

UNMANNED AERIAL VEHICLES: HUMANIZATION FROM INTERNATIONAL HUMANITARIAN LAW

HITOMI TAKEMURA*

Introduction	521
I. Types of Drones.....	523
II. Preliminary Legal Issues surrounding Armed Drones	525
A. Pros and Cons of Using Drones	525
B. Armed Drones and International Law.....	526
C. Jus Ad Bellum.....	527
D. Jus in Bello.....	530
E. Applicability of International Human Rights Law in an Armed Conflict	536
F. Peacetime Use of Drones: Law Enforcement	537
G. Accountability Issues	539
III. Present Use and Manufacture of Drones around the World	541
IV. The Case of Japanese Laws and UAVs	542
V. Conclusion	545

INTRODUCTION

This paper elucidates the present situation and future prospects of applicable international legal norms and accountability for unmanned aerial vehicles (UAVs), a.k.a. unmanned combat air vehicles (UCAVs). A UAV is regarded as a kind of robot, since, to some extent, it can operate automatically. Robot warfare is no longer science fiction. If combatant robots destroy enemy robots, then there seems to be no immediate impact on human beings. However, as long as robotics can potentially kill humans, one still needs to consider the applicability of laws regulating robotics.

The recent increase of the use of drones poses serious questions for international humanitarian law, both theoretically and practically. UAVs dehumanize war; furthermore, the implications of using these

*Associate Professor, Aichi Prefectural University, Japan. The author would like to thank Mr. Alzo David-West of Aichi Prefectural University and the editors of this journal for their comments. The author may be reached at takemurahitomi@hotmail.com.

robots in war are evident in the legal uncertainties surrounding their regulation. This is true both with respect to the laws of war and international humanitarian law, particularly since wars have traditionally been conducted between human beings and international humanitarian law strives for the maximum humanization of wars.

Therefore, this paper addresses first the preliminary legal issues surrounding the use of UAVs, as well as accountability from the standpoint of international humanitarian/human rights law and normative ethics. The proliferation of UAVs in national security among developed countries goes against the efforts of the international community to humanize both wars and the laws of war. Although the level of autonomy of a UAV varies considerably depending on its type, any such autonomy accelerates the dehumanization of armed conflicts. Faced with the legal *lacunae* of directly regulating lethal autonomous robots (LARs), the United Nations Human Rights Council report of May 2013 called for a temporary world moratorium on the development of LARs with the power to kill people. The fundamental legal issues surrounding UAVs include, but are not limited to, the impact on humanitarian law's principles of distinction and proportionality and the concept of accountability for breaches of international humanitarian law. Second, the paper briefly attempts to explain the present use and manufacture of drones all over the world, and describes an arguably difficult situation for Japan coping with drones over its territorial sea. While the United States is the leading manufacturer and holder of UAVs in the world, countries such as China and Israel also stand out in terms of their interest in manufacturing drones. Recently, there has been tension between Japan and China regarding a drone (which was possibly from China) that flew over the disputed area of the Senkaku/Diaoyu islands in the East China Sea. The Japanese government and the Japanese Ministry of Defense faced a conundrum as to whether Japan should shoot down this drone. The Japanese Constitution allows the use of force for defense purposes only. In the face of drones over disputed areas, Japan is now considering deploying Global Hawk, an unmanned high-altitude reconnaissance aircraft used by the US military. From the viewpoint of both disarmament and international humanitarian law, such an arms race only jeopardizes international peace.

I. TYPES OF DRONES

The terms “unmanned aerial vehicles” (UAVs), “uninhabited aerial vehicles,” “unmanned aerial combat,” “remotely operated aircraft” (ROA), “remotely piloted aircraft” (RPA), “remotely piloted aircraft system” (RPAS), “remotely piloted vehicle” (RPV), “remotely piloted weapons” (RPW), and “drones” currently denote a varying range of aerial vehicles, but there has not been a single legal definition to date, though the most shortened version among them, “drones,” seems to be favored.¹ While a legal definition of drones cannot be found, drones are defined in the *Oxford Dictionaries* as “a remote-controlled pilotless aircraft or missile.”² The homepage of the US Department of Defense defines UAVs as “powered aerial vehicles sustained in flight by aerodynamic lift over most of their flight path and guided without onboard crew.”³ Basically, UAVs and drones, in the broad sense of the terms, are remote-controlled aircraft. “Drones” originally stands for male honeybees.⁴ Consequently, both terms, “drones” and “unmanned aerial vehicles,” are not gender-neutral, and connote masculinity.⁵ Historically, drones are believed to have been invented during or right after the Second World War and were ready for use by the 1950s.⁶

The purpose for the use of drones and types of drones may be correlative. To date, drones are used for mainly two purposes: (1) surveillance, and (2) targeted killing.⁷ In this sense, drones basically

¹ For instance, the American Civil Liberties Union prefers the simplest term “drone.” while governments and industries would rather avoid using this term. Jay Stanley, ‘Drones’ vs ‘UAVs’—What’s Behind A Name?, AM. CIV. LIBERTIES UNION (May 20, 2013, 9:00 AM), <https://www.aclu.org/blog/technology-and-liberty-national-security/should-we-call-them-drones-or-uavs>.

² *Drone* Definition, OXFORD DICTIONARIES, http://www.oxforddictionaries.com/us/definition/american_english/drone (last visited Nov. 11, 2014).

³ *Unmanned Aerial Vehicles*, U.S. DEP’T DEF., <http://www.defense.gov/specials/uav2002/> (last updated June 3, 2003).

⁴ Ben Zimmer, *The Flight of ‘Drone’ from Bees to Planes*, WALL ST. J. (June 26, 2013, 7:36 PM), <http://online.wsj.com/articles/SB10001424127887324110404578625803736954968>.

⁵ It is suggested that when one speaks of drones, one metaphorically expresses something that performs one function repetitively, without distractions and with unrivalled efficiency. Roger Berkowitz, *Drones and the Question of ‘Human’*, 28 ETHICS & INT’L AFF. 159, 161 (2014).

⁶ Mary Ellen O’Connell, *The International Law of Drones*, AM. SOC’Y INT’L L. INSIGHTS (Nov. 12, 2010), http://www.asil.org/sites/default/files/insights_101112.pdf0_.pdf.

⁷ Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions, *Study on Targeted Killings*, ¶ 27, U.N. Doc. A/HRC/14/24/Add.6 (May 28, 2010) (by Philip Alston) [hereinafter *Alston Report*].

follow the history of balloons, which were also first developed for surveillance, yet were eventually found to be particularly convenient for air raids.⁸

The first category of drone is intelligence, surveillance, and reconnaissance (ISR) drones. The history of drones shows that ISRs were originally developed for the purpose of gathering intelligence and conducting surveillance and reconnaissance (known as “ISR functions”).⁹ For instance, the RQ-11B Raven is a “man-portable” ISR drone.¹⁰ A much larger high-altitude ISR drone is the RQ-4 Global Hawk. Thus, drones are not totally new to human beings, since they have been used since the Vietnam War for ISR purposes.¹¹

The RQ-4 Global Hawks are also used for humanitarian missions. For instance, they were dispatched after the 2007 fires in California and the Japanese earthquake in March 2011.¹² After a massive tsunami destroyed the Fukushima Daiichi nuclear power plant, the RQ-Global Hawk was in charge of monitoring it and measuring the level of radioactive plume as part of Operation Tomodachi.¹³ More recently, the Global Hawk was dispatched three times from Guam to the Philippines to collect images after a typhoon there in November 2013.¹⁴

The second category of drones is armed drones. The well-known examples of armed drones are the Predator and the Reaper.¹⁵ The United States deploys the MQ-1 Predator and the MQ-9 Reaper.¹⁶ Armed drones came under the international spotlight when the US began using them to combat the Taliban and al-Qaeda, especially after an incident that resulted in the killing of an alleged terrorist, one of the al-Qaeda leaders, Anwar al-Awlaki, by an American drone in Yemen on September 30,

⁸ O’Connell, *supra* note 6.

