enemy information further enhances the effects of your own operations.<sup>88</sup>

Combat drones are an effective solution to oppose fleeting targets. Against the extremely mobile and furtive terrorist factions, drones perform surveillance, reconnaissance, and target acquisition services over long periods of time with detection capability that permeates natural barriers, such as smoke, clouds, or haze.<sup>89</sup> When a target is sighted, upon corroboration following a rigorous protocol, Hellfire missiles can swiftly respond. Indeed, terrorists on the so-called “hit list” are time-sensitive targets who are “pos[ing] (or will soon pose) a danger to friendly forces or they are [a] highly lucrative, fleeting target of opportunity.”<sup>90</sup> Unlike the perceptible and concrete system of states with recognizable and well-known physical boundaries and political leaders, terrorist organizations are unfettered by territorial limitations.<sup>91</sup> Therefore, without an immediate and effective response, these groups will quickly vanish and resurface elsewhere. Constant surveillance and speedy targeting by UCAVs are essential to abate the threat of asymmetric warfare.

### B. UCAVs Check Manifest Disregard of the Law by Terrorists

Missions against concealment warfare are made even more complex because terrorists flout the canons of warfare. Not only is the line between civilian and terrorist blurry because of the constant switch between roles, but these insurgents also do not follow the established rules of combat. The inherent purpose of terrorism is to intimidate and injure combatants and noncombatants alike.<sup>92</sup>

---

<sup>88</sup> Michael N. Schmitt, *Asymmetrical Warfare and International Humanitarian Law*, 62 A.F. L. REV. 1, 8 (2008).

<sup>89</sup> *Id.* at 9 n.22.

<sup>90</sup> Citing a source from the CIA, the *LA Times* reported that a strict procedure, along with constant surveillance through UAVs, exists to ensure only militants who pose a threat to the United States are targeted. Cloud, *supra* note 87; on time-sensitive targets, see JOINT CHIEFS OF STAFF, JOINT PUB. 3-60, JOINT DOCTRINE FOR TARGETING, Appendix B (Jan. 17, 2002), available at [http://www.bits.de/NRANEU/others/jp-doctrine/jp3\\_60\(02\).pdf](http://www.bits.de/NRANEU/others/jp-doctrine/jp3_60(02).pdf).

<sup>91</sup> W. Michael Reisman, *Assessing Claims to Revise the Laws of War*, 97 AM J. INT'L L. 82, 86 (2003).

<sup>92</sup> See DINSTEIN, *supra* note 26, at 43.

Bellicose extremists are not wary of rules governing conduct of war to achieve such a vicious objective. Yet, the world cannot resort to lawlessness to fight the unlawful. President Obama recognized these two underlying challenges in his Nobel Peace Prize lecture: “And even as we confront a vicious adversary that abides by no rules, I believe that the United States of America must remain a standard bearer in the conduct of war.”<sup>93</sup> Without the aid of advanced technology, it is difficult to triumph over those who know no restraint.

Customary international law of war, as well as treaty law, stresses seven essentials of lawful combatancy, four of which are “subordination to responsible command, a fixed distinctive emblem, carrying arms openly, and conduct in accordance with the [LOAC].”<sup>94</sup> Terrorists are frequent violators of LOAC given that their members (1) unilaterally plan or instigate an attack, (2) wear civilian clothes, (3) conceal their weapons, and (4) commit indiscriminate attacks. There could be occasions in which terrorists will abide by some of these rules, but in the aggregate, the international community cannot reasonably expect that, among other facets of LOAC, terrorists will wear a uniform. Wearing military uniforms to distinguish oneself is not the purpose; instead, “the point is . . . whether (if observed) they [combatants] are likely to be mixed up with civilians.”<sup>95</sup> Terrorists are virtually indistinguishable because they wear civilian clothing, sometimes deliberately to dissemble. In war against non-state actors, “discerning friend from foe . . . is elusive [due to the lack of distinguishing uniforms].”<sup>96</sup>

Furthermore, terrorists often do not carry arms openly, but suddenly emerge with explosives to perpetrate mass murder. In order to effectively counter such unlawful tactics, advanced weapons

---

<sup>93</sup> President Barack Obama, Remarks at the Acceptance of the Nobel Peace Prize (Dec. 10, 2009), *available at* [http://www.huffingtonpost.com/2009/12/10/obama-nobel-peace-prize-a\\_n\\_386837.html](http://www.huffingtonpost.com/2009/12/10/obama-nobel-peace-prize-a_n_386837.html).

<sup>94</sup> Others include organization, belonging to a belligerent party, and lack of duty of allegiance to the detaining power. See DINSTEN, *supra* note 26, at 43.

<sup>95</sup> *Id.* at 44.

