Nebraska Law Review

Volume 93 | Issue 4 Article 7

2015

Lethal Autonomous Robots: Are They Legal under International Human Rights and Humanitarian Law?

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Comment*

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I. THE RISE OF LETHAL AUTONOMOUS ROBOTS

"Drone" has become a household word in the United States and throughout much of the world. It has found its way into the collective imagination of society and has been frequently depicted in Hollywood films.[1] More troublingly, drones are increasingly familiar to citizens of foreign countries, who must endure their constant presence and attacks.[2] A drone is a remotely operated aerial vehicle, which can be used for a variety of purposes, but is most commonly known for its military applications.[3] The more technical term is Unmanned Aerial Vehicle (UAV), generally, and Unmanned Combat Aerial Vehicle (UCAV) for military applications. However, these names can be misleading since they are still "manned" in the sense that they are operated by human beings remotely. The most well-known UCAVs are the U.S. Military's MQ-1 Predator, capable of delivering a payload of two Hellfire missiles, and the MQ-9 Reaper, capable of delivering a

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1. *See, e.g.*, EAGLE EYE (DreamWorks Pictures 2008); THE BOURNE LEGACY (Universal Pictures 2012).
2. *Drones in Pakistan Traumatise Civilians, US Report Says*, BBC NEWS (Sept. 25, 2012, 9:02 AM), http://www.bbc.co.uk/news/world-asia-19704981, *archived at* http://perma.unl.edu/F64P-3JW9.
3. Philip Alston, *Lethal Robotic Technologies: The Implications for Human Rights and International Humanitarian Law*, 21 J.L. INF. & SCI. 35, 35 (2013).

payload of fourteen Hellfire missiles.[4] The use of the Predator and Reaper has not been without controversy and has provided many challenges for International Humanitarian Law (IHL) and International Human Rights Law (IHRL).[5] Their use in combat has developed at an incredible rate. At the start of the Iraq invasion in 2003, the United States had fewer than ten UCAVs. It now has more than 7,000, and those are just the machines in the sky.[6] It also has more than 12,000 Unmanned Ground Vehicles (UGVs) currently in use.[7] The U.S. Navy uses robotic motorboats and submersibles, called Unmanned Surface Vehicles (USVs) and Unmanned Undersea Vessels (UUVs).[8] Although UCAVs, UGVs, USVs, and UUVs have raised several novel and difficult moral and legal issues, the situation is about to grow much more complex.

More than fifty governments are now developing robots that can function autonomously and with lethal force.[9] In fact, there are several already in use by militaries around the world.[10] For example, Samsung, a South Korean company, has developed a robot for use in the heavily guarded Demilitarized Zone (DMZ) between North and South Korea.[11] Called the Techwin, it is essentially an armed turret with heat-sensing as well as audio- and video-surveillance technology. It can detect a human from 500 meters away and alert its human operator, who then decides whether or not to allow the robot to engage with lethal force.[12] The Techwin can also operate autonomously to seek, acquire, and engage targets, but the South Korean government has decided as a matter of policy not to use them in this manner.[13]

4. Noel Sharkey, *Killing Made Easy: From Joysticks to Politics*, *in* ROBOT ETHICS: THE ETHICAL AND SOCIAL IMPLICATIONS OF ROBOTICS 111, 114 (Patrick Lin et al. eds., 2012).

5. Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions, *Report of the Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions*, *delivered to the General Assembly*, *transmitted by Note of the Secretary-General*, U.N. Doc. A/68/382 (Sept. 13, 2013) [hereinafter U.N. Extrajud. Execs. Report].

6. David Akerson, *The Illegality of Offensive Lethal Autonomy*, *in* INTERNATIONAL HUMANITARIAN LAW AND THE CHANGING TECHNOLOGY OF WAR 65, 65 (Dan Saxon ed., 2013).

7. *Id.*

8. *Id.* at 66–67.

9. *Id.* at 67.

10. Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions, *Report of the Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions*, ¶¶ 8–9, *delivered to the Human Rights Council*, U.N. Doc. A/HRC/23/47 (Apr. 9, 2013) [hereinafter U.N. LAR Report].

11. Aaron Saenz, *Armed Robots Deployed by South Korea in Demilitarized Zone*, SINGULARITYHUB (Jul. 25, 2010, 4:58 PM), http://singularityhub.com/2010/07/25/armed-robots-deployed-by-south-korea-in-demilitarized-zone-on-trial-basis/, *archived at* http://perma.unl.edu/8BC5-LWF3.

12. *Id.*

13. *Id.*

The Techwin is an example of what is called "man on the loop" robotics, meaning that the robot functions autonomously but a human is overseeing its operation and able to stop or dictate its behavior at any given moment.[14] This can be contrasted with "man in the loop" robotics, which denotes a robot that is completely controlled by a human being.[15] UCAVs such as the Predator and Reaper are examples of this latter category. Finally, there are man out of the loop robots, which function entirely without human intervention or control.[16] With this type of robot, the decision of whether or not to kill is made entirely by the machine itself. Governments, in particular the U.S. government, are spending a tremendous amount of money to develop Lethal Autonomous Robots (LARs), which would take humankind out of the loop.[17]

The U.S. Department of Defense has increasingly focused on developing robot technology for use in war.[18] The Pentagon's budget up to September 30, 2013 allocated $6.04 billion for autonomous aircraft and $261 million for autonomous ground vehicles alone.[19] The Defense Advanced Research Projects Agency (DARPA) has unveiled a new humanoid robot called the ATLAS, which it is using as the basis for the DARPA Robotics Challenge.[20] The challenge brings together a diverse group of roboticists to develop programming for the ATLAS, which could be used for a variety of functions, including military.[21] The U.S. Air Force has made it a goal to develop air systems with "fully autonomous capability, swarming, and Hypersonic technology to put the enemy off balance by being able to almost instantaneously create effects throughout the battlespace."[22] The U.S. Navy has developed and currently uses an autonomous, ship-based missile defense system called the "Phalanx," a radar-guided gun system that can detect and destroy incoming missiles, artillery, or enemy aircraft.[23] A similar device, called the "Counter Rocket, Artillery and Mortar" (C-

14. Akerson, *supra* note 6, at 71.
15. *Id.*
16. *Id.* at 71–72.
17. Sharkey, *supra* note 4, at 115.
18. Akerson, *supra* note 6, at 68.
19. John Markoff, *Army Lags in Race for Robot Vehicles*, N.Y. TIMES, Sept. 22, 2013, http://www.nytimes.com/2013/09/24/science/military-lags-in-push-for-robotic-ground-vehicles.html?_r=0&adxnnl=1&adxnnlx=1382281885-A3Sx07CHLwLyjdP8nbrWbA, *archived at* http://perma.unl.edu/5Q6U-N7CZ.
20. Press Release, DARPA, DARPA's ATLAS Robot Unveiled (July 11, 2013), *archived at* http://perma.unl.edu/U7ST-QB8K.
21. *See* DARPA ROBOTICS CHALLENGE, http://www.theroboticschallenge.org/ (last visited Oct. 27, 2014), *archived at* http://perma.unl.edu/9WX5-MUMG.
22. U.S. AIR FORCE, UNITED STATES AIR FORCE UNMANNED AIRCRAFT SYSTEMS FLIGHT PLAN 2009–2047, at 50 (2009), *archived at* http://perma.unl.edu/Z7ZE-7JJU.
23. Akerson, *supra* note 6, at 72.

