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Accountability Gap: Autonomous Weapon Systems and Modes of Responsibility in International Law

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ACCOUNTABILITY GAP: AUTONOMOUS WEAPON SYSTEMS AND MODES OF RESPONSIBILITY IN INTERNATIONAL LAW

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If the nature of a weapon renders responsibility for its consequences impossible, its use should be considered unethical and unlawful as an abhorrent weapon.1

I. INTRODUCTION

The development of unmanned systems that are remotely controlled and those with increased autonomy in making the decision to target or kill humans has been a worry to the international community for more than a decade now. The idea to develop Autonomous Weapon Systems (AWS)—machines that, once activated, are able to make the decision to kill humans without further human intervention—has sparked heated debates across the globe.2 The old adage, "technology is a double-edged sword"3 has never, in the history of weapons development, been more pertinent than it is with AWS. On the one hand, there are claims that AWS promise a potential to save lives—to make a change to the unacceptable current state of affairs in armed conflict and elsewhere—where force is used.4 On the other hand, however, there are compelling reasons to believe that the deployment of AWS will result in the violation of the right to life, dignity, and other important rights.5

1. LL.D, University of Pretoria, LL.M., Harvard Law School, LL.B., Midlands State University, Expert Member, International Committee for Robots Arms Control.


5. See, e.g., Robert Sparrow, Robotic Weapons and the Future of War, in NEW WARS AND NEW
Scholars, organizations and states are divided on how to respond to AWS.6 One of the major issues of concern relates to accountability. In this paper, I focus on the challenges of accountability that are posed by AWS and the possible solutions to such.

AWS without ‘Meaningful Human Control’ are unpredictable on the battlefield or wherever they are used.7 In the event of them violating the law—violations that are not intended by the person deploying them—it is not clear who is legally responsible, thereby creating an accountability gap.8 Accountability is important in international law because where there is an accountability gap, the victims’ right to a legal remedy is adversely affected.9 There are four forms of accountability that I am going to discuss in this paper: individual, command, corporate, and state responsibility.10 Under individual and corporate responsibility, there is civil and criminal liability.


7 Sparrow, Robotic Weapons and the Future of War, supra note 5, at 117, 125; Heyns, Extrajudicial, Summary or Arbitrary Executions, supra note 1, ¶ 94; Johnson, supra note 5, at 134; Kershner, supra note 5, at 239; Asaro, On Banning Autonomous Weapon Systems, supra note 5, at 697; Krishnan, supra note 5, at 98-99; Sharkey, supra note 5, at 86, 88-89; Docherty, supra note 2, at 1, 31; Wagner, The Dehumanization of International Humanitarian Law, supra note 5, at 1-3, 11, 25-26, 28, 39; HUMAN RIGHTS WATCH, SHAKING THE FOUNDATIONS, supra note 5, at 1–3.


9 Megan Burke & Loren Persi-Vicentic, Remedies and Reparations, in WEAPONS UNDER INTERNATIONAL HUMAN RIGHTS LAW 542-89 (Stuart Casey-Maslen ed., 2014) [hereinafter Burke].

In summary, the arguments I make in this paper are: the above mentioned forms of accountability are complementary to each other; they are not alternatives to the exclusion of the other.\(^11\) For example, if AWS create an accountability gap—as far as the individual criminal responsibility of those deploying AWS on the battlefield is concerned—that specific gap is neither closed by suing the responsible individuals under civil responsibility nor holding the manufacturing company liable under corporate responsibility.\(^2\)

Under individual responsibility, as long as there remains the possibility of AWS acting in an unpredictable manner, they may present an unresolvable challenge as far as the establishment of the accused person's mens rea is concerned. I also argue that the proposed system of 'split-responsibility' over use of a weapon—where responsibility is divided or shared between the fighter and other persons involved in the production of AWS like manufacturers—is not only foreign to international weapons law as the lex specialis on the use of weapons but also inappropriate and hence unwelcome.\(^3\)

As for command responsibility, I argue that it is inapplicable to the relationship between AWS and those deploying them. No analogy may be drawn between the relationship of human commander versus a human subordinate and that of the human fighter versus a robot. The continued referral of a person deploying AWS as a commander gives a misleading impression that AWS are somewhat combatants or fighters.\(^4\) AWS must be developed in a manner that they remain weapons in the hands of a fighter who is liable on the basis of individual responsibility in cases where crimes are committed.\(^5\) It should not, and must not, be a case of a commander and subordinate where the notion of command responsibility is invoked. Command responsibility is only applicable to the extent of the responsibilities of a human commander over his or her human subordinates involved in the deployment or use of AWS.\(^6\)

Persons involved in the production of AWS have their own responsibilities in the designing, manufacturing, selling and transferring stages.\(^7\) This is where cor-

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porate responsibility also comes into play. I note, however, that although corporate responsibility is a sound form of accountability, it has an inherent weakness of putting the onus on victims to bring cases against robot corporations which in some cases are registered in foreign countries thereby presenting insurmountable difficulties for the victims. Victims will not only face monetary challenges in terms of legal costs but will also be confronted by jurisdictional challenges.  