<sup>96</sup> *Al-Marri v. Pucciarelli*, 534 F.3d 213, 334 (4th Cir. 2008).

systems that examine individual faces, record patterns of conduct, survey the surroundings, and follow suspicious individuals are critical to military success.UCAVs can perform all of these tasks with high precision in a limited time frame.

### C. UCAVs Are Deterrents

Unlike states, terrorists engaged in a synallagmatic relationship are undeterred by the constraints in the existing system:

One of the factors that had made the inherited *jus ad bellum* effective was the concentration of weapons in the hands of territorial elites who were subject to the dynamic of reciprocity and retaliation that underlies international law. That dynamic does not operate for non-state actors, for they are neither beneficiaries of nor hostages to the territorial system. As long as non-state actors did not amass significant arsenals, their indifference or even hostility to world public order was inconsequential. . . . [T]he United States, on the morning of September 11, 2001, awoke to a new reality.<sup>97</sup>

This new reality is a combination of powerful non-state actors acting in defiance of the existing order. Physically immobile states, which can be pinpointed for accountability purposes, are the principal actors under the existing order. Thus far, enforcement of international humanitarian law is induced by, *inter alia*, “consideration for public opinion, reciprocal interests of the parties to the conflict, fear of reprisals, [and] liability for compensation.”<sup>98</sup> Unlike rational actors, terrorists purposely project a disobedient persona, discount reciprocity, and are unaffected by the traditional means of reprisal. It is also preposterous to expect reparation from these groups. Terrorists are irrational by their nature.

Above all, nuclear or legal deterrence, principally imposed through the means of reciprocity and retaliation, are inadequate against terrorists. Nuclear retaliation on non-state actors is too

---

<sup>97</sup> Reisman, *supra* note 91, at 86.

<sup>98</sup> Rüdiger Wolfrum & Dieter Fleck, *Enforcement of International Humanitarian Law*, in THE HANDBOOK OF INTERNATIONAL HUMANITARIAN LAW 675, 686 (Dieter Fleck ed., 2nd ed. 2008).

costly and politically risky, or outright unlawful considering the territorial integrity and political independence of the host state. These factors eliminate one principal means to deter attacks on U.S. soil. Additionally, these insurgents are nurtured in ineffective states, mere blind spots on the map where law enforcement is virtually absent or meaningless.<sup>99</sup> The insurgents are not only difficult to locate, but also tough to contain. Non-state actors are dispersed and itinerant; consequently, opportunities for military engagement through traditional means will be scarce.

UAVs cannot eliminate terrorism, yet they can effectively fill the gap created by the breakdown of nuclear deterrence. The current security relationship is centered on nuclear deterrent capability as a fundamental pillar and presumes a state-to-state global structure.<sup>100</sup> In order to account for extremely mobile, scattered, furtive, and robust non-state actors, drones are needed to provide surveillance and an immediate military response within a limited window of opportunity. Such versatility will in due course prove to be an effective deterrent against terrorists, who are essentially liberated from the fear of nuclear attack. In fact, Juan Zarate, a counterterrorism advisor in the Bush Administration, and other supporters of the Predator drone program, argue that drones have had such positive ripple effects because “[s]urviving militants are forced to operate far more cautiously, which diverts their energy from planning new attacks.”<sup>101</sup> Ubiquitous and injudicious use of combat drones, like any other weapon, is inimical to world order. However, when prudently used, UAVs can be an optimal solution to deter non-state actors from pursuing vicious military ambition. Preserving the new world order requires new resources. Drones could reinstate reprisal as an apparatus to deter non-state actors from acting recklessly.

---

<sup>99</sup> See Reisman, *supra* note 91, at 86.

<sup>100</sup> *Id.* at 84-85.

<sup>101</sup> Jane Mayer, *The Predator War: What Are the Risks of the C.I.A.'s Covert Drone Program*, NEW YORKER, Oct. 26, 2009, [http://www.newyorker.com/reporting/2009/10/26/091026fa\\_fact\\_mayer](http://www.newyorker.com/reporting/2009/10/26/091026fa_fact_mayer).

#### D. *Improvised Explosive Devices*

On March 7, 2010, “The Hurt Locker,” a movie portraying an explosive ordinance disposal (“EOD”) team in the Iraq War, won six Academy Awards, including one for Best Picture.<sup>102</sup> It informed the public of the real danger of IEDs in the theater of operation. According to the Defense Manpower Data Center, explosive devices, including IEDs, accounted for 67 percent and 58 percent of all combat casualties in Operation Iraqi Freedom and Operation Enduring Freedom, respectively.<sup>103</sup> EOD squads have become an indispensable element of all troops fighting an asymmetric war, whether employed by national forces, multinational forces, or forces comprising U.N. peacekeeping operations.