RAM) system, uses a laser to destroy incoming enemy fire.[24] The U.S. Navy has also commissioned development of an UCAV that can autonomously launch and land from an aircraft carrier as well as autonomously navigate.[25]

Other countries have also developed and deployed autonomous weapons systems (AWS), the Israeli Iron Dome air defense system being a notable example.[26] The United Kingdom has developed an autonomous UCAV prototype called the Taranis, which can seek out and identify enemies but cannot engage until authorized by a human.[27]

The impetus behind all of this innovation is the way armed confrontation has changed since the attacks of September 11, 2001. Jonathan David Herbach, a lecturer in public international law and researcher at the Centre for Conflict and Security Law at Utrecht University, points this out:

> The increasing deployment of unmanned weapon systems results not only from technological development, but also from the changing nature of 21st century armed conflicts. Targeted enemies are more mobile, more difficult to identify, and are often ensconced among the civilian population within populated urban areas . . . .[28]

This explains why UCAVs have become so pervasive in the "War on Terror." The ability to fly high over civilian populations and monitor people's movements makes it easier to identify potential enemies and carry out an attack without having to risk putting a soldier in the line of fire. However, discriminating friend from foe via a video feed from thousands of feet in the air is difficult, and there are many reports of civilians being killed.[29]

While all of the technology currently being used is either man in the loop or man on the loop, there are several factors pushing toward the implementation of man out of the loop technology (i.e., LARs), as two professors at the U.S. Naval War College have pointed out. "Operational realities will likely drive the United States to discard its practice of keeping a human in the loop . . . ."[30] First, keeping humans

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24. U.N. LAR Report, *supra* note 10, ¶ 45.
25. *Id.*
26. RAFAEL, IRON DOME: DUAL-MISSION COUNTER ROCKET, ARTILLERY AND MORTAR (C-RAM) AND VERY SHORT RANGE AIR DEFENSE (V-SHORAD) SYSTEM, *archived at* http://perma.unl.edu/8AVW-5RHL.
27. U.N. LAR Report, *supra* note 10, ¶ 45.
28. Jonathan David Herbach, *Into the Caves of Steel: Precaution, Cognition and Robotic Weapon Systems Under the International Law of Armed Conflict*, AMSTERDAM L.F., Summer 2012, at 3, 4.
29. *See, e.g.*, David Zucchino, *Karzai Accuses U.S. of Civilian Deaths in November Drone Strike*, CHI. TRIB., Dec. 5, 2013, http://www.chicagotribune.com/news/nationworld/la-fg-wn-karzai-civilian-deaths-drones-20131205,0,1460123.story, *archived at* http://perma.unl.edu/2SSB-FM9E.
30. Michael N. Schmitt & Jeffrey S. Thurnher, *"Out of the Loop": Autonomous Weapon Systems and the Law of Armed Conflict*, 4 HARV. NAT'L SECURITY J. 231, 237 (2013).

in the loop requires many people for each weapons system, and as more and more of these weapons come into use it becomes impractical to assemble all of the staff needed for them.[31] Second, because a person operates these machines remotely, it must communicate with them via satellite, making the operation susceptible to signal jamming and cyber attacks.[32] Third, many countries are developing autonomous weapons systems. These systems would be able to operate and make decisions much faster than humans, giving other countries a tactical advantage in combat situations against enemies without like technology.[33] Fourth, "there are economies of scale in operating multiple autonomous vehicles at the same time through the same system."[34]

There are many who do not think it is wise or legal to use LARs.[35] This criticism is based on moral grounds, arguments about the effect they will have on civilization, a concern over increased warfare when one side need not assume the risk of death or injury, and the application of IHL and IHRL.[36] However, there are others who do not feel that LARs should be completely dismissed.[37] While there are certain risks that must be investigated and carefully addressed, LARs are simply another weapon.[38] As such, their use is governed by IHL and, if used lawfully, can complement other weapons and personnel in combat situations. According to this side's view, the concerns about wars fought entirely between robots, robots wreaking indiscriminate carnage, or robots turning on their masters and killing humanity are misguided and largely based on popular stories from sci-fi novels and Hollywood.[39]

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31. *Id.*
32. *Id.* at 238; *see also, e.g.*, *Iran Shows Film of Captured US Drone*, BBC NEWS (Dec. 8, 2011, 6:34 PM), http://www.bbc.co.uk/news/world-middle-east-16098562, *archived at* http://perma.unl.edu/DFY8-NYJX (discussing an United States RQ-170 Sentinel stealth aircraft that Iran claims was electronically hijacked by Iran's army).
33. Schmitt & Thurnher, *supra* note 30, at 238; *see also* Herbach, *supra* note 28, at 19 (discussing the development of autonomous weapons systems in the context of international humanitarian law).
34. Alston, *supra* note 3, at 35, 44.
35. U.N. LAR Report, *supra* note 10; Akerson, *supra* note 6; Herbach, *supra* note 28; Sharkey, *supra* note 4; Daniel Suarez, *The Kill Decision Shouldn't Belong to a Robot*, TED (June 2013), http://www.ted.com/talks/daniel_suarez_the_kill_decision_shouldn_t_belong_to_a_robot.html, *archived at* http://perma.unl.edu/WLN5-GZKP.
36. *See* sources cited *supra* note 35.
37. Ronald C. Arkin, *Viewpoint: Military Robotics and the Robotics Community's Responsibility*, 38 INDUS. ROBOT (2011), *archived at* http://perma.unl.edu/K4A7-87XG; Schmitt & Thurnher, *supra* note 30.
38. Arkin, *supra* note 37.
39. Schmitt & Thurnher, *supra* note 30, at 240–41.

The UN Special Rapporteur on summary and arbitrary executions, Chistof Heyns, has also weighed in on LARs.[40] Of particular concern in his report is how legal responsibility would be assigned if LARs were to be used. For instance, who would face the consequences if an LAR were to wrongfully kill someone? Another issue is that of states using LARs outside of recognized battlefields, such as attacking terrorists in civilian populations or attacking "enemies" of the state within a country's own borders. There is also concern that there will be proliferation of LARs, with the result that they will end up in the hands of nonstate actors. Finally, it is posited that taking human decision making out of the loop leads to a moral dilemma. The decision to kill is an inherently moral decision, and LARs may lack the requisite conscience or humanity to be entrusted with such a choice. Furthermore, the ease and relatively risk-free nature of using LARs could lead to them being used more frequently against agitators and troublemakers. This could result in additional killing because LARs are simply being used to dispose of malcontents instead of dealing with them in other ways. Such a world would be one where symptoms of problems are addressed with lethal force instead of addressing the root causes and avoiding unnecessary violence.[41]

This Comment addresses these varying concerns as they relate to IHL and IHRL. Parts II and III examine the relevant provisions of IHL and IHRL, respectively. Part IV looks at LARs in light of the relevant law and addresses some of the concerns of the UN Special Rapporteur and others, and makes a few recommendations regarding the path forward.