State responsibility is like an umbrella to all the forms of responsibility mentioned above: covering and enforcing corporate responsibility at the design stage of AWS up to selling or transferring stage, enforcing individual and command responsibility when the weapon is finally used on the battlefield or law enforcement situations. As one commentator has observed, when considering accountability over the actions of AWS, state responsibility "is the frame of reference for considering other forms of international responsibility." From a state responsibility perspective, I also acknowledge the genuine fear that AWS may make it possible for some states to deploy force against other states in non-attributable ways.

In conclusion, I recommend that the only way to address the accountability challenges that are presented by AWS is to make sure that humans exercise 'Meaningful Human Control' over weapons. Where 'Meaningful Human Control' is exercised, AWS will remain mere weapons in the hands of the warriors—that is exactly what they should be. In short, however, I propose that the notion of 'Meaningful Human Control' over the use of a weapon is only satisfied where the control that a fighter exercises over a weapon is to such a degree that the actions of an Autonomous Weapon System are entirely his—the system depends on the control of the human fighter to execute the 'critical functions' like the decision as to who to kill and legal calculations on the lawfulness of an attack.

II. THE IMPORTANCE OF ACCOUNTABILITY IN INTERNATIONAL LAW

It is necessary to appreciate the seriousness of the problems that are raised by AWS in terms of accountability before going into the details of arguments summarized above. I mentioned in the introduction that the potential accountability gap created by AWS will impact negatively on the victims’ rights to remedy. This is a very important area of international law. After all, without accountability, interna-
tional law is nothing but the proverbial *brutum fulmen*—a harmless thunderbolt.  

Steven Ratner observes that the purpose of international law is “not only in setting standards for governments, non-state actors and their agents, it is to prescribe the consequences of a failure to meet those standards.” International Humanitarian Law norms—some of them part of *jus cogens*—will mean nothing without accountability for failure to abide by them. Some scholars have observed that non-accountability of violations may pose a threat to the general maintenance of peace and security.

The issue of accountability is fundamental in international law because it is inherently connected to the victim’s right to remedy. In particular reference to remedies for violations as a result of use of certain weapons, Meagan Burke and Loren Persi-Vicentic categorically state that for both civilian and military victims:

[Unlawful] use of a weapon will give rise to a right to a remedy or reparation. Such unlawful use of weapons includes: any use of a weapon that has been outlawed in all circumstances, such as biological weapons or, at least for any State Party to the relevant treaty, anti-personnel mines or cluster munitions; the use of indiscriminate weapons or the indiscriminate use of a weapon as a method of warfare in an armed conflict; or the use of force that is disproportionate or excessive during law enforcement. Any wilful or negligent failure to protect victims from harmful weapons, especially explosive weapons delivered from drones, mines, sub-munitions or other victim-activated explosive devices has also been recognised […] as unlawful conduct tantamount to a rights violation.

To the list that is mentioned by Meagan Burke and Loren Persi-Vicentic, I add Autonomous Weapon Systems. The accountability challenges that are posed by AWS must be taken seriously as they threaten some aspects of victims’ right to remedy.

Victims of violations of International Humanitarian Law and International Human Rights Law have a right to remedy. In International Law, victims are understood to be “persons who, individually or collectively, have suffered harm, including physical or mental injury, emotional suffering, economic loss or substan-

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23. [Steven Ratner et al., *Accountability for Human Rights Atrocities in International Law: Beyond the Nuremberg Legacy* 3 (3rd. ed. 2009)].
27. Burke, *supra* note 9, at 554.
29. Id.
tional impairment” of their fundamental rights. In International Criminal Law, such harm is “as a result of the commission of crime” and may have been directed at the victim’s person, such as “property which is dedicated to religion, education, art or science or charitable purposes, and to their historic monuments, hospitals and other places and objects for humanitarian purposes.” In the case of AWS, it means that the victim whose rights are violated by AWS is entitled to a remedy—and the question is: In the case of AWS, are remedies available for the victim?

Given the importance of accountability, it is the paramount duty of states to provide victims with remedies; not only in circumstances where the state is directly responsible for the violations but even where the violations are committed by non-state actors. Thus, states have an obligation to protect human rights through the adoption of various measures. This obligation of the state has been confirmed several times by international human rights bodies. Courts have also held that as


32. Id.


a result of this duty, states must restore the rights of the victim by allowing them access to justice, information and reparation. 36

Likewise, and in the context of accountability and the right of victims to remedy, the Human Rights Committee, 37 the European Court of Human Rights, 38 and the African Commission on Human and People’s Rights 39 held that it is the state’s duty to give effect to victim’s rights by investigating human rights violations and bringing perpetrators to justice through prosecution. 40 As I will argue below, in certain circumstances, prosecution of crimes committed by AWS is difficult if not impossible.