UCAVs are an effective countermeasure against IEDs for two main reasons. First, pilots and ground troops are less subject to the danger of the battlefield. The advantages of utilizing UCAVs are apparent considering risks scattered and hidden throughout the battlefield: “Uninhabited systems [i.e. UCAVs] offer the prospect of achieving military objectives without risking the politically unacceptable cost of friendly casualties.”<sup>104</sup> Since UCAVs are remotely controlled, pilot casualty is virtually nonexistent. In addition, UCAVs can excuse ground troops from conducting dangerous assignments. Combat zones are extremely volatile arenas where irrationality abounds. That is, countries must exploit all means at their disposal to protect soldiers, including pilots, from being exposed to unnecessary risks—not just IEDs—but landmines, suicide attacks, snipers, anti-aircraft missiles, etc. If pilots and ground troops are removed from the battlefield, ground-based IEDs become a very manageable threat.

---

<sup>102</sup> See John Blake, *Inside the Heads of ‘Hurt Locker’ Bomb Defusers*, CNN (Mar. 5, 2010, 7:12 AM), <http://www.cnn.com/2010/SHOWBIZ/Movies/03/05/real.hurt.locker/>; see also Alan Duke, *‘Hurt Locker’ is Best Picture, Wins Six Oscars*, CNN (Mar. 9, 2010, 3:05 PM), <http://www.cnn.com/2010/SHOWBIZ/Movies/03/07/academy.awards.night/>.

<sup>103</sup> See U.S. DEP’T OF DEF., DEF. MANPOWER DATA CTR., GLOBAL WAR ON TERRORISM CASUALTY SUMMARY BY REASON, OCTOBER 7, 2001 THROUGH MAY 7, 2012 (2012), [http://siadapp.dmdc.osd.mil/personnel/CASUALTY/gwot\\_reason.pdf](http://siadapp.dmdc.osd.mil/personnel/CASUALTY/gwot_reason.pdf).

<sup>104</sup> *Id.*

Second, airborne devices, especially unmanned ones, can protect troops from a plethora of risks without compromising the success of the mission. Due to their cutting-edge visual and sensory technology, drones assist ground troops in detecting and eliminating IEDs. A drone has “great range and loitering capability . . . [u]sing synthetic aperture radar, a ground moving target indicator, and high-resolution electro-optical and infrared sensors, it collects information that is transmitted to users near real-time.”<sup>105</sup> Such long-term surveillance and reconnaissance capacity enables the operator to descry suspicious behaviors and objects. The effectiveness of drones is undeniable. Without drones, the casualties of U.S. troops in the so-called “Global War on Terrorism” from IEDs would have been significantly higher: “[UAVs] have saved countless lives, providing the Warfighter with evidence that IEDs have been planted on convoy routes, warning troops of ambushes, assisting troops in contact, and permanently removing [high value assets] from the battle.”<sup>106</sup> Drones are evolving into a global watchtower that scrutinizes the warzone in advance to eliminate dangers before ground-troops are introduced. Essentially, drones are necessary to safely conduct military missions without jeopardizing the probability of success in the future war.

#### E. *Less Costly*

The U.N. Charter embodies the postwar ambition to eradicate significant military aggression outside the scope of Security Council authorization and self-defense.<sup>107</sup> Despite the U.N.’s effort, a certain degree of force—just enough so it does not rise to the level of significant threat or use of force—is yet a necessary evil to counter the prevalence of illegitimate violence.<sup>108</sup> Maintenance of security

---

<sup>105</sup> Schmitt, *supra* note 88, at 9 n. 22.

<sup>106</sup> UNMANNED SYSTEMS INTEGRATED ROADMAP, *supra* note 58, at 37.

<sup>107</sup> U.N. Charter art.2, para. 4.

<sup>108</sup> Without digressing too much into the realm of *jus ad bellum*, a threat or use of force is significant only if it endangers the territorial integrity or political independence of a state, hence a violation of the Article 2(4) of the U.N. Charter. The use of drones strictly against terrorist factions, especially with the consent of the host state, does not rise to the level of significant threat or use of force. When there is consent of the targeted state and the attack is significantly narrow in its scope, territorial integrity or political independence is unaffected.

comes at a cost. Terrorist factions are spread throughout the global theater of operation, thereby making the problem particularly more challenging.<sup>109</sup> The crisis is further amplified by the parasitical presence of terrorist networks in feckless states. If an Al Qaeda affiliate resides in a state where meaningful law enforcement exists, criminal prosecution following arrest or capture would be the least costly remedy. For example, it is absurd to unleash a Hellfire missile in New York City, especially at the risk of producing civilian casualties, because terrorists could be handcuffed by law enforcement with relative ease. *A fortiori*, if a terrorist is pinpointed in a country with a fully functioning legal system, the United States could file a request for extradition to gain jurisdiction and afford due process under the law, instead of resorting to various military tactics.<sup>110</sup>

Unfortunately, terrorists are often beyond the reach of effective police force, difficult to distinguish from civilians, and hard to locate due to geological barriers. Nor do terrorist threats have a definite duration. In the absence of the rule of law, it is futile to expect arrests and subsequent judicial proceedings. Under the doctrine of state responsibility, however, ineffective states have “the

---

<sup>109</sup> The broad language of the AUMF is reflective of the difficulty:

[T]he President is authorized to use all necessary and appropriate force against those nations, organizations, or persons he determines planned, authorized, committed, or aided the terrorist attacks that occurred on September 11, 2001, or harbored such organizations or persons, in order to prevent any future acts of international terrorism against the United States by such nations, organizations or persons.