⁹ *See id.*

¹⁰ Michael N. Schmitt, *Drone Attacks under the Jus ad Bellum and Jus in Bello: Clearing the ‘Fog of Law’*, 13 Y.B. INT’L HUMANITARIAN L., Dec. 2010, at 311, 313.

¹¹ Stuart Casey-Maslen, *Pandora’s Box? Drone Strikes Under Jus Ad Bellum, Jus In Bello, and International Human Rights Law*, 94 INT’L REV. RED CROSS 597, 598–99 (2012).

¹² Scott Fontaine, *Global Hawk Served New Role in Japan Aftermath*, ARMY TIMES (Aug. 14, 2011, 11:06 AM), <http://www.armytimes.com/article/20110814/NEWS/108140323/Global-Hawk-served-new-role-Japan-aftermath>.

¹³ ANDREW FEICKERT & EMMA CHANLETT-AVERY, CONG. RESEARCH SERV., R41690, JAPAN 2011 EARTHQUAKE: U.S. DEPARTMENT OF DEFENSE (DOD) RESPONSE 5 (2011).

¹⁴ *Global Hawk Aids in Philippine Relief Efforts*, PR NEWswire, Jan. 6, 2014, <http://www.prnewswire.com/news-releases/global-hawk-aids-in-philippine-relief-efforts-238865571.html>.

¹⁵ Schmitt, *supra* note 10, at 313.

¹⁶ *Alston Report*, *supra* note 7, ¶ 18.

2011.¹⁷ That incident was a result of teamwork between Predators and Reapers.¹⁸

Today, “armed drones” have been developed to permit targeted killing with little to no risk to the state personnel carrying out the missions.¹⁹ The term “combat drones” is also used to refer to “armed drones.”²⁰ Despite the wording, armed drones are recognized as weapons, rather than combatants.

Although the level of autonomy of a UAV varies considerably depending on its type, any autonomy accelerates the dehumanization of armed conflicts. Faced with the legal *lacunae* of directly regulating lethal autonomous robots (LARs), the United Nations Human Rights Council report of April 2013 called for a temporary world moratorium on the development of LARs with the power to kill people.²¹

II. PRELIMINARY LEGAL ISSUES SURROUNDING ARMED DRONES

A. PROS AND CONS OF USING DRONES

There are normative and ethical reservations concerning the deployment of armed drones. The normative problem is caused by “a notable lack of consensus on how to apply the rules of international law that regulate the use of force to drones.”²² Nonetheless, the UN reports states that the advantages of armed drones are clear: (1) “no risk to the State personnel,”²³ and (2) they “greatly reduc[e] the time between the identification of a potential target that could be a great distance away and

¹⁷ See Laurie R. Blank, *After ‘Top Gun’: How Drone Strikes Impact the Law of War*, 33 U. PA. J. INT’L L. 675, 676 (2012).

¹⁸ Mark Mazzetti, Charlie Savage & Scott Shane, *How a U.S. Citizen Came to Be in America’s Cross Hairs*, N.Y. TIMES, Mar. 9, 2013, <http://www.nytimes.com/2013/03/10/world/middleeast/anwar-al-awlaki-a-us-citizen-in-americas-cross-hairs.html?smid=pl-share> (“Two of the Predator drones pointed lasers on the trucks to pinpoint the targets, while the larger Reapers took aim. The Reaper pilots, operating their planes from thousands of miles away, readied for the missile shots, and fired.”).

¹⁹ *Alston Report*, *supra* note 7, ¶ 27.

²⁰ O’Connell, *supra* note 6.

²¹ Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions, *Report on Extrajudicial, Summary or Arbitrary Executions*, ¶ 113, UN Doc. A/HRC/23/47 (Apr. 9, 2013) (by Christof Heyns) [hereinafter *Heyns Report on LARs*].

²² Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions, *Report on Extrajudicial, Summary or Arbitrary Executions, transmitted by Note by the Secretary-General*, ¶ 13, U.N. Doc. A/68/382 (Sept. 13, 2013) (by Christof Heyns) [hereinafter *Heyns Report*].

²³ *Alston Report*, *supra* note 7, ¶ 27.

the deployment of deadly force against that target.”²⁴ Thus, the technology of remote-controlled weapons can save both lives and time. However, these advantages can easily become disadvantages.

One of the obvious disadvantages is characterized as the “PlayStation mentality/phenomenon.” The PlayStation phenomenon makes it less likely that a person controlling a remote drone will hesitate to use lethal force because physical distance can break the psychological barrier that inhibits one person from killing another human being.²⁵ Armed drones can diminish the deterrent effects of war by rendering death akin to virtual reality.²⁶ The soldiers that remotely control armed drones may not even see any blood. Reportedly, disconnecting a person from armed conflict, “especially via distance, makes killing easier and [makes] abuses and atrocities more likely” to occur.²⁷ The unmanning of the operation also means that drones take risks that can result in mistakes, where human beings would not.²⁸

These pros and cons all reaffirm the characteristics of dehumanized technology. Nonetheless, unlike LARs, in the case of armed drones, people intervene in decision-making when it comes to the use of lethal force.²⁹ Clearly, harm caused by drones is a manmade disaster; the machine itself is mindless technology. Laws cannot bind machines, but they are controlling over the humans beings that man them.

B. ARMED DRONES AND INTERNATIONAL LAW

International law does not prohibit either the possession or the use of armed drones.³⁰ In other words, the legal *lacunae* directly regulating drones exists, and the applicable laws covering their use

²⁴ *Heyns Report*, *supra* note 22, ¶ 12.

²⁵ *See Alston Report*, *supra* note 7, ¶ 84.

²⁶ P. W. SINGER, *WIRED FOR WAR: THE ROBOTICS REVOLUTION AND CONFLICT IN THE TWENTY-FIRST CENTURY* 396 (2009).

²⁷ *Id.* at 395.

²⁸ *Id.* at 398.

²⁹ *Heyns Report on LARs*, *supra* note 21, ¶¶ 26–27.

³⁰ *Heyns Report*, *supra* note 22, ¶ 13 (“There is broad agreement that drones themselves are not illegal weapons.”). *See also* COMMISSIE VAN ADVIES INZAKE VOLKENRECHTELIJKE VRAAGSTUKKEN [ADVISORY COMMITTEE ON ISSUES OF PUBLIC INTERNATIONAL LAW], ADVIES NR. 23: ADVIES INZAKE BEWAPENDE DRONES [ADVISORY REPORT NO. 23: ADVISORY REPORT ON ARMED DRONES] 2 (2013) (Neth.), *translated at* http://www.sg.unimaas.nl/_OLD/oudelezingen/CAVV_advisory_report_on_armed_drones.pdf [hereinafter CAVV].

would be any international law applicable to similar weapons in armed conflicts and law enforcement in times of peace.³¹ This means that, unless states come up with new rules of international law regulating drones, the respective actors “will be trying to apply international law written for the Second World War to *Star Trek* technology.”³² Although the applicability of *jus ad bellum* and *jus in bello* to contemporary armed conflict, which often involves non-state actors, is not clear, the dualism of *jus ad bellum* and *jus in bello* still seems valid for now.

C. JUS AD BELLUM

Drones may be used both in peacetime and in an armed conflict. If used in peacetime, the use of drones is discussed in the context of law enforcement, and violations of international human rights law would be at issue.³³ Here, again, general international law regulating the use of force, *jus ad bellum*, and general international law regulating the means of warfare, *jus in bello*, seem to be applicable to drones. If an armed conflict occurs in accordance with *jus ad bellum*, *jus in bello* regulates the use of drones in that conflict. Therefore, knowing the definition of “armed conflict” (i.e., *jus ad bellum*) is essential for the lawful deployment of drones to a battlefield.³⁴ In 2010, the International Law Association concluded that, as a matter of customary international law, a situation of armed conflict depends on the satisfaction of two essential minimum criteria: (1) the existence of organized armed groups, and (2) the engagement in fighting of some intensity.³⁵ In contrast to war, an armed conflict does not begin with a declaration, but rather with an organized, armed group fighting with some intensity.³⁶

That said, the threat or use of force against the territorial integrity or political independence of any state is prohibited under article 2(4) of the United Nations Charter.³⁷ The prohibition of use of force is believed to be both customary international law and *jus cogens* in

³¹ Ian Henderson, ‘Civilian Intelligence Agencies and the Use of Armed Drones’, 13 Y.B. INT’L HUMANITARIAN L., Dec. 2010, at 133, 137.