II. APPLICABLE INTERNATIONAL HUMANITARIAN LAW

A fundamental concept in IHL is that those not party to a military conflict, i.e., civilians, must be protected. This is enshrined in the earliest IHL treaties. The 1868 St. Petersburg Declaration states, "the only legitimate object which States should endeavor to accomplish during war is to weaken the military forces of the enemy."[42] Following from this principle, Additional Protocol I (API) to the Geneva Conventions of 12 August 1949 states in Article 51(1), "The civilian population and individual civilians shall enjoy general protection against dangers arising from military operations."[43] Article 51(2) of

40. U.N. Extrajud. Execs. Report, *supra* note 5.
41. *Id.* ¶¶ 15–17.
42. Declaration Renouncing the Use, in Time of War, of Explosive Projectiles Under 400 Grammes Weight, Nov. 12–Dec. 11, 1868, 138 Consol T.S. 297, *available at* http://perma.unl.edu/AJ76-7BR4.
43. Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts art. 51(1), June 8, 1977, 1125 U.N.T.S. 3 [hereinafter API].

the API further states that civilians "shall not be the object of attack" and that "[a]cts or threats of violence the primary purpose of which is to spread terror among the civilian population are prohibited."[44] Article 57(2)(a)(i) of the API says that a military shall do all it can to make sure that it does not attack civilians or civilian objects, and Article 57(2)(a)(iii) says an attack must not be launched if civilian loss of life, injury, or damage to infrastructure "would be excessive in relation to the concrete and direct military advantage anticipated."[45] A violation of these articles is a "grave breach" under Article 85(3) of the API, and the Rome Statute Article 8(2)(a) gives the International Criminal Court (ICC) jurisdiction to try grave breaches as war crimes.[46]

Implicit in all of this is that a military must distinguish between civilians and enemy combatants in order to abide by these terms.[47] This is known as the "principle of distinction."[48] Though several countries, including the United States, have not ratified the API, the principle of distinction is also considered a part of customary international law.[49] The International Committee of the Red Cross (ICRC) has stated, "State practice establishes this rule as a norm of customary international law applicable in both international and non-international armed conflicts."[50] This makes the principle of distinction binding on all states under international law regardless of whether or not they have ratified the API.

Another fundamental aspect of IHL is the "principle of proportionality," which is related to the previous prohibition on indiscriminate attacks. Article 51(5)(b) of the API states, "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" must be considered indiscriminate and thus prohibited.[51] Article 57(2)(a)(iii) echoes the requirements set forth in 51(5)(b).[52] Note that this does not prohibit attacks that cause incidental loss of civilian life or injury in all cases. It only prohibits them when the loss of life or injury is *excessive* in relation to the military advantage. This is not a bright-line rule and requires a careful weighing of the relevant

44. *Id.* art. 51(2).
45. *Id.* art. 57(2)(iii).
46. Rome Statute of the International Criminal Court art. 8(2)(a), Dec. 31, 2000, 2187 U.N.T.S. 3, *archived at* http://perma.unl.edu/C4T8-P7G5 [hereinafter Rome Statute].
47. *Rule 1: The Principle of Distinction Between Civilians and Combatants*, ICRC, https://www.icrc.org/customary-ihl/eng/docs/v1_cha_chapter1_rule1 (last visited May 19, 2015), *archived at* http://perma.unl.edu/W4BW-FCL2.
48. *Id.*
49. *Id.*
50. *Id.*
51. API, *supra* note 43, art. 51(5)(b).
52. *Id.* art. 57(2)(a)(ii).

factors in any given situation.[53] An attack that causes civilian casualties may not necessarily be considered indiscriminate if there are compelling military advantages that outweigh this loss of life. The ICRC has similarly stated that the principle of proportionality is a norm of customary international law and that it applies to both international and noninternational armed conflicts.[54]

Underlying the prior two principles is the "duty to take constant care," which is outlined in Article 57 of the API: "In the conduct of military operations, constant care shall be taken to spare the civilian population, civilians and civilian objects."[55] This is a broad rule that carries with it many specific obligations, some of which are spelled out in Article 57.[56] Of note are the duties to take all feasible precautions in the way the attack is conducted[57] and to give effective advance warning if civilians might be affected.[58] The ICRC has again found these to be "norm[s] of customary international law applicable in both international and noninternational armed conflicts."[59]

Articles 35 and 36 of the API deal with weapons and their use. Article 35 lays out one of the most basic limitations on the use of weapons or means of warfare.[60] In paragraph 2, there is a prohibition on using weapons or means of warfare "of a nature to cause superfluous injury or unnecessary suffering."[61] Scholars have noted that this prohibition only applies to the way in which weapons are used along with other means and methods of warfare.[62] It does not apply to the weapons themselves. That is, illegality is determined by the use of a weapon within a specific context. If it could be determined that a weapon would cause unnecessary suffering or superfluous injury in all

53. Akerson, *supra* note 6, at 82.
54. *Rule 14: Proportionality in Attack*, ICRC, https://www.icrc.org/customary-ihl/eng/docs/v1_cha_chapter4_rule14 (last visited May 19, 2015), *archived at* http://perma.unl.edu/2UVN-7ZWS.
55. API, *supra* note 43, art. 57.
56. *See id.*
57. *Id.* art. 57(2)(A)(ii).
58. *Id.* art. (2)(c).
59. *Rule 15: Precautions in Attack*, ICRC, https://www.icrc.org/customary-ihl/eng/docs/v1_cha_chapter5_rule15 (last visited May 19, 2015), *archived at* http://perma.unl.edu/6L6F-DMRW; *Rule 17: Choice of Means and Methods of Warfare*, ICRC, https://www.icrc.org/customary-ihl/eng/docs/v1_cha_chapter5_rule17 (last visited May 19, 2015), *archived at* http://perma.unl.edu/KT2U-KVF3; *Rule 20: Advance Warning*, ICRC, https://www.icrc.org/customary-ihl/eng/docs/v1_cha_chapter5_rule20 (last visited May 19, 2015), *archived at* http://perma.unl.edu/W3V2-VG44.
60. API, *supra* note 43, arts. 35 and 36.
61. *Id.*
62. Benjamin Kastan, *Autonomous Weapons Systems: A Coming Legal "Singularity"?*, 2013 U. ILL. J.L. TECH. & POL'Y 45, 61 (2013); Gary E. Marchant et al., *International Governance of Autonomous Military Robots,* 12 COLUM. SCI. & TECH. L. REV. 272, 295 (2011); Schmitt & Thurnher, *supra* note 30, at 245.

contexts, then it would always be illegal to use such a weapon. Note though that this determination is still reached by focusing on the *effects* of the weapon rather than the weapon itself.[63] Furthermore, this section only applies to the harm experienced by combatants; it does not apply to civilians.[64] This interpretation is affirmed by the International Court of Justice (ICJ) in its advisory opinion on the legality of nuclear weapons: "According to [this] principle, it is prohibited to cause unnecessary suffering to combatants: it is accordingly prohibited to use weapons causing them such harm or uselessly aggravating their suffering."[65] This rule developed out of customary practice, and the ICRC, in its study on the topic, similarly states: "The prohibition of means of warfare which are of a nature to cause superfluous injury or unnecessary suffering refers to the effect of a weapon on combatants."[66]