Authorization for Use of Military Force, Pub. L. No. 107-40, 115 Stat. 224 (2001) (codified at 50 U.S.C. § 1541 (2012)).

<sup>110</sup> According to W. Michael Reisman, the Myres S. McDougal Professor of International Law at Yale Law School:

International law does not ordinarily distinguish between states that are capable of controlling their territory and those that are not... [But] the issue is not simply what is owed to a state that acts as a haven for terrorists, but what are the international legal consequences and permissible responses when that state violates the obligations that it owes to other states who have theretofore respected and deferred to its sovereignty and are now suffering a consequential injury... [U]nilateral action [against ineffective states] would appear justified, but would, as anywhere else, have to meet the conditions of any lawful use of force.

W. Michael Reisman, *International Legal Responses to International Terrorism*, 22 HOUS. J. INT'L L. 3, 50-54 (1999).



obligation to protect within the territory the rights of other States, in particular their right to integrity and inviolability in peace and in war,” and inaction constitutes “a breach of an international obligation of the State.”<sup>111</sup> If these states are incapable of protecting the rights of other states from acts arising within their sovereign territory, other states can proactively and unilaterally seek to claim their right to security through “lawful use of force.”<sup>112</sup> Thus, the United States is entitled to engage in Iraq, Afghanistan, Yemen, and Pakistan to offset the dispersed and burgeoning threats that are not being addressed by those countries’ respective governments.<sup>113</sup>

The national security of the United States depends on its ability to suppress global terrorism, but it is both impractical and too costly in lives and money to wage a full-scale war against all harboring states that are simply unable or unwilling to control non-state actors. Of course, diplomacy and engagement are essential, but could prove to be unproductive. Using UCAVs is a lawful and cost-effective substitute. Terrorism is unlikely to perish in the foreseeable future and nation building to enforce criminal liability for militant insurgents is a time-consuming task. Yet, states are entitled to exploit all necessary and appropriate means to forestall terrorism. Compared to a full-scale war or the use of imprecise outmoded weapons, the combat drone is the lesser of two evils:

Militarily it [a large-scale military invasion] costs lives and is quite expensive. Abroad, it is extremely risky both politically and diplomatically. Legally, it creates the kinds of problems

---

<sup>111</sup> The Island of Palmas Case (Neth. v. U.S.), 2 R.I.A.A. 829, 839 (1928); Rep. of the Int’l Law Comm’n, 53rd Sess., Apr. 23 - June 1, July 2 - Aug. 21, 2001, U.N. Doc. A/56/10; GAOR, 56th Sess., Supp. No. 10, art. 2(b) (2001).

<sup>112</sup> Reisman, *supra* note 110, at 54.

<sup>113</sup> According to Thomas M. Franck, the former Murry and Ida Becker Professor of Law at New York University:

Is it lawful for a state to invade its neighbor if that neighbor fails to prevent its territory from being used to launch attacks across the common border? Are illegal attacks across a border by insurgents to be attributed to the state from which they are launched? There may be a growing inclination to answer that question in the affirmative.

Thomas M. Franck, *On Proportionality of Countermeasures in International Law*, 102 AM. J. INT’L. L. 715, 764 (2008).

under international law that were present in debates leading up to the war in Iraq. Because of these limitations, targeted killings against known terrorists have become a real and accepted option within the United States as the only reasonably effective way of reaching a hostile target.<sup>114</sup>

Drones can precisely locate a suspect with the help of an onboard camera, while the loitering capability grants extra time to visually verify the target.<sup>115</sup> Although drones are not immune from non-combatant deaths, the misery is far less severe than military invasion to achieve the inevitable task of battling terrorism. In fact, there are signs that indicate drones are increasingly becoming more discriminate and proportionate: “[T]he incidence of civilian casualties appears to be trending downward; during 2009, only 8.5 percent of the reported casualties were identified as civilians.”<sup>116</sup> According to *The Long War Journal*, this rate decreased to 3 percent from 2010 to 2012.<sup>117</sup> Drones are perhaps the least damaging military solution for transnational terrorism.