³² SINGER, *supra* note 26, at 387.

³³ *Alston Report*, *supra* note 7, ¶ 31.

³⁴ O’Connell, *supra* note 6.

³⁵ INT’L LAW ASS’N, FINAL REPORT ON THE MEANING OF ARMED CONFLICT IN INTERNATIONAL LAW 32 (2010).

³⁶ O’Connell, *supra* note 6.

³⁷ U.N. Charter art. 2, para. 4.

nature.³⁸ The wrongfulness of the use of force by a state in an armed conflict is overcome only when it has the consent of the territorial state,³⁹ or acts in accordance with the uses permitted under the United Nations Charter, namely the mandate of the use of force authorized by the Security Council,⁴⁰ or for self-defense under article 51.⁴¹ For this reason, one author argues that a state embroiled in an internal armed conflict may request external assistance by another state to restore order.⁴² Of course, international humanitarian law, *jus in bello*, and international human rights law still should be observed when using drones as a resort to force in each case.⁴³

There are at least three requirements for the use of force as a means of self-defense in international law. According to long-established international law, a threatened state can take military action as long as the threatened attack is imminent (the requirement of imminent attack), no other means would deflect it (the principle of necessity), and the action is proportionate (the principle of proportionality).⁴⁴ The International Court of Justice also confirmed the requirements of necessity and proportionality in its advisory opinion of 1996.⁴⁵ It is

³⁸ Military and Paramilitary Activities in and Against Nicaragua (Nicar. v. U.S.), 1986 I.C.J. 14, para. 190 (June 27) [hereinafter Nicaragua Judgment].

³⁹ Article 20 of the Draft Articles on Responsibility of States for Internationally Wrongful Acts states "Valid consent by a State to the commission of a given act by another State precludes the wrongfulness of that act in relation to the former State to the extent that the act remains within the limits of that consent." G.A. Res. 56/83, annex, U.N. Doc. A/RES/56/83 (Jan. 28, 2002), reprinted in *Report of the Commission to the General Assembly on the work of its 53rd session*, [2001] 2 Y.B. Int'l L. Comm'n 26, 27, U.N. Doc. A/CN.4/SER.A/2001/Add.1 (Part 2).

⁴⁰ In accordance with articles 39 and 42 of the Charter of the United Nations, the Security Council has authorized the use of force to reverse or repel aggression by one state against another. It has also authorized the use of force to maintain or restore international peace and security. U.N. Charter arts. 39, 42.

⁴¹ U.N. Charter art. 51.

⁴² Schmitt, *supra* note 10, at 315.

⁴³ If the Security Council authorizes the use of force, it is recognized that a situation of armed force is present. CAVV, *supra* note 30, at 13. See also U.N. Secretariat, Secretary-General's Bulletin: Observance by United Nations forces of international humanitarian law, sec. 1.1, U.N. Doc. ST/SGB/1999/13 (Aug. 6, 1999): ("The fundamental principles and rules of international humanitarian law set out in the present bulletin are applicable to United Nations forces when in situations of armed conflict they are actively engaged therein as combatants, to the extent and for the duration of their engagement.").

⁴⁴ Chairman of High-level Panel on Threats, Challenges and Change, *A More Secure World: Our Shared Responsibility: Report of the Secretary-General High-Level Panel on Threats, Challenges and Change*, ¶ 188, transmitted by Note of the Secretary-General, U.N. Doc. A/59/565 (Dec. 2, 2004).

⁴⁵ Legality of Threat or Use of Nuclear Weapons, Advisory Opinion, 1996 I.C.J. 226, ¶ 41 (July 8) [hereinafter Nuclear Weapon Advisory Opinion].

emphasized that the governing regime's need for self-defense is no different, even if drones are used.⁴⁶ Therefore, a procedural limitation of the use of force in name of self-defense is also applicable to the use of armed drones in accordance with article 51 of the United Nations Charter. That is, the inherent right to collective or individual self-defense of member states of the United Nations is only allowed until the Security Council has taken the measures necessary to maintain international peace and security.

In the case of self-defense, it becomes an issue for the threatened state whether "an armed attack" has occurred in order to make a counterattack against a threatening State. Article 51 of the United Nations Charter stipulates: "Nothing in the present Charter shall impair the inherent right of individual or collective self-defence *if an armed attack occurs* against a member of the United Nations, until the Security Council has taken measures necessary to maintain international peace and security."⁴⁷ The International Court of Justice requires a "significant attack" for an attack to give rise to self-defense.⁴⁸ The point is arguable that "a very limited and targeted drone strike by one state against individuals located in another state would not constitute an armed attack in the sense of the UN Charter or customary [international] law."⁴⁹ By contrast, more intensive drone strikes similar to a bombardment would be considered an armed attack.⁵⁰ Although a strong argument exists that even one drone strike constitutes an armed attack,⁵¹ that attack has to be proven to be "significant," as stated in international jurisprudence seen above.

In short, the use of drones in the territories of other states has also been justified on the basis of self-defense, including the cases where consent was not given or is unclear.⁵² According to general international law, in order to deploy armed drones in the course of exercising the right to self-defense, a state needs to fulfill the requirements of proportionality, necessity, and imminence, and the state needs to prove there has been a significant armed attack by another state.⁵³ However,

⁴⁶ CAVV, *supra* note 30, at 15.

⁴⁷ U.N. Charter art. 51 (emphasis added).

⁴⁸ Nicaragua Judgment, *supra* note 38, para. 230; O'Connell, *supra* note 6.

⁴⁹ Casey-Maslen, *supra* note 11, at 602.

⁵⁰ *Id.*

⁵¹ *Id.*

⁵² Heyns Report, *supra* note 22, ¶ 85.

⁵³ CAVV, *supra* note 30, at 14.

after the attack of September 11, 2001, it has been contended that the right to act in self-defense includes actions taken against non-state actors, especially on the basis of Security Council Resolutions 1368 and 1373.⁵⁴ It has been warned, however, that

... it will only be in very rare circumstances that a non-state actor whose activities do not engage the responsibility of any State will be able to conduct the kind of armed attack that would give rise to the right to use extraterritorial force. In such exceptional circumstance, the UN Charter would require that Security Council approval should be sought.⁵⁵

The authorization of the use of force by the Security Council even in case of self-defense would increase transparency and the legitimacy of the right to self-defense.

D. JUS IN BELLO

To date, armed drones are not prohibited weapons under international law. The weapons normally deployed from armed drones, guided bombs and so forth, are conventional weapons that are also not prohibited under international humanitarian law.⁵⁶ As in case of *jus ad bellum*, there is no specific law of *jus in bello* that applies in the case of armed drones. When they are used in armed conflicts, the rules of international humanitarian law and international human rights law apply to them. If they are used in a context other than armed conflict, the domestic laws of law enforcement and international human rights law still apply to the use of armed drones.⁵⁷ This dichotomy also exists for the so-called targeted killing that armed drones carry out.⁵⁸ Namely, drones may commit targeted killings both in peacetime and during an armed conflict,⁵⁹ and the applicable law is different depending on the situation.⁶⁰ Moreover, international human rights law may also be applied to the deployment of armed drones in an armed conflict, where necessary.⁶¹

⁵⁴ *Heyns Report*, *supra* note 22, ¶ 88; *Schmitt*, *supra* note 10, at 317.

⁵⁵ *Alston Report*, *supra* note 7, ¶ 40.

⁵⁶ *CAVV*, *supra* note 30, at 20.

⁵⁷ *Alston Report*, *supra* note 7, ¶ 31.

⁵⁸ The term “targeted killing” has not yet been defined by international law. *Id.* ¶ 7.