Article 51(4)(b) of the API prohibits the use of weapons that cannot be aimed.[67] This can be understood as delineating weapons that are unlawful per se.[68] The ICRC has stated that both of these prohibitions are "norm[s] of customary international law applicable in both international and non-international armed conflicts."[69] Finally, Article 36 sets out the procedure states must follow whenever a new weapon or means of warfare is developed, acquired, or adopted.[70] In regard to the new weapon or means of warfare, "a High Contracting Party is under an obligation to determine whether its employment would . . . be prohibited by this Protocol or by any other rule of international law."[71]

III. APPLICABLE INTERNATIONAL HUMAN RIGHTS LAW

In the past, military action was almost always in a demarcated war zone and against the military of another state actor. IHL was the body of law that developed to govern military actions in such situations. Thus, a reasonable inference is that IHRL is applied in times of

63. Schmitt & Thurnher, *supra* note 30, at 245.
64. *Id.*
65. Legality of Threat or Use of Nuclear Weapons, Advisory Opinion, 1996 I.C.J. 226, ¶ 78 (July 8) [hereinafter Nuclear Weapons Adv. Op.].
66. *Rule 70: Weapons of a Nature to Cause Superfluous Injury or Unnecessary Suffering*, ICRC, https://www.icrc.org/customary-ihl/eng/docs/v1_cha_chapter20_rule70 (last visited May 19, 2015), *archived at* http://perma.unl.edu/J92S-Z7YT.
67. Schmitt & Thurnher, *supra* note 30, at 245 (citing API, *supra* note 43, art. 51(4)(b)).
68. *Id.* at 244.
69. *Rule 71: Weapons That Are by Nature Indiscriminate*, ICRC, https://www.icrc.org/customary-ihl/eng/docs/v1_cha_chapter20_rule71 (last visited May 19, 2015), *archived at* http://perma.unl.edu/4UTE-NHPN; *see* sources cited *supra* note 59.
70. API, *supra* note 43, art. 36.
71. *Id.*

peace and IHL is *lex specialis* that governs exclusively during times of war. However, the International Court of Justice (ICJ) addressed this issue in an advisory opinion and found otherwise:

> [T]he protection of the International Covenant [on] Civil and Political Rights does not cease in times of war, except by operation of Article 4 of the Covenant whereby certain provisions may be derogated from in a time of national emergency. Respect for the right to life is not, however, such a provision. In principle, the right not arbitrarily to be deprived of one's life applies also in hostilities.[72]

This shows that IHRL does not cease to operate in times of war, but rather that IHL applies in addition to IHRL. The right to life, specifically mentioned in the opinion, is recognized in the International Covenant on Civil and Political Rights (ICCPR)—one of the foundational treaties of IHRL[73]—in Article 6(1), which provides: "Every human being has the inherent right to life. This right shall be protected by law. No one shall be arbitrarily deprived of his life."[74] The UN Human Rights Committee considers this right to be a part of customary international law, a general principle of law, and a peremptory norm.[75]

The ICCPR also recognizes a right to be free from torture and "cruel, inhuman, or degrading treatment or punishment" in Article 7.[76] The UN Human Rights Council (HRC) has found this to be binding as customary international law. It says in a resolution, "a number of international, regional and domestic courts have held the prohibition of cruel, inhuman or degrading treatment or punishment to be customary international law."[77] The HRC states further that "the prohibition of torture has been recognized as a peremptory norm of international law."[78] This makes the prohibition of cruel or inhuman punishment binding on all states unless a state has remained a persistent objector to this rule. Persistent objector status, however, would not apply to torture, which remains binding on all states as a peremptory norm.[79]

The European Commission on Human Rights was one of the first human-rights bodies to consider the difference between torture, cruel

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72. Nuclear Weapons Adv. Op., *supra* note 65, ¶ 25.

73. PHILIP ALSTON & RYAN GOODMAN, INTERNATIONAL HUMAN RIGHTS 157 (2013).

74. International Covenant on Civil and Political Rights art. 6(1), Oct. 5, 1977, 999 U.N.T.S. 171 [hereinafter ICCPR].

75. Human Rights Comm., General Comment on Issues Relating to Reservations Made upon Ratification or Accession to the Covenant or the Optional Protocols Thereto, or in Relation to Declarations Under Article 41 of the Covenant, ¶ 10, U.N. Doc. CCPR/C/21/Rev.1/Add.6 (Nov. 11, 1994).

76. ICCPR, *supra* note 74, art. 7.

77. Human Rights Council Res. 8/8, at 1, U.N. Doc. A/HRC/RES/8/8 (June 18, 2008).

78. *Id.*

79. Human Rights Comm., *supra* note 75.

treatment, inhuman treatment, and degrading treatment.[80] It determined that the difference was largely a matter of degree. Torture subsumes cruel, inhuman, and degrading treatment, and it is typically used to obtain information or a confession but can also be used as punishment.[81] Inhuman treatment is unjustifiably inflicting severe physical or mental suffering while degrading treatment is grossly humiliating a person or driving one to act contrary to one's will or conscience.[82] Finally, cruel treatment is an unjustifiable infliction of physical or mental suffering.[83]

Article 9 of the ICCPR guarantees the right to physical security.[84] Section 1 states, "Everyone has the right to liberty and security of person . . . . No one shall be deprived of his liberty except on such grounds and in accordance with such procedure as are established by law."[85] While this rule specifically envisions unlawful imprisonment, its scope is larger than that. There are many other ways in which one's personal security or liberty could be taken or infringed upon. For example, if a government were to verbally and physically harass a group of people but not imprison them, this would be considered an infringement upon their personal security and liberty. This is so because the effect is that the victims cannot engage in lawful activities for fear of suffering harassment.

Finally, Article 14 sets out rules of equality before the law and due process.[86] Section 1 states that, if charged with a crime, "everyone shall be entitled to a fair and public hearing by a competent, independent and impartial tribunal established by law."[87] Section 2 states that those charged with a crime shall be innocent until proven guilty.[88] Section 3 outlines several minimum guarantees for those charged with a crime, including being timely informed of the charges, time and facilities to prepare a defense, a speedy trial, to be present at trial and have legal assistance, to examine witnesses, and the right against self-incrimination.[89]

The ICCPR contains a derogation clause in Article 4(1), referred to in the ICJ advisory opinion, which allows states to derogate from obligations under the ICCPR in times of emergency. However, Article 4(2) states that Articles 6 and 7, relating to the right to life and free-

80. David Weissbrodt & Cheryl Heilman, *Defining Torture and Cruel, Inhuman, and Degrading Treatment*, 29 LAW & INEQ. 343, 374 (2011).
81. *Id.*
82. *Id.*
83. *Id.*
84. ICCPR, *supra* note 74, art. 9.
85. *Id.* art. 9(1).
86. *Id.* art. 14.
87. *Id.* art. 14(1).
88. *Id.* art. 14(2).
89. *Id.* art. 14(3).

dom from torture, can never be derogated from.[90] While this means that states may derogate from the other articles discussed above (9 and 14), Article 4(1) further restricts how they may do so. In order to derogate, there must be a public emergency threatening the life of the nation and this emergency must be officially proclaimed. Even then, a state can only derogate from its obligations "to the extent strictly required by the exigencies of the situation, provided that such measures are not inconsistent with [its] other obligations under international law and do not involve discrimination solely on the ground of race, colour, sex, language, religion or social origin."[91] This presents a significantly high bar to clear, and it would appear that derogation would only be permitted in the most exceptional of circumstances.