#### IV. THE RECENT SUCCESS OF COMBAT DRONES

One of the most vocal critics of drones, Mary Ellen O’Connell, wrote that the successful raid against Osama bin Laden swung the pendulum in favor of capture-and-trial law enforcement standards, instead of relying on drones, as “the legal and effective

---

<sup>114</sup> The report moves on to recognize the downside of unrestraint and widespread usage of targeted killing. It suggests targeted killing should be limited to instances in which there is no other reasonable alternative (as a last resort), when the threat is reasonably imminent, and as a preventive measure. These are *ad bellum* concerns and hence beyond the scope of this paper. Philip B. Heymann & Juliette N. Kayyem, *Long Term Legal Strategy Project for Preserving Security and Democratic Freedoms in the War on Terrorism*, THE NATIONAL MEMORIAL INSTITUTE FOR THE PREVENTION OF TERRORISM 65-66 (2005), [http://belfercenter.ksg.harvard.edu/files/ltls\\_final\\_5\\_3\\_05.pdf](http://belfercenter.ksg.harvard.edu/files/ltls_final_5_3_05.pdf).

<sup>115</sup> See *MQ-9 Reaper*, *supra* note 40; see also *MQ-1B Predator*, *supra* note 40.

<sup>116</sup> Bill Roggio & Alexander Mayer, *Analysis: US Air Campaign in Pakistan Heats Up*, LONG WAR J, (Jan. 5, 2010), [http://www.longwarjournal.org/archives/2010/01/analysis\\_us\\_air\\_camp.php](http://www.longwarjournal.org/archives/2010/01/analysis_us_air_camp.php).

<sup>117</sup> See William Saletan, *Drones are the Worst Form of War, Except for All the Others*, SLATE (Feb. 19, 2013, 10:40 PM), [http://www.slate.com/articles/health\\_and\\_science/human\\_nature/2013/02/drones\\_war\\_and\\_civilian\\_casualties\\_how\\_unmanned\\_aircraft\\_reduce\\_collateral.html](http://www.slate.com/articles/health_and_science/human_nature/2013/02/drones_war_and_civilian_casualties_how_unmanned_aircraft_reduce_collateral.html).

option for dealing with the criminals we call terrorists.”<sup>118</sup> Of course though, bin Laden was killed, not captured.<sup>119</sup> O’Connell seems to conclude that the assassination of a terrorist is lawful and praiseworthy if a highly-trained unit of special forces conducts the killing, whereas a similar task would be unlawful—in fact it would rise to the level of “extra-judicial killing”—if it involves the use of UCAVs.<sup>120</sup> Such a view is misguided in light of abundant reasons vindicating the lawfulness and need for combat drones. Given that the role of UAVs, if any, in the operation to purge bin Laden is still uncertain, one extraordinary episode cannot be the theme of the global counterterrorism policy. Surely it is impractical, if not impossible, to conduct similar operations and maintain effective counterterrorism policy without drones. Nor is it likely that such a high level of care and scrutiny, in which the President himself sat by monitoring the raid,<sup>121</sup> would henceforth be available, especially without incurring friendly casualty. Halting the drone program in favor of the protracted battle against global terrorism is myopic at best. Navy SEAL commando teams are more appropriate in certain circumstances, but their aptness does not undermine other modes of warfare. UCAVs are equally lawful and effective.

Although details of the drone-strike policy, especially the exact number of civilians and militants killed, remain classified or unknown, there are a substantial number of high-profile incidents that attest to the lawfulness and necessity of combat drones. In short, targeted killing eliminated prominent terrorist leaders and “dramatically thinned the ranks of both [Al] Qaeda leaders and cadres.”<sup>122</sup> A series of successful drone strikes has dealt a significant blow to the integrity of terrorist networks. Although adverse

---

<sup>118</sup> Mary Ellen O’Connell, *The Death of bin Laden as a Turning Point*, OPINIO JURIS (May 3, 2011, 3:10 PM), <http://opiniojuris.org/2011/05/03/the-death-of-bin-laden-as-a-turning-point/>.

<sup>119</sup> Peter Baker, Helene Cooper & Mark Mazzetti, *Bin Laden is Dead, Obama Says*, N.Y. TIMES, May 1, 2011, at A1.

<sup>120</sup> See O’Connell, *supra* note 118.

<sup>121</sup> Elisabeth Bumiller, *Raid to Kill Bin Laden Helped U.S., Panetta Says*, N.Y. TIMES, Apr. 28, 2012, at A6.