⁵⁹ *Id.* ¶ 8.

⁶⁰ *See id.* ¶¶ 28–36.

⁶¹ *Id.* ¶ 29.

Importantly, article 36 of the Additional Protocol I to the Geneva Conventions regulates new weapons, such as armed drones. Article 36 stipulates:

In the study, development, acquisition or adoption of a new weapon, means or method of warfare, a High Contracting Party is under an obligation to determine whether its employment would, in some or all circumstances, be prohibited by this Protocol or by any other rule of international law applicable to the High Contracting Party.⁶²

This obligation applies to countries that manufacture as well as purchase weapons.⁶³ Although neither the United States nor Israel is a party to Additional Protocol I,⁶⁴ the Additional Protocol has 174 state parties, including China.⁶⁵ It is said that the states that reportedly possess drones have not made public their own analyses of the legality of armed drones.⁶⁶

There are four important principles in international humanitarian law, which apply to the deployment of armed drones in armed conflicts, and they are all related: (1) “the rule of precautions in attacks,” (2) the rule on distinction, (3) the rule on proportionality, and (4) the rule of “prohibition on using means or methods of warfare that are of a nature to cause superfluous injury or unnecessary suffering.”⁶⁷

The rule of precautions in attacks states that there is an obligation to take constant care and/or take precautions to avoid or minimize incidental civilian losses; this is described in Rule 15 of the Customary Rules of International Humanitarian Law, identified by the International Committee of the Red Cross as follows: “In the conduct of military operations, constant care must be taken to spare the civilian

⁶² Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I) art. 36, June 8, 1977, 1125 U.N.T.S. 3 [hereinafter Additional Protocol I].

⁶³ Int’l Comm. of the Red Cross, *Commentaries on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949*, para. 1473 (1987).

⁶⁴ Only Israel, the United Kingdom, and the United States are reported to have launched drone strikes against their adversaries. Peter Bergen & Jennifer Rowland, *A Dangerous New World of Drones*, CNN (Oct. 8, 2012, 5:13 AM) <http://www.cnn.com/2012/10/01/opinion/bergen-world-of-drones/>.

⁶⁵ For ratification status, see *Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I)*, 8 June 1977, INT’L COMMITTEE FOR RED CROSS, https://www.icrc.org/applic/ihl/ihl.nsf/States.xsp?xp_viewStates=XPages_NORMStatesParties&xp_treatySelected=470 (last visited Nov. 11, 2014).

⁶⁶ Casey-Maslen, *supra* note 11, at 601.

⁶⁷ *Id.* at 606.

population, civilians and civilian objects. All feasible precautions must be taken to avoid, and in any event to minimise, incidental loss of civilian life, injury to civilians and damage to civilian objects.”⁶⁸ This rule is recognized as a “norm of customary international law applicable [to] both international and non-international armed conflicts.”⁶⁹ This rule is codified in article 57(a) of Additional Protocol I, “to which no reservations have been made.”⁷⁰

Whether armed drones fulfill the rule of “precautions” is a contentious and divisive claim. For instance, one academic points out that a video feed from a modern drone is in real-time; therefore, “the absence of civilians close to the target can be monitored until the last few minutes or even seconds before action is taken.”⁷¹ Moreover, armed drones are sometimes operated under monitored conditions by nearby military forces, as they have been on Afghan soil.⁷² Except for Hellfire missiles using a thermobaric warhead, most missiles launched from armed drones “are believed to have a smaller blast radius than other conventional munitions.”⁷³ The Special Rapporteur of the Promotion and Protection of Human Rights and Fundamental Freedoms while Countering Terrorism also concurred with such observations and held, “If used in strict compliance with the principles of humanitarian law, they can reduce the risk of civilian casualties by significantly improving overall situational awareness.”⁷⁴ Thus, for those who believe that utilization of armed drones fulfills the rule of precautions, drone technology offers an effective precautionary measure with little to no risk to pilots, which also allows for the prior assessment of targets.⁷⁵

Although it is true that no human lives are endangered on the side of the drone-flying state,⁷⁶ the precision of aiming at a target with an

⁶⁸ JEAN-MARIE HENCKAERTS & LOUISE DOSWALD-BECK, CUSTOMARY INTERNATIONAL HUMANITARIAN LAW, VOL. 1: RULES 51 (2009).

⁶⁹ *Id.*

⁷⁰ *Id.*

⁷¹ Casey-Maslen, *supra* note 11, 607.

⁷² *Id.*

⁷³ *Id.*

⁷⁴ Special Rapporteur on the Promotion and Protection of Human Rights and Fundamental Freedoms While Countering Terrorism, *Third Rep. on the Promotion and Protection of Human Rights and Fundamental Freedoms While Countering Terrorism*, transmitted by Note of the Secretary-General, ¶ 28, UN Doc. A/68/389 (Sept. 18, 2013) (by Ben Emmerson) [hereinafter *Emmerson Report*].

⁷⁵ Frederik Rosén, *Extremely Stealthy and Incredibly Close: Drones, Control and Legal Responsibility*, 18 J. CONFLICT & SEC. L. 1, 2 (2013).

⁷⁶ *Id.* at 17.

armed drone⁷⁷ should not be overestimated. More than a few civilians have lost their lives, and friendly fire deaths have occurred among U.S. military personnel as a result of U.S. drone attacks.⁷⁸ Notably, the United Nations Special Rapporteur on the Promotion and Protection of Human Rights and Fundamental Freedoms while Countering Terrorism noted the following in his interim report to the General Assembly on the use of remotely-piloted aircraft in counter-terrorism operations: “the Special Rapporteur has identified 33 sample remotely piloted aircraft strikes that appear to have resulted in civilian casualties.”⁷⁹

One must note that the rule of distinction applies to armed drones. This principle is the most fundamental of the four principles and applicable to both international and non-international armed conflicts.⁸⁰ It prohibits states from employing “an indiscriminate means of warfare, that is, a weapon or weapons system [that] cannot be directed at a lawful target or the effects of which cannot be controlled.”⁸¹ Only lawful military targets and civilians participating directly in hostilities may be lawfully targeted.⁸² This principle of distinction is a customary rule of international humanitarian law, as stated in Common Article 3 of the Geneva Conventions of 1949, article 51(4)(b) of Additional Protocol I, and article 13(3) of Additional Protocol II.

Non-state actors in a non-international conflict become a complicated issue when states must distinguish combatants from civilians and must decide which people are civilians participating directly in hostilities under the principle of distinction. The ICRC Interpretative Guidance on the Notion of Direct Participation in Hostilities under International Humanitarian Law asserts that in a non-international armed conflict an organized group of a non-state party can be militarily targeted if they meet the criteria of performing a

⁷⁷ This is also a matter of collateral damage. Schmitt points out that because “armed drones employ very accurate weapons enhances the likelihood of a successful strike, thereby limiting the need for a restrike on the target, which could risk further collateral damage.” Schmitt, *supra* note 10, at 314.

⁷⁸ Casey-Maslen, *supra* note 11, at 607.

⁷⁹ *Emmerson Report*, *supra* note 74, ¶ 21.

⁸⁰ Blank, *supra* note 17, at 680–90 (citing Prosecutor v. Tadic, Case No. IT-94-1-I, Decision on Defence Motion for Interlocutory Appeal on Jurisdiction, ¶¶ 111, 127 (Int’l Crim. Trib. for the Former Yugoslavia Oct. 2, 1995)).

⁸¹ Schmitt, *supra* note 10, at 321.

⁸² *Id.* at 323.

“continuous combat function” (CCF).⁸³ Such an approach has been criticized by Professor Philip Alston, the Special Rapporteur of Extrajudicial, Summary or Arbitrary Executions, since the CCF category is contrary to the wording of treaty language and would raise the risk of erroneously targeting someone who may have disengaged from his or her previous function.⁸⁴ This problem is the result of states failing to disclose their criteria for Direct Participation in Hostilities (DPH).⁸⁵ This “leaves open the likelihood” of states being able to “expand their concept of [DPH] beyond permissible boundaries.”⁸⁶ Failing to make an appropriate distinction during an attack would render the attack unlawful and could constitute evidence of a war crime.⁸⁷ Here, again, the precision of drone attacks and the ability of armed drones to discriminate are at issue. Therefore, it may be an oversimplification to say that the legal question is not the legality of the weapon system, but the legal status of the target.⁸⁸ Eventually, the legality of collateral damage depends on determinations made according to the rule of proportionality under international humanitarian law.