IV. LARS IN LIGHT OF IHL AND IHRL

There is much ongoing debate concerning the morality and legality of LARs, and most scholars focus on how IHL relates to issues raised by their potential use. Professor David Akerson argues that offensive LARs (OLARs) are banned under IHL because they are unable to meet the standards required under the law.[92] OLARs are distinguished from LARs that function purely in a defensive capacity, i.e., only shooting at a target after being attacked. An example of a defensive LAR is the Navy Phalanx, which shoots down incoming missiles or artillery fired at it.[93] This distinction is important because a defensive autonomous weapon system only attacks objects that have already revealed themselves to be hostile. However, "[a] fully autonomous offensive weapon is designed to rely on algorithms to identify the unrevealed hostile nature of the person or object."[94] This involves a great deal of judgment in situations where the context can significantly affect one's decision. Akerson argues that one of the major problems for OLARs under IHL is the principle of distinction, found in Articles 51(2) and 57(2)(a)(i) of the API.[95] The nature of the rule is discretionary and difficult to apply, particularly in asymmetrical warfare where the enemy is hidden among the civilian population.[96] This is further complicated when a civilian takes part in hostilities or an enemy combatant is injured, sick, or mentally ill and thus is *hors de combat*.[97]

90. *Id.* art. 4(2).
91. *Id.* at art. 4(1).
92. Akerson, *supra* note 6, at 69–70.
93. *Id.* at 72.
94. *Id.* at 74.
95. *Id.* at 76–82. For a general discussion of the principle, see *supra* notes 47–50 and accompanying text.
96. *Id.* at 77.
97. API, *supra* note 43, art. 41.

Professor Noel Sharkey echoes this point. "[T]he whole point of using robot weapons is to help in warfare against insurgents, and in these cases sensors would not help in discrimination . . . . Cues can be very subtle and there is an infinite number of circumstances where lethal force is inappropriate."[98] He also points out that facial-recognition technology, which can read expressions or recognize faces, does not work in real time.[99] Christof Heyns states similarly that "the inability of LARs to interpret intentions and emotions will be a significant obstacle to compliance with the rule of distinction."[100]

While it is true that at present LARs are not sophisticated enough to identify an enemy combatant in plain clothes in a crowd of civilians,[101] this does not mean LARs inherently violate the principle of distinction under IHL. One mistake often made by these arguments is to frame the capacity to comply with IHL based solely on hypothetical scenarios where even a human would have difficulty distinguishing between enemy combatants and civilians.[102] When it is made clear that the technology is not nearly sophisticated enough to deal with such a situation, this is offered as proof that LARs are simply unsuitable for use in combat. This argument seems to come from two basic assumptions concerning LARs and modern warfare. The first is that LARs are being developed to replace humans in all or the most complicated combat positions. The second is that the current state of asymmetrical warfare is the only way wars will ever be fought, and that these weapons are being developed solely for fighting in such conditions. While LARs are being built to replace human operators in the field, they are also being built to perform new and unique tasks.[103] Further, there is no indication from any branch of the military that

98. Noel Sharkey, *Grounds for Discrimination: Autonomous Robot Weapons*, 11 RUSI DEF. SYS. 86, 88 (2008), *archived at* http://perma.unl.edu/5JZE-F9MD.

99. *Id.*

100. U.N. LAR Report, *supra* note 10, ¶ 68.

101. *But cf.* ALEXANDER M. BRONSTEIN, MICHAEL M. BRONSTEIN & RON KIMMEL, NUMERICAL GEOMETRY OF NON-RIGID SHAPES 261–75 (David Gries & Fred B. Schneider eds., 2008) (discussing advancements in facial recognition technology).

102. *See, e.g.*, Akerson, *supra* note 6, at 77 (analyzing LAR compliance with the principle of distinction in asymmetrical theaters and in situations where civilians directly participate in hostilities); HUMAN RIGHTS WATCH, LOSING HUMANITY: THE CASE AGAINST KILLER ROBOTS 30–31 (2012) (focusing on inability of LARs to assess human intentions and emotional states).

103. For example, an autonomous submarine that gathers intelligence by deploying and operating smaller UUVs with sensors. This is likely not a role that is currently being performed by human operators in the field. *See* John Keller, *UUV Mothership to Deploy Intelligence-Gathering Unmanned Underwater Vehicles in Development by SAIC*, MIL. & AEROSPACE ELECTRONICS (Nov. 29, 2009), http://www.militaryaerospace.com/articles/2009/11/uuv-mothership-to-deploy-intelligence-gathering-unmanned-underwater-vehicles-in-development-by-saic.html, *archived at* http://perma.unl.edu/B2RR-59XJ.

the goal is to eventually have an army composed entirely of robots.[104] So, although there are situations and positions in which it would not be suitable to deploy an LAR, there are many others where it may be advisable and in compliance with the principle of distinction under IHL. For example, an LAR in the form of an aerial vehicle could be programmed to patrol a certain airspace and attack fighter jets that are identified as enemies by radar. In this scenario, it is possible that a passenger jet might enter the airspace, but the LAR would not attack because it is preprogrammed to only attack enemy fighter jets as recognized by radar. This easily complies with the standard set forth in Articles 51(2) as well as 52(1) of the API because the LAR can effectively distinguish between what is and is not civilian.

Professors Michael Schmitt and Jeffrey Thurnher point out that arguments concluding that LARs violate IHL typically do so because of a conflation of the two different strains of weapons law.[105] One strain concerns the legality of the weapon itself, and the other concerns how the weapon is used—embodied in Articles 51(4)(b) and 35(2) of the API, respectively. For use of a weapon to be lawful under IHL, the weapon itself must be legal and it must be used in a legal manner. Schmitt and Thurnher's critique of the arguments made against LARs is that they point to a situation in which the use of LARs would be illegal and mistakenly conclude that the weapon itself is illegal. However, this argument fails if there are circumstances where LARs could be used "without placing civilians at excessive risk."[106] Furthermore, weapons can only be unlawful per se if they are incapable of being aimed, i.e., are indiscriminate by their nature.[107] LARs are programmed to be discriminating.[108] They can only attack specifically designated targets that meet set criteria determinable by an algorithm.

Schmitt and Thurnher also point out that critics have oversimplified the capabilities of military technology to make their arguments:

> The claims of the critics are not only counter-normative, they are counterfactual. Military technology has advanced well beyond simply being able to spot an individual or object. Modern sensors can, inter alia, assess the shape and size of objects, determine their speed, identify the type of propulsion being used, determine the material of which they are made, listen to the object and its environs, and intercept associated communications or other electronic emissions. They can also collect additional data on other objects or individuals in the area and, depending on the platform with which they are affiliated, monitor a potential target for extended periods in order to gather information that will enhance the reliability of identification and facilitate target engagement when the risk of collateral damage is low. Even software for autonomous weapon systems that enables visual identification of individuals,

104. Schmitt & Thurnher, *supra* note 30, at 236–37.
105. *Id.* at 243.
106. *Id.* at 246.
107. *See supra* notes 67–71 and accompanying text.
108. *See supra* notes 14–17 and accompanying text.