<sup>122</sup> Marc Sageman, *Confronting al-Qaeda: Understanding the Threat in Afghanistan*, 3 PERSP. ON TERRORISM 1, 23 (2009), <http://www.terrorismanalysts.com/pt/index.php/pot/article/view/79/162>.

consequences on civilian lives were recorded, many more lives were saved. History will in due course evaluate the denouement of advanced technology in curbing threats by non-state actors. Still, the international community has thus far witnessed the death of notorious Al Qaeda and Taliban leaders responsible for, or planning on, undertaking atrocious schemes.<sup>123</sup> These militants are certainly lawful targets under *jus in bello*.<sup>124</sup> There is no systematic method of quantifying the impact of these operations, but the world is a step closer to peace and security due to these terrorists' deaths. To measure success, it is helpful to review some of the recent successes of combat drones targeting various terrorist members.

A. *Abu Laith al-Libi*

On January 29, 2008, a guesthouse in North Waziristan was struck by a drone-launched missile.<sup>125</sup> In the building were thirteen militants, one of whom was Abu Laith al-Libi, the third most senior leader of the Al Qaeda command chain, who was “knowledgeable about how to conduct suicide bombing missions and how to inflict the most civilian casualties.”<sup>126</sup> Al-Libi was responsible for initiating the alliance between Al Qaeda and the Salafist Group for Preaching and Combat, and had strategic ties with the Libyan Islamic Fighting Group, which is listed as an affiliate of Al Qaeda and the Taliban by the United Nations.<sup>127</sup>

---

<sup>123</sup> See *Counter Terrorism Profiles*, NAT'L COUNTERTERRORISM CTR., <http://www.nctc.gov/site/profiles/> (last visited Feb. 12, 2014) (reporting an official list).

<sup>124</sup> Some of the targets, such as Anwar al-Awlaki, an American citizen, pose additional legal issues. However, whether or not the U.S. government has the authority to kill its citizen without trial is beyond the scope of this paper and irrelevant in assessing the lawfulness of a weapon.

<sup>125</sup> Bill Roggio, *Arab, Asian Al Qaeda Operatives Reported Killed in North Waziristan Raid*, LONG WAR J. (Jan. 31, 2008), [http://www.longwarjournal.org/archives/2008/01/arab\\_asian\\_al\\_qaeda.php](http://www.longwarjournal.org/archives/2008/01/arab_asian_al_qaeda.php).

<sup>126</sup> *Al Qaeda Commander Reportedly Killed*, NY TIMES, Mar. 1, 2008, available at: [http://www.nytimes.com/2008/01/31/world/asia/31iht-31qaeda.9650144.html?\\_r=0](http://www.nytimes.com/2008/01/31/world/asia/31iht-31qaeda.9650144.html?_r=0).

<sup>127</sup> S.C. Res. 1267, 1989 (Aug. 23, 2010), available at <http://www.un.org/sc/committees/1267/NSQE01101E.shtml>.

### B. *Abu Khabab al-Masri*

Under the auspices of the Pakistani government, UCAVs eliminated six men—all identified as militants—at the Afghanistan-Pakistan border on July 28, 2008.<sup>128</sup> One of the victims was Abu Khabab al-Masri, an infamous scientist involved in the chemical and biological weapons development program for Al Qaeda.<sup>129</sup> Al-Masri was known to be one of Al Qaeda's most seasoned experts in developing WMD.<sup>130</sup>

### C. *Abu Jihad al-Masri*

On October 31, 2008, Al Qaeda propaganda and media chief, Abu Jihad al-Masri, was targeted and killed in Pakistan.<sup>131</sup> Ayman al-Zawahiri, one of the highest ranked Al Qaeda leaders, introduced al-Masri in a provocative video with a strong anti-Western message.<sup>132</sup> Al-Masri was suspected of being the chief of Al Qaeda's intelligence branch, in charge of the ideological warfare, and was known to have made incendiary statements against the United States and the Pope.<sup>133</sup> Although the drone bombing killed two other individuals in the vehicle,<sup>134</sup> this attack does not violate *in bello* proportionality even if those individuals were civilians. Two civilian deaths to eliminate a high-value target, albeit unfortunate, would be *in bello* proportionate considering the anticipated military gain.<sup>135</sup>

### D. *Sheik Ahmed Salim Swedan and Usama al-Kini*

Sheik Ahmed Salim Swedan and Usama al-Kini were responsible for the bombing of the Marriott Hotel in Islamabad, as

---

<sup>128</sup> See Farhan Bokhari, *Officials: Al Qaeda's Mad Scientist Killed*, CBS NEWS (Sept. 10, 2009, 1:34 PM), <http://www.cbsnews.com/stories/2008/07/28/terror/main4301490.shtml>.

<sup>129</sup> *Id.*

<sup>130</sup> *Id.*

<sup>131</sup> See *Al-Qaeda Propaganda Chief Killed in Pakistan Strike: Officials*, AFP (Nov. 1, 2008), <http://afp.google.com/article/ALeqM5i-kilo-XOudi-VkBdvQ6Y097hhUQ>.