The principle of proportionality applies to the deployment of armed drones when harm to civilians cannot be avoided. Rule 14 of the Customary Rules of International Humanitarian Law, identified by the ICRC, describes this principle as follows: “Launching an attack which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated, is prohibited.”⁸⁹ This rule is a norm of customary international law applicable in both international and non-international armed conflicts.⁹⁰ The principle of proportionality in attacks is codified in article 51(5)(b) of Additional Protocol I and repeated in articles 57(2)(a)(iii) and 57(2)(b).⁹¹ Although the rule of proportionality is not

⁸³ NILS MELZER, INT’L COMM. OF THE RED CROSS, INTERPRETATIVE GUIDANCE ON THE NOTION OF DIRECT PARTICIPATION IN HOSTILITIES UNDER INTERNATIONAL HUMANITARIAN LAW 27 (2009).

⁸⁴ *Alston Report*, *supra* note 7, ¶ 66.

⁸⁵ *Id.* ¶ 68.

⁸⁶ *Id.*

⁸⁷ Rome Statute of the International Criminal Court, art. 8, para. 2, subsecs. (b)(i)–(iii), (e)(i)–(iii), July 17, 1998, 2187 U.N.T.S. 3 [hereinafter Rome Statute].

⁸⁸ Schmitt, *supra* note 10, at 322.

⁸⁹ HENCKAERTS & DOSWALD-BECK, *supra* note 68, at 46.

⁹⁰ *Id.*

⁹¹ Additional Protocol I, *supra* note 62, arts. 51(5)(b), 57(2)(a)(iii), 57(2)(b).

mentioned in either Common Article 3 of the Geneva Conventions or Additional Protocol I, this principle is contained in article 3(8) of Amended Protocol II to the Convention on Certain Conventional Weapons.⁹² According to the ICJ, respect for the environment is one of the elements to be taken into account under this principle.⁹³

The question for the principle of proportionality is what constitutes excessive damage to civilians and/or civilian objects. However, states have their own assessments of what is proportionate and excessive damage in this respect.⁹⁴ Measuring proportionality is also complicated by the secrecy of armed drone operations.⁹⁵ For example, the involvement of the CIA in lethal counter-terrorism operations by the United States in Pakistan and Yemen “created an almost insurmountable obstacle to transparency [The CIA] operates on the basis of neither confirming nor denying its operations.”⁹⁶ Accordingly, there is a lack of data transparency related to the number of civilian casualties inflicted through attacks of armed drones from the side of deploying states.⁹⁷

Lastly, there is a customary rule of prohibition on using means or methods of warfare that are of a nature to cause superfluous injury or unnecessary suffering, the rule being applicable in both international and non-international armed conflicts.⁹⁸ This rule is prescribed in Additional Protocol I, and its violation constitutes a war crime.⁹⁹ States are prohibited from using any means or methods that cause “a harm greater than that unavoidable to achieve legitimate military objectives.”¹⁰⁰ The following weapons have been cited in practice as causing unnecessary suffering so that states should refrain from loading them onto drones: lancers or spears with a barbed head, serrated-edged bayonets, expanding

⁹² Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices as amended on 3 May 1996 (Protocol II as amended on 3 May 1996) annexed to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons which may be deemed to be Excessively Injurious or to have Indiscriminate Effects, art. 3, para. 8, May 3, 1996, 2048 U.N.T.S. 133.

⁹³ Nuclear Weapon Advisory Opinion, *supra* note 45, ¶ 30.

⁹⁴ Casey-Maslen, *supra* note 11, at 613.

⁹⁵ *Emmerson Report*, *supra* note 74, ¶ 41.

⁹⁶ *Id.* ¶ 46.

⁹⁷ *Id.* ¶ 47.

⁹⁸ HENCKAERTS & DOSWALD-BECK, *supra* note 68, at 237.

⁹⁹ Additional Protocol I, *supra* note 62, art. 35, para. 2.

¹⁰⁰ Nuclear Weapon Advisory Opinion, *supra* note 45, ¶ 78.

bullets, explosive bullets, poison and poisoned weapons, biological and chemical weapons, and nuclear weapons.¹⁰¹

Even though the aforementioned principles are all related to how to use an armed drone properly in accordance with international humanitarian law, the functions of the drones themselves are still problematic. Namely, “the accuracy of targeting intelligence is critical to the proper application of the principles of distinction, proportionality, and precaution.”¹⁰²

E. APPLICABILITY OF INTERNATIONAL HUMAN RIGHTS LAW IN AN ARMED CONFLICT

The principle that international human rights law continues to apply during armed conflicts as a complement to international humanitarian law is now one of the established tenets of international law.¹⁰³ Under this principle, the right to life is non-derogable even in case of an exigency.¹⁰⁴ There is an increased influence of international human rights law on the content of *jus in bello*.¹⁰⁵ Awareness of human rights all over the world eventually led to a total ban on land mines in 1997 and cluster munitions in 2008 by multilateral treaties.¹⁰⁶ These inhumane weapons violate a number of basic human rights, including the right to life, the right to food, and the freedom of movement.¹⁰⁷ The victims of inhumane weapons, especially of landmines and explosive remnants, are expected to be protected by international human rights law, especially in

¹⁰¹ HENCKAERTS & DOSWALD-BECK, *supra* note 68, at 243–44.

¹⁰² *Emmerson Report*, *supra* note 74, ¶ 73.

¹⁰³ Nuclear Weapon Advisory Opinion, *supra* note 45, ¶ 25; Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory, Advisory Opinion, 2004 I.C.J. 136, ¶ 106 (July 9); Armed Activities on the Territory of the Congo (Dem. Rep. Congo v. Uganda), Judgment, 2005 I.C.J. 168, ¶ 216 (Dec. 19).

¹⁰⁴ See International Covenant on Civil and Political Rights art. 4, Dec. 19, 1966, 999 U.N.T.S. 171; Inter-American Convention on Human Rights art. 27, para. 2, Nov. 21, 1969, 1144 U.N.T.S. 143. The European Convention on Human Rights permits derogations from the right to life, but only within the limits of lawful acts of war. See Convention for the Protection of Human Rights and Fundamental Freedoms art. 15, para. 2, Nov. 4, 1950, 213 U.N.T.S. 221.

¹⁰⁵ Casey-Maslen, *supra* note 11, at 623.

¹⁰⁶ Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction, Sept. 18, 1997, 2056 U.N.T.S. 211; Convention on Cluster Munitions, May 30, 2008, 2688 U.N.T.S. 35.

¹⁰⁷ Universal Declaration of Human Rights, G.A. Res. 217 (III) A, U.N. Doc. A/RES/217(III), arts. 3, 13(1), 25(1) (Dec. 10, 1948).

accordance with the Convention on the Rights of Persons with Disabilities of 2006.¹⁰⁸ Article 11 stipulates that:

States Parties shall take, in accordance with their obligations under international law, including international humanitarian law and international human rights law, all necessary measures to ensure the protection and safety of persons with disabilities in situations of risk, including situations of armed conflict, humanitarian emergencies and the occurrence of natural disasters.¹⁰⁹

F. PEACETIME USE OF DRONES: LAW ENFORCEMENT

States may wish to use armed drones in domestic law enforcement contexts, including the lethal use of force.¹¹⁰ “The legality of a killing outside the context of armed conflict is governed by human rights standards.”¹¹¹ International human rights law treaties require that no one shall be deprived of his or her own life arbitrarily,¹¹² with a few exceptions: fulfillment of the death penalty,¹¹³ lawful action taken in defense of any person from unlawful violence, lawful arrest, prevention of the escape of a person lawfully detained, and lawful action taken to quell a riot or insurrection.¹¹⁴ Lawful law enforcement in light of international human rights law should be in accordance with the principles of necessity, and proportionality ought to be respected.¹¹⁵ Under the proportionality principle, state killing is legal only if it is required to protect life (making lethal force proportionate),¹¹⁶ and under

¹⁰⁸ See Convention on the Rights of Persons with Disabilities, Dec. 13, 2006, 2515 U.N.T.S. 3.