> thereby enhancing accuracy during autonomous "personality strikes" against specified persons, is likely to be developed.[109]

Indeed, given the advance of this technology, there are conceivably situations where it would prove superior to humans in complying with IHL. In the heat of battle, fear and other emotions can interfere with a human's judgment and cause him or her to take action that would be indiscriminate.[110] While humans also possess positive emotional capacities, such as empathy, other emotions can lead to deplorable actions in dangerous situations. Furthermore, the need to make split-second decisions in times of combat can lead to human error, and robots are arguably better placed to assess such situations more accurately and quickly.[111]

It certainly is true that LAR technology is not advanced enough to be used in all combat situations. However, the fact that the technology is inherently capable of discriminating between potential targets and aiming at identified enemies means that these weapons are not unlawful per se under IHL. This means that the lawfulness of their use must be examined on a case-by-case basis taking into account the situation in which they would be used. There are situations in which the use of OLARs would not violate Article 35(2) of the API because they could adequately discriminate and not cause "superfluous injury or unnecessary suffering."[112] Furthermore, the advanced capacity of LARs may actually necessitate their use under this provision since they may actually cause less superfluous injury or unnecessary suffering relative to more conventional weapons or means of warfare.

One of the other main principles of IHL which it is contended makes LARs unlawful is the principle of proportionality, which is found in Articles 51(5)(b) and 57(2)(a)(iii) of the API.[113] It is not enough to simply discriminate between military combatants and civilians or military and civilian objects because the attack may still cause incidental injury or loss of civilian life. This principle requires a careful balancing of the military advantage verses the expected harm to civilians or civilian objects.[114] This balancing is complex because what constitutes military advantage could be any number of things from the strategic nature of the target or combatants to be attacked to

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109. Schmitt & Thurnher, *supra* note 30, at 247 (internal citations omitted).

110. An example of this is the Haditha incident in Iraq where a roadside bomb spooked a battalion of Marines who subsequently did a sweep of houses in the area and killed twenty-four innocent Iraqi civilians, including women and children. *See* Thom Shanker, Eric Schmitt & Richard A. Oppel Jr., *Military to Report Marines Killed Iraqi Civilians*, N.Y. TIMES, May 26, 2006, at A1, *archived at* http://perma.unl.edu/NNA7-DXQP.

111. Schmitt & Thurnher, *supra* note 30, at 248–49.

112. API, *supra* note 43, art. 35(2).

113. *See supra* text accompanying notes 47–54.

114. Akerson, *supra* note 6, at 82–83.

an estimation that it will substantially impact the morale of the enemy's forces.[115] This analysis is necessarily highly subjective to the commander making the decision, and it is also highly contextual; military advantage may change depending on other developments within the larger operation or conflict. On the other side of the proportionality equation is the difficulty of measuring civilian harm. Is simply conducting a potential body count sufficient? Saying that destroying a military base is worth *x* civilian casualties seems counter to human morals and the policy of IHL. Additionally, damage to civilian objects may not cause many casualties but may greatly decrease the health and wellness of the civilian population. An example might be destruction of civilian access to clean water. This analysis is necessarily complex for almost any military decision and, because the overall context of a war is constantly changing, the envisioned military action must be constantly reassessed.[116] Such a seemingly subjective analysis does not appear amenable to the algorithmic calculation that LARs employ. Akerson argues, "Proportionality cannot be converted to an algorithmic formula necessary for autonomy because, at some point, a human has to be able to express it in common, measurable values."[117] Christof Heyns is also troubled by this, stating, "Proportionality is widely understood to involve distinctively human judgement . . . . It remains to be seen to what extent these concepts can be translated into computer programmes, now or in the future."[118]

Schmitt and Thurnher, proponents for the use of LARs, also acknowledge that this is a valid concern. "Given the complexity and fluidity of the modern battlespace, it is unlikely that, despite impressive advances in artificial intelligence, 'machines' will soon be programmable to perform robust assessments of a strike's likely military advantage on their own."[119] However, they also point out that there is already a system developed that can determine collateral damage from an attack—the "Collateral Damage Estimate Methodology" (CDEM).[120] Through this system, a commander can mathematically calculate various factors to reach a quantifiable determination of the likelihood of collateral damage.[121] The CDEM is likely capable of being incorporated into an algorithm upon which an LAR could operate.

The technology is not presently capable of carrying out the complicated analysis required in certain instances for determinations of proportionality. From this it can be concluded that the use of LARs in

115. *Id.*
116. *Id.* at 84.
117. *Id.* at 85.
118. U.N. LAR Report, *supra* note 10, ¶ 72.
119. Schmitt & Thurnher, *supra* note 30, at 257.
120. *Id.* at 254.
121. *Id.* at 254–55.

such situations would be unlawful under IHL. However, it cannot be inferred from this that LARs are per se unlawful. Furthermore, there are other situations in which such a complex analysis would not be needed. An example would be an LAR carrying out an attack on an enemy submarine that is nowhere near any civilians or civilian objects. Simply recognizing that there are no civilians nearby that the attack may affect is a clear and easily determinable estimation for a machine that would comport with the principle of proportionality. Indeed, an LAR could comply with IHL in this area by simply being programmed not to take action anytime a proportionality issue would be raised. That is, an LAR could be programmed to attack military targets, but not to attack anytime it calculates that there would be any level of civilian collateral damage. While this would result in LAR technology not taking action that humans could, it also ensures compliance with IHL while still utilizing the benefits of LARs in more clear-cut situations.

In sum, although LAR technology cannot currently perform the complex principle of proportionality balancing test, this does not mean that LARs should be banned under IHL. There are still many situations in which action by an LAR would not have an impact on civilians or civilian objects. In such situations, the principle of proportionality is not implicated. LARs could be programmed to recognize when there would be a civilian impact and to simply refrain from attacking in those situations. Even in such a situation, the LAR could still, theoretically, stalk moving enemy targets until such time as there is no longer a risk of collateral damage.

Throughout the discussions of the legality of LARs, the context of contemporary military engagement is palpably in the background. So-called "asymmetrical warfare," whereby a state fights nonstate actors, has become the new norm.[122] Since the military engagement in this situation is not between two different states, it would not be considered to be of an international character as defined in Article 2 common to all four of the Geneva Conventions.[123] By and large, most asymmetrical warfare would thus be considered of a noninternational character. As this Comment explained, IHRL applies even when there is an armed conflict and IHL is applicable, but it must be interpreted in light of the provisions of IHL.[124] This would typically mean that incidental loss of civilian life not in violation of the principle of proportionality would also be in keeping with the right not to be arbitrarily deprived of life under Article 6 of the ICCPR. However, Christof

122. Akerson, *supra* note 6, at 77.

123. Geneva Convention for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field art. 2, Aug. 12, 1949, 6 U.S.T. 3516, 75 U.N.T.S. 30.

124. *See supra* text accompanying notes 72–75.