<sup>132</sup> *Id.*

<sup>133</sup> *Id.*

<sup>134</sup> *Id.*

<sup>135</sup> See *infra* Part II.B.

well as the 1998 bombings of the U.S. embassies in Kenya and Tanzania.<sup>136</sup> On January 1, 2009, a U.S. Predator drone killed them in South Waziristan close to the Afghan border.<sup>137</sup> An American official stressed that the success of the mission represented a major setback for the terrorist network, or “a significant degradation of [A]l Qaeda’s leadership.”<sup>138</sup>

*E. Mustafa Abu al-Yazid*

Al Qaeda admitted the death of one of its top leader and financial official, Mustafa Abu al-Yazid, who also served as an adviser to Osama bin Laden.<sup>139</sup> Here, the May 21, 2010 drone strike purportedly killed other militants, as well as Yazid’s wife and daughters.<sup>140</sup> Because Yazid was then ranked third in Al Qaeda’s chain of command,<sup>141</sup> and as such was a very important military target, this airstrike, despite causing civilian casualties, probably satisfied the *in bello* proportionality test.

*F. Abu Yahya al-Libi*

Following the death of Osama bin Laden, Abu Yahya al-Libi became Al Qaeda’s deputy and second in command after Ayman al-Zawahri.<sup>142</sup> Due to his conspicuous efforts to promote global terrorism, he had been identified as a high-value target with a \$1 million bounty on his head.<sup>143</sup> He had been described as one of Al Qaeda’s “most experienced and versatile leaders . . . [who] played a critical role in the group’s planning against the West, providing

---

<sup>136</sup> Dean Nelson, *Pakistan: Al-Qaeda Leaders Killed in US Strike*, TELEGRAPH (Jan. 9, 2009, 12:20 PM), <http://www.telegraph.co.uk/news/worldnews/asia/pakistan/4207565/Pakistan-Al-Qaeda-leaders-killed-in-US-strike.html>.

<sup>137</sup> *Id.*

<sup>138</sup> *Id.*

<sup>139</sup> Katherine Tiedemann, *Daily Brief: Drone Reportedly Kills Qaeda No.3*, FOREIGN POLICY, June 1, 2010, available at [http://afpak.foreignpolicy.com/posts/2010/06/01/daily\\_brief\\_drone\\_reportedly\\_kills\\_qaeda\\_no\\_3](http://afpak.foreignpolicy.com/posts/2010/06/01/daily_brief_drone_reportedly_kills_qaeda_no_3).

<sup>140</sup> *Id.*

<sup>141</sup> *Id.*

<sup>142</sup> Declan Walsh & Eric Schmitt, *Drone Strike Killed No. 2 in Al Qaeda, U.S. Officials Say*, N.Y. TIMES, June 6, 2012, at A1.

<sup>143</sup> *Id.*

oversight of the external operations efforts.”<sup>144</sup> On June 5, 2012, U.S. officials confirmed his death by a drone strike with no civilian injury.<sup>145</sup>

### G. *Wali ur-Rehman*

On May 30, 2013, Pakistani Taliban spokesman confirmed the death of Wali ur-Rehman, the group’s deputy leader, from a U.S. drone strike.<sup>146</sup> Ur-Rehman had been accused “both of organizing attacks on American troops in Afghanistan and playing a role in the 2009 attack on a C.I.A. base in the eastern part of the country that killed seven agency employees.”<sup>147</sup> In addition, as the main operations leader for the Pakistani Taliban, he had been involved in numerous terrorist attacks both in and out of Pakistan, including the bombing of the Marriott Hotel in Islamabad on September 20, 2008, and the failed Times Square car bombing in New York City on May 1, 2010.<sup>148</sup>

### H. *Compliance with jus in bello*

The number of fatalities caused by UCAVs varies from count to count, but the overall trend is similar.<sup>149</sup> According to the New America Foundation, the estimated total militant deaths from U.S. drone strikes in Pakistan from 2004 to 2013 ranges from 1,590 to 2,740.<sup>150</sup> The average ratio of civilian deaths to enemy combatant deaths from UCAVs during this time period is approximately 15 percent.<sup>151</sup> Further, it is estimated that between 2010 and 2012, civilian deaths accounted for between just 3 to 6 percent of all U.S.

---

<sup>144</sup> *Id.*

<sup>145</sup> *Id.*

<sup>146</sup> Mark Mazzetti & Declan Walsh, *Pakistan Says U.S. Drone Killed Taliban Leader*, N.Y. TIMES, May 29, 2013, at A1

<sup>147</sup> *Id.*

<sup>148</sup> See *id.*; see also Bill Roggio, *Pakistani Taliban Confirm Death of Deputy Emir in Drone Strike*, LONG WAR J. (May 30, 2013), [http://www.longwarjournal.org/archives/2013/05/pakistani\\_taliban\\_cl\\_1.php](http://www.longwarjournal.org/archives/2013/05/pakistani_taliban_cl_1.php).