¹⁰⁹ *Id.* art. 11.

¹¹⁰ *Heyns Report*, *supra* note 22, ¶¶ 12–14.

¹¹¹ *Alston Report*, *supra* note 7, ¶ 31.

¹¹² Convention for the Protection of Human Rights and Fundamental Freedoms, *supra* note 104, art. 2(1); International Covenant on Civil and Political Rights, *supra* note 104, art. 6(1); Inter-American Convention on Human Rights, *supra* note 104, art. 4(1); African Charter on Human and Peoples’ Rights art. 4, Oct. 21, 1981, 21 I.L.M. 58.

¹¹³ Convention for the Protection of Human Rights and Fundamental Freedoms, *supra* note 104, art. 2(1); International Covenant on Civil and Political Rights, *supra* note 104, art. 6(2); Inter-American Convention on Human Rights, *supra* note 104, art. 4(2).

¹¹⁴ Convention for the Protection of Human Rights and Fundamental Freedoms, *supra* note 104, art. 2.

¹¹⁵ Casey-Maslen, *supra* note 11, at 617.

¹¹⁶ Basic Principles on the Use of Force and Firearms by Law Enforcement Officials, art. 9, U.N. Doc. A/CONF.144/28/Rev.1 (Sept. 7, 1990) (“Whenever the lawful use of force and firearms is unavoidable, law enforcement officials shall: (a) Exercise restraint in such use and act in proportion to the seriousness of the offence and the legitimate objective to be achieved . . .”) [hereinafter Basic Principles].

the necessity principle, state killing is legal only if there are no other means, such as capture or non-lethal incapacitation, for preventing the threat to life (making lethal force necessary).¹¹⁷ The proportionality principle limits the permissible level of force used by armed drones, and the necessity requirement imposes an obligation to minimize the level of force used through the employment of warnings before an attack by armed drones.¹¹⁸

In a peacetime context, the practice of targeted killing causes considerable controversy.¹¹⁹ Under any circumstance, states are prohibited from conducting a targeted killing in light of the principles of proportionality and necessity of international human rights law.¹²⁰ As the Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions suggests, if the specific objective of targeted killing is confined to the use of lethal force, targeted killing is never allowed in peacetime law enforcement.¹²¹

Law enforcement by means of armed drones in the territory of another state also raises questions of legality under international human rights law, and there is concern about whether states can be held accountable for their actions outside their own territories.¹²² Legal action involving less than lethal means in the territory of another state may be taken outside the context of active hostilities in the case of fulfilling the requirements of anticipatory self-defense; that is, the requirement of necessity when threat is instant, overwhelming, and leaves no choice of means or moment of deliberation.¹²³ When “intentional killing is the only way to protect against an imminent threat to life, [killing] may be used.”¹²⁴ “States cannot consent to the violation of their obligations under international humanitarian law or international human rights law.”¹²⁵

¹¹⁷ *Alston Report*, *supra* note 7, ¶ 32. See also Basic Principles, *supra* note 116, art. 9 (“In any event, intentional lethal use of firearms may only be made when strictly unavoidable in order to protect life.”).

¹¹⁸ *Alston Report*, *supra* note 7, ¶ 32.

¹¹⁹ *Id.* at ¶¶ 31–33.

¹²⁰ The UN Special Rapporteurs agree that, outside situations of armed conflict, international human rights law prohibits almost any counter-terrorism operation that has the infliction of deadly force as its sole or main purpose. See *Alston Report*, *supra* note 7, ¶¶ 32–33; *Emmerson Report*, *supra* note 74, ¶ 24.

¹²¹ *Alston Report*, *supra* note 7, ¶ 33.

¹²² *Heyns Report on LARs*, *supra* note 21, ¶ 81.

¹²³ *Alston Report*, *supra* note 7, ¶ 86.

¹²⁴ *Heyns Report*, *supra* note 22, ¶ 35.

¹²⁵ *Id.* ¶ 38.

International human rights treaty obligations can apply in principle to the conduct of a state outside its territory.¹²⁶

G. ACCOUNTABILITY ISSUES

If states use drones in violation of international law, especially international humanitarian law and/or international human rights law, that act incurs state responsibility under international law.¹²⁷ In the contemporary world, not only states but also non-state actors may acquire drone techniques and possess armed drones.¹²⁸ Non-state actors are less likely to abide by regulatory regimes for control and transparency.¹²⁹ Non-state actors should observe at least their own national domestic laws, since they are subject to their government's sovereignty, such as criminal laws. Additionally, other domestic laws, such as third-state domestic laws, might apply to non-state actors if the deployment is operated in a third state or affects a third state.¹³⁰

In addition to state responsibility for the unlawful use of armed drones, there may be individual criminal responsibility for unlawful drone strikes. The use of UAVs "mudd[ies] the waters surrounding war crimes."¹³¹ Ambiguous accountability for the use of UAVs mainly results from both the lack of transparency of the facts relating to UAVs, including their existence and the outcomes of their deployments, and the unmanned nature and remoteness of UAVs in relation to a soldier and his/her commander controlling them. A lack of appropriate transparency and accountability concerning the deployment of drones undermines the rule of law and may threaten international security.¹³² For these reasons, the greatest obstacle to an evaluation of the civilian impact of an armed drone strike is the lack of transparency, which makes it extremely difficult to objectively assess claims of precision targeting.¹³³

¹²⁶ Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory, Advisory Opinion, 2004 I.C.J. 136, ¶ 109 (July 9).

¹²⁷ Heyns Report on LARs, *supra* note 21, ¶ 75.

¹²⁸ See generally Henderson, *supra* note 31, at 133–73.

¹²⁹ Heyns Report on LARs, *supra* note 21, ¶ 88.

¹³⁰ Henderson, *supra* note 31, at 136.

¹³¹ SINGER, *supra* note 26, at 389.

¹³² Heyns Report on LARs, *supra* note 21, ¶¶ 110–11.

¹³³ Emmerson Report, *supra* note 74, ¶ 41.

As for individual criminal responsibility, the question is: who bears the responsibility?¹³⁴ UAVs, including armed drones and LARs, involve many levels of decisions about deployment, and this layer of decision-making results in a potential accountability gap or vacuum.¹³⁵ The question becomes more difficult in the case of LARs, since such robots act without moral agency and cause a deprivation of life that would normally require accountability, had a human made the decision.¹³⁶ The possible candidates for suspicion in unlawful attacks by armed drones may be the operator of the drone, the spotters on the ground, those who designate the target as a military objective, and the lawyer who authorizes the strike.¹³⁷ Even though accountability for LARs is still a hypothetical question,¹³⁸ candidates for legal responsibility of illegal attacks conducted through LARs include the software programmer, those who build or sell hardware, military commanders, subordinates who deploy these systems, and political leaders.¹³⁹ The appropriate attribution of responsibility forms another layer of the issue. Are those who become involved in an unlawful attack by armed drones to be punished under a joint criminal enterprise, or are they better captured for aiding or abetting an unlawful attack?¹⁴⁰ These modes of criminal liability have been the least of the problems in this realm.

For civil liability, one author suggests a system of splitting responsibility between the potential candidates.¹⁴¹ He also suggests that responsibility for civil damages should be assigned to the programmers and the manufacturers by utilizing a scheme similar to strict liability, though national product liability laws remain untested with regard to robotics.¹⁴²

In addition to these substantive problems, there remains a technical problem for victims wishing to bring civil suits, since the concerned persons will need to bring a suit in a foreign country, given that drones and LARs are most often operated remotely.¹⁴³

¹³⁴ *Heyns Report on LARs*, *supra* note 21, ¶ 76.