Heyns points out that "not all applications of violence by States against non-State actors meet the threshold requirements to be regarded as an armed conflict. Accordingly, if there is no armed conflict, there can be no non-international armed conflict, and international humanitarian law does not apply."[125] He outlines the two threshold requirements for violence to be considered a noninternational armed conflict. First, the intensity of the conflict must be above a certain level and, second, an armed group must be sufficiently organized to be considered a party to the conflict.[126] For the first requirement, the conflict must be more than internal disturbances or tensions. It must be protracted violence. Heyns clarifies that this "refers more to the intensity of the armed violence than its duration."[127] For the second requirement, the given criteria are "the existence of a command structure, of headquarters and of a group's ability to plan and carry out military operations."[128] There is disagreement as to whether terrorist groups like Al-Qaida "possess the kind of integrated command structure that would justify considering them a single party involved in a global noninternational armed conflict."[129] While some of the acts of terrorist groups are very violent, it is not clear that all such acts rise beyond the level of internal disturbances or tensions. Certainly some acts do, like those of September 11th, but others are not so clear. Heyns notes that the ICRC has determined that the current War on Terror is not a noninternational armed conflict.[130] The ICRC advocates applying "a case-by-case approach to legally analyzing and classifying the various situations of violence that have occurred in the fight against terrorism."[131]

If this is the appropriate method for determining when IHL applies, it has a decided impact on how warfare is currently being conducted. Based on the above considerations, Heyns has analyzed the current U.S. policy of carrying out targeted UCAV strikes on suspected terrorist groups, and his findings bear on potential LAR use. If the ICRC's case-by-case approach is used, then a large volume of the attacks are likely outside the purview of IHL. This means that drone strikes are being used not in a wartime capacity, but against insurgents who cannot be viewed as soldiers, but as criminals:

> The use of drones by States to exercise essentially a global policing function to counter potential threats presents a danger to the protection of life, because

125. U.N. Extrajud. Execs. Report, *supra* note 5, ¶ 53.
126. *Id.* ¶ 55.
127. *Id.* ¶ 57.
128. *Id.* ¶ 56.
129. *Id.* ¶ 65.
130. *Id.* ¶ 66.
131. ICRC, International Humanitarian Law and the Challenges of Contemporary Armed Conflicts at 10–11, ICRC Doc. 31IC/11/5.1.2 (2011).

> the tools of domestic policing (such as capture) are not available, and the more permissive targeting framework of the laws of war is often used instead.[132]

Similarly, while LARs are not unlawful weapons per se under IHL, their use in the current environment of fighting terrorism should likely be governed by IHRL in most situations. Even if it could be determined that IHL should apply, it would not displace IHRL.[133] Of course, when IHL applies it sets the standard for what is an arbitrary deprivation of life.[134] However, all of the other provisions of the ICCPR, and IHRL in general, are still applicable. It would seem that, where IHL does not specifically speak to an area that is addressed in the ICCPR, the common interpretation of IHRL is controlling. Accordingly, whether the use of IHL or IHRL applies, the use of LARs would present significant challenges to a state's ensuring the right to life, the right not to be tortured, the right to physical security, and the right to due process.[135]

Article 6(1) of the ICCPR outlines the right not to be arbitrarily deprived of life, and this right bears a relation to the right to due process outlined in Article 14. The use of LARs in the current War on Terror would likely violate both of these in many instances and thus be unlawful because IHL likely does not apply to such use. If IHL does not apply then there are no enemy soldiers to be killed. In this context, terrorists are civilians and suspected criminals. Using an LAR to target and kill a suspected terrorist, no matter how much intelligence has been gathered to link this person to the crime, is arbitrary. Under IHRL, the use of force must be as a last resort used by police officers to protect life.[136] Thus, "the intentional, premeditated killing of an individual would generally be unlawful" unless there is no other way to protect the lives of others.[137] If there is no immediate threat to life, the suspected terrorist must be afforded the rights under Article 14 of the ICCPR.[138] As a criminal suspect, he or she has the right to a fair and public hearing by an impartial tribunal, to be presumed innocent, to have time and facilities to prepare a defense, to have assistance of counsel, to appear at trial, to examine witnesses, and to appeal a judgment.[139] Using an LAR to simply identify and kill a suspect is to effectively use a preprogrammed machine to play the role of judge, jury, and executioner. It affords the suspect none of the

132. U.N. Extrajud. Execs. Report, *supra* note 5, ¶ 103.
133. Nuclear Weapons Adv. Op., *supra* note 65, ¶ 25.
134. *Id.*
135. *See supra* text accompany notes 72–89. It should be noted, here, that the ICCPR has been ratified by the United States and is thus binding on it under international law. *See* ICCPR, *supra* note 70.
136. U.N. Extrajud. Execs. Report, *supra* note 5, ¶ 32.
137. *Id.* ¶ 35.
138. ICCPR, *supra* note 74, art. 14.
139. *Id.*

rights to due process in the ICCPR and, thus, constitutes an arbitrary deprivation of life.

Article 7 of the ICCPR guarantees the right not to be tortured or subjected to cruel, inhuman, or degrading treatment.[140] In the Rome Statute of the International Criminal Court (Rome Statute), torture is defined as "the intentional infliction of severe pain or suffering, whether physical or mental, upon a person in the custody or under the control of the accused."[141] Bentham defined torture as follows: "Torture, as I understand it, is where a person is made to suffer any violent pain of body in order to compel him to do something or to desist from doing something which done or desisted from the penal application is immediately made to cease."[142] Under the Rome Statute's definition of torture, even severe mental pain or suffering can constitute torture and, as has been seen in the case of prolonged and repeated drone strikes, this can be brought about by a real and reasonable fear that an attack will be launched anywhere and at any time.[143] A prolonged use of LARs to hunt and kill suspected terrorists could have a similar effect on a population. For example, if civilians in an area had been repeatedly injured or traumatized by the effects of LAR attacks directed at terrorists, this might lead to the development of psychological problems such as post-traumatic stress disorder. This would seem to indicate severe mental pain and suffering. If the result is a persistent fear that could be described as severe mental suffering and that keeps civilians from doing things they would otherwise do as a result of such fear, such as going outdoors, then this would arguably be a violation of IHRL under the ICCPR. Furthermore, if this were committed as "part of a widespread or systematic attack directed against any civilian population, with knowledge of the attack," then charges could be brought at the International Criminal Court (ICC) for Crimes against Humanity under article 7(1)(f) and (k) of the Rome Statute.[144] If IHL were the applicable law and it were determined that torture

140. *Id.* art. 7.

141. Rome Statute, *supra* note 46, art. 7(2)(e).

142. W.L. Twining & P.E. Twining (eds. and commentary), *Bentham on Torture*, 24 N. IR. LEGAL Q. 305, 309 (1973), *reprinted in* PHILIP ALSTON & RYAN GOODMAN, INTERNATIONAL HUMAN RIGHTS 243–45 (2013); *see supra* text accompanying notes 72–85.