<sup>149</sup> See Williams, *supra* note 57; see also Mayer, *supra* note 57.

<sup>150</sup> See *Analysis-The Drone War in Pakistan*, NEW AMERICA FOUND., <http://natsec.newamerica.net/drones/pakistan/analysis> (last visited Feb. 12, 2014).

<sup>151</sup> See *id.*

drone attack casualties.<sup>152</sup> While it is impossible to conclusively ascertain when an attack crosses the line of proportionality, 3 to 6 percent collateral damage, especially when many of the militants were time sensitive targets, will in normal circumstances be considered lawful.<sup>153</sup> Even if cynics find the ratio to be disproportionate, the bottom line remains intact: over the years, the drone program is becoming more faithful to *jus in bello* principles.<sup>154</sup> Against the backdrop of UCAVs eminent triumphs and potential, it is impulsive for critics to gainsay the lawfulness and effectiveness of UCAVs. Additionally, up until now, the decade-old drone program was in its nascent form. Future UCAVs, fortified by superior technology, are more likely to better conform to the demands of LOAC.

## V. CONCLUSION

The tragedy of 9/11 ushered in a new era of belligerent non-state actors capable of threatening national security. Within the boundary of law, proactive and innovative measures are warranted to counter hostile non-state actors at all costs. Therefore, technologically sophisticated tools of war that better comply with *jus in bello* must replace indiscriminate weapons. UCAVs clearly fall under that prescribed legal regime.

Scholars and U.S. government officials should articulate their support of combat drones solely on *jus in bello* grounds without conflating the issue with the momentous burden of justifying the war against non-state actors operating in states against which the United

---

<sup>152</sup> Saletan, *supra* note 117.

<sup>153</sup> Civilian death rates caused by conventional weapons in previous wars are much higher:

In Vietnam, by some calculations, one civilian died for every two enemy combatants . . . [i]n Afghanistan, the civilian death toll from 2001 to 2011 has been ballparked at anywhere from 60 to 150 percent of the Taliban body count. In Iraq, more than 120,000 civilians have been killed since the 2003 invasion.

*Id.*

<sup>154</sup> Peter Bergen & Katherine Tiedemann, *The Hidden War*, FOREIGN POLICY, Dec. 21, 2010, available at [http://www.foreignpolicy.com/articles/2010/12/21/the\\_hidden\\_war?page=0,5](http://www.foreignpolicy.com/articles/2010/12/21/the_hidden_war?page=0,5).



States has not declared war. *Ad bellum* factors are inappropriate to emphasize the exceptional capability of drones to comply with *jus in bello*. Advanced weapons systems, such as combat drones, offer the ability to comply with the four-pronged LOAC with increasing exactitude.

Furthermore, U.S. officials should highlight the need for drones in modern warfare as well as various procedural mechanisms to maximize their lawfulness, thereby vindicating the Obama Administration's growing reliance on UCAVs. Regardless of whether targeted killing complies with domestic and international *ad bellum* norms, the use of the combat drone is both *in bello* lawful and necessary.<sup>155</sup>

Combat drones are exemplary in their competence to comply with *jus in bello*. Drone operators are, in effect, obliged to heighten the standard of conformity due to greater availability of information. The International Committee of the Red Cross notes that "[e]ach party to the conflict must do everything feasible to verify that targets are military objectives."<sup>156</sup> More precaution is feasible when drones are used. Distinguishing insurgents from civilians using a live visual feed with sufficient time for deliberation allows for fewer civilian casualties than hastily using speculative intelligence to make the distinction. Excluding such technological innovation from the ambit of law is the equivalent of fighting modern war with armaments and military tactics from the distant past.

In addition, UCAVs are necessary to achieve important policy objectives in the modern warfare against mobile terrorists. It is extremely difficult to counter fleeting targets in an asymmetric war without such state-of-the-art weaponry that is capable of prolonged surveillance and accurate targeting. UCAVs are an effective countermeasure against non-state actors, who have a proven track record of behaving recklessly by employing unlawful tactics. Without putting soldiers in harm's way, UCAVs provide a less costly

---

<sup>155</sup> This statement is radically different from Harold Koh's implied thesis that because the United States is *jus ad bellum* entitled to exercise the right to self-defense against terrorists, combat drones can be used.

<sup>156</sup> CUSTOMARY INTERNATIONAL HUMANITARIAN LAW, *supra* note 75, at 55.

---

alternative to other forms of military operations to curb and deter terrorism. Preserving peace and security *vis-à-vis* a globalized theater of war is an overwhelming task that demands extraordinary efforts. Against such a backdrop of instability, combat drones equipped with precision-guided munitions are most likely the least detrimental, and certainly a lawful and necessary, alternative to conventional warfare.