¹³⁵ *Id.* ¶ 77.

¹³⁶ *Id.* ¶ 76.

¹³⁷ *Casey-Maslen*, *supra* note 11, at 624.

¹³⁸ *See Heyns Report on LARs*, *supra* note 21, ¶ 29 (“[T]heir use during armed conflict or elsewhere is not currently envisioned.”).

¹³⁹ *Id.* ¶ 77.

¹⁴⁰ *Casey-Maslen*, *supra* note 11, at 624.

¹⁴¹ *Heyns Report on LARs*, *supra* note 21, ¶ 81.

¹⁴² *Id.* ¶ 79.

¹⁴³ *Id.*

III. PRESENT USE AND MANUFACTURE OF DRONES AROUND THE WORLD

The United States is the most well known for deploying drones, but for better or worse, it is not the only country to do so. The exact number of countries deploying drones is unknown, but Brazil, China, Georgia, Hezbollah, Iran, Israel, Pakistan, Russia, Turkey and the United Kingdom reportedly possess drones.¹⁴⁴ Among these, however, only the United States, the United Kingdom, and Israel have armed drones that have been used in combat.¹⁴⁵ The US Government Accountability Office estimated that the number of countries with UAVs had nearly doubled in the seven years leading to the middle of 2012, and reported that at least seventy-six countries acquired a UAV system.¹⁴⁶ The UN Rapporteur also suggests that the number of states with the capacity to use drones “is likely to increase significantly in the near future.”¹⁴⁷

Drone attacks in the context of counter-terrorism operations have been recognized in Pakistan, Yemen, and Somalia by US military forces; in Afghanistan, Libya, and Iraq by both US and UK forces; and in Gaza by the Israel Defense Force.¹⁴⁸ During these operations, substantial civilian casualties were reported.¹⁴⁹ “There is an onus on any State using lethal force to account for civilian casualties,” and such a legal obligation is “an inherent part of [states’] obligations of accountability under international humanitarian law and international human rights law.”¹⁵⁰ The obligation is even stricter for the United Kingdom, a state party of the Statute of the International Criminal Court, since article 12(2) of the Statute prescribes that the International Criminal Court may exercise its jurisdiction complementary to jurisdictions of the state parties when the crime was committed on the territory of the state party, on board a vessel

¹⁴⁴ Exact data regarding which countries possess armed drones and UAVs is not known; Alston wrote that more than forty countries possess such technology. *Alston Report*, *supra* note 7, ¶ 27.

¹⁴⁵ Daniel Brunstetter & Megan Braun, *The Implications of Drones on the Just War Tradition*, 25 ETHICS & INT’L AFF. 337, 337 (2011).

¹⁴⁶ U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-12-536, NONPROLIFERATION: AGENCIES COULD IMPROVE INFORMATION SHARING AND END-USE MONITORING ON UNMANNED AERIAL AND VEHICLE EXPORTS 9–10 (2012).

¹⁴⁷ *Heyns Report*, *supra* note 22, ¶ 14.

¹⁴⁸ *Emmerson Report*, *supra* note 74, ¶¶ 29–40.

¹⁴⁹ *Id.*

¹⁵⁰ *Id.* ¶ 45.

or aircraft registered to the state party, and when the person accused of the crime is a national of the state party.¹⁵¹

IV. THE CASE OF JAPANESE LAWS AND UAVS

There is tension between China and Japan over Chinese drones flying over the disputed territory of the Senkaku/Diaoyu islands in the East China Sea. On September 9, 2013, a Chinese drone, seemingly for ISR purposes, was detected approaching the disputed Senkaku/Diaoyu islands.¹⁵² Immediately after the incident, the Japanese Air Self-Defense Force (ASDF) scrambled fighter jets.¹⁵³ The Japanese government approved the defense plan that the ASDF would shoot down a drone if the ASDF found it threatens people's lives and property, especially if it was seen approaching petrochemical complexes and atomic power plants in Japan.¹⁵⁴ The Chinese Minister of Defense reportedly considered that any attempts to shoot down Chinese drones over the Senkaku/Diaoyu islands would be considered an act of war.¹⁵⁵ In November 2013, China successfully made its first flight of a stealth drone named Sharp Sword.¹⁵⁶ Such introduction of the stealth drone by China created more tense bilateral relations.¹⁵⁷ However, there is a domestic legal limit to the use of force on the side of Japan, in addition to *jus ad bellum* of international law.¹⁵⁸

¹⁵¹ Rome Statute, *supra* note 87, art. 12(2). The United Kingdom ratified the Rome Statute on October 4, 2001. *States Parties – Chronological List*, INT'L CRIM. CT., http://www.icc-cpi.int/en_menus/asp/states%20parties/Pages/states%20parties%20_%20chronological%20list.aspx (last visited Nov. 11, 2014). Neither the United States nor Israel is a state party to the Rome Statute. *See id.*

¹⁵² *See* Shaun Waterman, *Drone War Heats Up Between China and Japan*, WASH. POST (Sept. 9, 2013), <http://www.washingtontimes.com/news/2013/sep/9/japan-dispatches-jets-drone-flies-disputed-islands/>.

¹⁵³ *Id.*

¹⁵⁴ *See Japan to Shoot Down Foreign Drones That Invade Its Airspace*, JAPAN TIMES (Oct. 20, 2013), <http://www.japantimes.co.jp/news/2013/10/20/national/japan-to-shoot-down-foreign-drones-that-invade-its-airspace/>.

¹⁵⁵ *Japan Will Stand Up to China, says PM Shinzo Abe*, BBC NEWS (Oct. 26, 2013, 11:51 ET), <http://www.bbc.co.uk/news/business-24684683>.

¹⁵⁶ Douglas Ernst, *China's 'Sharp Sword' Stealth Drone Takes Flight*, WASH. TIMES (Nov. 22, 2013), <http://www.washingtontimes.com/news/2013/nov/22/chinas-sharp-sword-stealth-drone-takes-flight/>.

¹⁵⁷ *See* Jonathan Kaiman & Justin McCurry, *Japan and China step up drone race as tension builds over disputed islands*, GUARDIAN, (Jan. 9, 2013, 11:50 EST), <http://www.theguardian.com/world/2013/jan/08/china-japan-drone-race>.

¹⁵⁸ *See* NIHONKOKU KENPŌ [KENPŌ] [CONSTITUTION], art. 9 (Japan), available at http://japan.kantei.go.jp/constitution_and_government_of_japan/constitution_e.html.

Any Japanese action towards a suspicious foreign drone flying over Japanese territory is limited to acts for defensive purposes.¹⁵⁹ Japan, without its own military force, is prohibited from waging any aggressive war.¹⁶⁰ In 1946, after the Second World War, Japan, under the Allied Powers' occupation, established a constitution that set forth pacifist principles.¹⁶¹ Article 9(1) renounces war as a means of settling international disputes.¹⁶² Japan is constitutionally prohibited from having an aggressive military force, only the Japan Self-Defense Forces.¹⁶³

Japan has thus far developed UAV technology for the purposes of civilian use. For example, on January 24, 2014, the Japan Aerospace Exploration Agency (JAXA) and the Japan Atomic Energy Agency (JAEA) reportedly succeeded with the test flight of a surveillance drone to measure radiation over the Fukushima nuclear plants, which were severely damaged after the tsunami of March 2011.¹⁶⁴ The surveillance drone is expected to resume full function by 2015.¹⁶⁵

Presently, the Japanese government plans to introduce the Global Hawk to play a role in the ASDF by the year 2015, especially in order to protect the Senkaku/Diaoyu islands from China.¹⁶⁶ In fact, the Defense Ministry has shown a compelling interest in the unmanned defense system. The Ministry requested 1.2 billion yen (\$12 million) to research an unmanned underwater vehicle and 200 million yen (\$2 million) to research UAVs as part of its 2015 fiscal budget.¹⁶⁷ The Ministry of

¹⁵⁹ See *id.*

¹⁶⁰ See *id.*

¹⁶¹ *Id.* pmbl., art. 9.