143. *See, e.g.*, Conor Friedersdorf, *'Every Person is Afraid of the Drones': The Strikes' Effect on Life in Pakistan*, THE ATLANTIC, Sept. 25, 2012, http://www.theatlantic.com/international/archive/2012/09/every-person-is-afraid-of-the-drones-the-strikes-effect-on-life-in-pakistan/262814/, *archived at* http://perma.unl.edu/628D-MK34; *Drones in Pakistan Traumatise Civilians, US Report Says*, BBC NEWS (Sept. 25, 2012), http://www.bbc.co.uk/news/world-asia-19704981, *archived at* http://perma.unl.edu/M4KR-Y6M8.

144. Rome Statute, *supra* note 46, art. 7(1)(f)&(k).

occurred, then charges could be brought under article 8(2)(a)(ii) if the action rose to the level of a grave breach.[145]

Finally, Article 9 of the ICCPR guarantees the right of liberty and security of person.[146] More specifically this means that no one shall be arbitrarily detained, arrested, or deprived of liberty. Similar to the preceding discussion, if civilians are persistently policed by LARs and fear an imminent attack, then they may feel forced to go outside sparingly or only during certain times of day. The induced fear restricts freedom of movement and would violate security of the person under IHRL.

While there is much fear about the use of LARs, particularly in present forms of asymmetrical warfare, these fears are somewhat misplaced because use of LARs should not be allowed in such situations due to conflicts with IHRL. Although there is a legitimate fear that they would be used in spite of this, given the current use of UCAVs to carry out strikes on terrorist suspects in the Middle East,[147] the UN should further seek to clarify the law on this point and encourage countries to agree that IHRL applies in these circumstances, not IHL. Under the laws of IHRL, use of UCAVs and LARs to carry out targeted killings would be prohibited as a violation of the right to life, the right to due process, the right not to be tortured, and the right to personal security. Arguably, even if IHL were to apply, their use affecting civilians could trigger violations of the right not to be tortured and the right to personal security under IHRL, which still applies in times of war. This has tremendous implications for the current War on Terror, and would make the use of such weapons illegal in most of the instances in which they are currently being used.

V. CONCLUSION

In the current discussions on LARs, there is much uneasiness that LARs will be used in a way that will cause great injury or death to civilians and that will cause those who employ them to become increasingly numb to the human costs of war. This is especially so because much of the interest in their development is with an eye toward asymmetrical warfare (viz., fighting terrorist groups). While these are valid and important concerns, they tend to focus on capabilities the weapon does not possess and on potential misuse of these systems,

145. *Id.* at art. 8(2)(a)(ii). Note that the country of the person charged would have to be a signatory to the Rome Statute or have been referred by the UN Security Council under Article 13.

146. ICCPR, *supra* note 74, art. 9.

147. *See* Spencer Ackerman, *US cited controversial law in decision to kill American citizen by drone*, GUARDIAN, June 23, 2014, http://www.theguardian.com/world/2014/apr/21/us-release-memo-anwar-al-awlaki-drone-killing, *archived at* http://perma.unl.edu/26NY-N65M.

and then take for granted that LARs are inherently unlawful or even evil. The current state of military action in the world does nothing to quell people's fears that such weapons will be misused. Current use of UCAVs in the War on Terror is highly controversial and arguably unlawful in many of the instances in which they have been used. While this is cause for concern about the future implementation of LARs, it should not be used as an excuse to ban them altogether. Principles of IHL and IHLR, properly understood, would serve to considerably restrict the use of these weapons in ways that would fully comply with the law. Concerned parties should look on this as an opportunity to reexamine current practice regarding UCAVs as well as potential future use of LARs. Greater clarity and cooperation among states is needed in this area. As is often the case, the main barrier to stronger ethical practice is human, not technological.

Further, the wisdom and policy of using such weapons in what appears to be an endless war should be questioned. Politically, it may have more destructive ramifications, both domestically and abroad. Governments, like the United States, risk losing legitimacy in the eyes of their own people the longer they employ weapons to the detriment of other societies based on narrow legal interpretations largely at odds with global consensus.[148] This can be seen in public perception of the current War on Terror. One critic of the United States' strategy has said:

> One cannot reduce terror by holding over the world the threat of what it most fears. All the things we supposedly want to secure are thus subverted by our proposed means of securing them. Edmund Burke recognized this contradiction and was wary of it: "Laws are commanded to hold their tongues amongst arms; and tribunals fall to the ground with the peace they are no longer able to uphold."[149]

It is perhaps best to recognize that weapons of increasing complexity, precision, and power cannot answer all of the problems involved in dealing with an enemy. This is particularly the case when dealing with terrorist groups that thrive off of radical beliefs and the glorification of martyrdom. The recent War on Terror, though exhibiting extreme and novel forms of violence, has largely been a battle of beliefs and ideas.[150] It is doubtful that any number of missiles is able to de-

148. Mark Hosenball, *Court Releases Memo of U.S. Justifying Drone Attacks on Citizens*, REUTERS, June 23, 2014, http://www.reuters.com/article/2014/06/23/us-usa-drones-memo-idUSKBN0EY1VP20140623, *archived at* http://perma.unl.edu/W3TX-9QQC; Dan Kedmey, *Americans Support Drone Strikes, Rest of World Begs to Differ*, TIME, July 15, 2014, http://time.com/2986118/drone-strike-poll-pew/, *archived at* http://perma.unl.edu/8E88-QQPS.

149. WENDELL BERRY, *A Citizen's Response to "The National Security Strategy of the United States of America," in* CITIZENSHIP PAPERS 1, 7 (2003).

150. *See* David Brooks, Op-Ed., *War of Ideology,* N.Y. TIMES, July 24, 2004, http://www.nytimes.com/2004/07/24/opinion/war-of-ideology.html, *archived at* http://perma.unl.edu/D6YB-FXBF.

stroy pernicious ideas such as those posited by extremist terrorist groups. When such a Hydra rears its heads, we must recognize that the only weapons truly suited to the task are superior ideas. In the past, the United States has been eager to punctuate its views with the use of force and subterfuge,[151] thus undermining the legitimacy of the ideals it would seek to promote. Continuing to do so only belies a hypocrisy that spawns further animosity. Where one head is lopped off, two more grow back in its place until the hatred and extremism has grown beyond what can be killed.[152] Although LARs are an incredible advancement which have their lawful place, they must be used wisely. While it is possible to envision future battlegrounds on which their use would be legal, the densely populated civilian theaters of current asymmetrical warfare are not such places.

151. James Meernik, *United States Military Intervention and the Promotion of Democracy*, 33 J. PEACE RES. 391, 391–92 (1996).

152. *The Deaths of Afghans: Civilian Fatalities in Afghanistan, 2001–2012*, NATION, http://www.thenation.com/afghanistan-database (last visited Oct. 8, 2014), *archived at* http://perma.unl.edu/UND4-MNAF (list of civilian casualties in Afghanistan, only one of the countries in which the U.S. is conducting operations); Robert Windrem & Richard Engel, *How Millions of Violent Deaths Feed the Cycle of Terrorism*, NBC NEWS (Oct. 21, 2013, 2:52 AM), http://investigations.nbcnews.com/_news/2013/10/21/21026837-how-millions-of-violent-muslim-deaths-feed-the-cycle-of-terrorism?lite&ocid=msnhp&pos=1, *archived at* http://perma.unl.edu/Q5HV-XV2U.