¹⁶² *Id.* art. 9(1) ("Aspiring sincerely to an international peace based on justice and order, the Japanese people forever renounce war as a sovereign right of the nation and the threat or use of force as means of settling international disputes.").

¹⁶³ *Id.* art. 9(2) ("In order to accomplish the aim of the preceding paragraph, land, sea, and air forces, as well as other war potential, will never be maintained. The right of belligerency of the state will not be recognized.").

¹⁶⁴ Maan Pamintuan-Lamorena, *Drones Used to Measure Radiation in Fukushima Nuclear Plant*, JAPAN DAILY PRESS (Jan. 27, 2014), <http://japandailypress.com/drones-used-to-measure-radiation-in-fukushima-nuclear-plant-2743074/>.

¹⁶⁵ For the details of new national defense program of Japan, see MINISTRY OF DEF., DEFENSE OF JAPAN 2014, at 144-70, (2014) (Japan), available at http://www.mod.go.jp/e/publ/w_paper/2014.html.

¹⁶⁶ Fumiaki Sonoyama, *Japan faces hurdles in plan to deploy drones*, ASAHI SHIMBUN (Sept. 5, 2013), http://ajw.asahi.com/article/behind_news/AJ201309050047.

¹⁶⁷ MINISTRY OF DEF., DEFENSE PROGRAMS AND BUDGET OF JAPAN: OVERVIEW OF FY2014 BUDGET REQUEST 6, 7, 30 (2013) (Japan), available at http://www.mod.go.jp/e/d_budget/pdf/251009.pdf.

Defense also plans to buy at least one ISR drone in fiscal year 2015.¹⁶⁸ Nonetheless, the Japanese Ministry of Defense would be confronted with the problem upon the deployment of unmanned surveillance, since the Japanese Civil Aeronautics Law defines aircraft as manned fixed-wing airplanes, helicopters, and other such vehicles.¹⁶⁹ In fact, neither the domestic laws of civil aviation nor international civil aviation law seem to be well prepared for integrating unmanned aircraft into global airspace.¹⁷⁰ Both domestic and international civil aviation law are waiting to regulate ISR drones for law enforcement purposes, including the clarification of measures to ensure safety.¹⁷¹

Although the Japanese attitude of assiduously catching up with and overtaking Chinese drone technology is quite understandable, from the viewpoint of both disarmament and international humanitarian law, such an arms race only jeopardizes international peace. In any case, Japan needs to use ISR drones and develop the technology for an armed drone, in accordance with existing customary rules of international humanitarian law and international human rights law applicable to drones. Article 98(2) of the Japanese Constitution stipulates: "The treaties concluded by Japan and established laws of nations shall be faithfully observed," while article 98(1) prescribes that, "This Constitution shall be the supreme law of the nation."¹⁷² Since Japan is a state party of the relevant international criminal law, international humanitarian law, and international human rights law, such as the Geneva Conventions and their additional Protocols, the Rome Statute of the International Criminal Court, and the International Covenant on Civil and Political Rights,¹⁷³ Japan needs to be in conformity with international obligations at the time of introduction of uninhabited vehicles. Simultaneously, Japan has to prepare the necessary domestic legislation

¹⁶⁸ See Sonoyama, *supra* note 166.

¹⁶⁹ See *id.* See also Kōkūhō [Civil Aeronautics Act], Law No. 231 of 1952, art. 2, para. 1 (Japan), translated in COMM. ON COMMERCE, 89TH CONG., AIR LAWS AND TREATIES OF THE WORLD, VOL. II, at 1440 (Comm. Print 1965). ("... any airplane, rotorcraft, glider and airship which can be used for air navigation with a person on board and any contrivance usable for air navigation which may be designated by cabinet order." (emphasis added)).

¹⁷⁰ Sonoyama, *supra* note 166; see also Convention on International Civil Aviation, Dec. 7, 1944, 61 Stat. 1180, 15 U.N.T.S. 295 [hereinafter Chicago Convention].

¹⁷¹ Sonoyama, *supra* note 166; Chicago Convention, *supra* note 170, art. 3.

¹⁷² Nihonkoku Kenpō [KENPŌ] [CONSTITUTION], art. 98 (Japan),

¹⁷³ See, e.g., Databases: Advanced Search, UNITED NATIONS TREATY COLLECTION, <https://treaties.un.org/Pages/AdvanceSearch.aspx?tab=SEARCH> (last visited Nov. 11, 2014).

preventing unnecessary excessive attacks and/or civilian casualties by the use of this new military technology.

V. CONCLUSION

Even though international law does not directly regulate either drones or LARs, it is an exaggeration to say there is a legal vacuum, or *lacunae*, of international law surrounding their regulation. There may be persistent legal uncertainties, especially with regard to the legal accountability incurred by their illegal use. However, the minimum legal obligation for states using armed drones and/or LARs are the principles reflected in customary rules of international humanitarian law and respect for the right to life, as well as the requirements of public conscience set forth in the famous Martens Clause.¹⁷⁴ While states have been allowed to use armed drones and LARs in both armed conflict and peacetime, states are not allowed to use them in a legal vacuum. Instead, armed drones and LARs are to be used in accordance with existing international law and domestic law.

At the end of February 2014, the United Nations and the European Parliament issued two reports on drones. On February 25, 2014, the European Parliament passed a resolution, by 534 votes to 49, calling for the adoption of a EU common position on the use of armed drones.¹⁷⁵ On March 11, Ben Emmerson, UN Rapporteur on the Promotion and Protection of Human Rights and Fundamental Freedoms While Countering Terrorism, also published his final report on the use of drones for the purpose of targeted killing.¹⁷⁶ While the UN report recognized substantial civilian casualties during the US military operations in Pakistan and Yemen, the European Parliament called on member states to oppose and ban the practice of extrajudicial killings,

¹⁷⁴ Convention With Respect To The Laws and Customs of War on Land (Hague II), pmbl., July 29, 1899, 32 U.S.T. 1803, T.S. No. 403 ("Until a more complete code of the laws of war is issued, the High Contracting Parties think it right to declare that in cases not included in the Regulations adopted by them, populations and belligerents remain under the protection and empire of the principles of international law, as they result from the usages established between civilized nations, from the laws of humanity, and the requirements of the public conscience.").

¹⁷⁵ *Resolution*, UNITED NATIONS HUM. RTS., <http://unsrct-drones.com/report/192> (last visited Nov. 11, 2014).

¹⁷⁶ See Special Rapporteur on the Promotion and Protection of Human Rights and Fundamental Freedoms While Countering Terrorism, *Third Rep. on the Promotion and Protection of Human Rights and Fundamental Freedoms While Countering Terrorism*, UN Doc. A/HRC/25/59 (Mar. 11, 2014) (by Ben Emmerson) [hereinafter *Emmerson Final Report*].

and to include armed drones in relevant European and international arms control regimes.¹⁷⁷

Overall, the greatest obstacle to an evaluation of drone technology is the lack of transparency, which makes it extremely difficult to assess claims of precision targeting objectively. On March 28, the UN Human Rights Council approved a resolution sponsored by Pakistan that “[c]alls upon States to ensure transparency in their records on the use of remotely piloted aircraft or armed drones and to conduct prompt, independent and impartial investigations whenever there are indications of a violation to international law caused by their use.”¹⁷⁸

Unmanned systems are doubtless a constantly advancing field. Nonetheless, states should never use such technology for indiscriminate killing. Developing unmanned systems requires a high standard of ethics. World governments must reevaluate how to humanize armed conflict through dehumanized systems before dehumanizing the world by means of inhumane technology.

¹⁷⁷ See *Emmerson Final Report*, *supra* note 176, ¶¶ 31, 47–60.

¹⁷⁸ Human Rights Council Res. 25/22, Ensuring use of remotely piloted aircraft or armed drones in counter-terrorism and military operations in accordance with international law, including international human rights and humanitarian law, 25th Sess., Apr. 15, 2014, U.N. Doc. A/HRC/RES/25/22, ¶ 2 (Apr. 15, 2014).