A victim’s remedy has three components namely: access to justice—linked to the states’ responsibility to remedy victims; access to reparation—linked to state’s responsibility to prosecute offenders as a form of victim’s remedy. 41 Reaparation is also linked to corporate responsibility and individual responsibility since non-state actors also have an obligation to provide reparations upon their conviction. 42 Finally, victims also have a right to access information and to know the truth concerning the infringement of their rights. 43

Although all the above three components are equally important for victims to


37. See General Cmt. No. 31 on Art. 2 of the Covenant, supra note 35, para. 2–3.


41. SEIBERT-FOHR, supra note 24, at 40; Ken Obura, Duty to Prosecute International Crimes Under International Law, in PROSECUTING INTERNATIONAL CRIMES IN AFRICA 11–31 (Chacha Murungu & Japhet Biegon ed., 2011) [hereinafter Obura].


43. See the Basic Principles and Guidelines on the Right to a Remedy and Reparation for Victims of Gross Violations of International Human Rights Law and Serious Violations of International Humanitarian Law, G.A. Res. 60/147, 2005, ¶ 24, U.N. Doc. A/RES/60/147 (Mar. 21, 2006) [hereinafter Principles on the Right to a Remedy and Reparation for Victims]; see also G.A. Res. 217 (III) A, Universal Declaration of Human Rights, art. 8 (Dec. 10, 1948); ICCPR, supra note 34, art. 2; CERD, supra note 34, art. 6; ACHR, supra note 34, art. 7.
realize an effective remedy,\textsuperscript{44} in this paper I will focus on reparation which is directly linked to the accountability challenges posed by AWS. Reparation is a process which is meant to provide victims with justice; remove or redress to the extent possible, the damage done by the unlawful acts through prevention and deterrence.\textsuperscript{45}

The right to reparation is provided for in treaty law,\textsuperscript{46} it has been given as a remedy in various cases,\textsuperscript{47} recognized by legal scholars\textsuperscript{48} and is part of customary International Law.\textsuperscript{49} International criminal courts and tribunals have played a sig-

\textsuperscript{44} See SEIBERT-FOHR, supra note 24, at 38. For a remedy to be effective it must be prompt and accessible; there must be speedy and impartial investigation of any gross human right violation, adjudication and enforcement must be by an independent authority. See General Cmt. No. 31 on the Nature of the General Legal Obligation Imposed on States Parties to the Covenant, supra note 33, para. 15; The African Commission has interpreted the right to remedy in its Principles and Guidelines on the Right to a Fair Trial and Legal Assistance in Africa, Principle C (a), African Comm'n on Human and Peoples' Rights, Principles and Guidelines on the Right to a Fair Trial and Legal Assistance in Africa, Princ. C(a), ACHPR Doc. DOC/OS(XXX) (2001), http://hrlibrary.umn.edu/research/ZIM%20PrinciplesAnd_G.pdf. Nevertheless, when it comes to international courts and tribunals, it is apparent that they have been dawdling in their investigation, charging, and prosecution of gross violations that there is no promptness to talk about. A good example is that of the ICC case against Thomas Lubanga which took 9 years from the time of investigation to the time of conviction. Prosecutor v. Lubanga, Case No. ICC-01/04-01/06, Judgment Pursuant to Article 74 of the Statute (Mar. 14, 2012). During such a long period, it is highly probable that other victims died before seeing justice. However, while recognizing the significance of promptness in prosecution of international crimes as a form of remedy for victims, it can be argued that sometimes "justice delayed may be justice delivered." A simple consideration of the magnitude of international crimes points one to the fact that more time is needed in their prosecution if victims are to receive true justice. In that regard, there is a need to balance the aspiration for a prompt remedy for victims against the "stubborn but necessary processes that may cause delay." Alex Whiting, In International Criminal Prosecutions, Justice Delayed Can Be Justice Delivered, 50 HARV. INT'L L. J. 323, 323 (June 25, 2009). On courts' interpretation of an effective remedy see cases of Case Concerning Avena and Other Mexican Nationals, LaGrand Case, Case of the Caracazo v. Venezuela, Silver v. the UK. Case Concerning Avena and Other Mexican Nationals (Mex. v. U.S.), Judgment, 2004 I.C.J. 12, ¶¶ 131–38 (Mar. 31); LaGrand Case (Ger. v. U.S.), Judgment, 2001 I.C.J. 466, ¶ 125 (June 27); Case of the Caracazo v. Venezuela, Judgment, 2002 Inter-Am. Ct. H.R. (ser. C) No. 95, ¶ 115 (Aug. 29, 2002); Case of Silver and Others v. the United Kingdom (Article 50), Judgment, 61 Eur. Ct. H.R. (ser. A), ¶ 113 (Mar. 25, 1983).


\textsuperscript{46} ICCPR, supra note 34, art. 2(3); Rome Statute of the International Criminal Court, art. 75, Jul. 17, 1998, U.N. Doc. A/CONF.183/9 [hereinafter Rome Statute]; ICCPR, supra note 34, art. 3; CAT, supra note 34, art. 14; CERD, supra note 34, art. 6.

\textsuperscript{47} Achutan (on behalf of Banda) and Amnesty International (on behalf of Orton and Vera Chirwa) v. Malawi, Communication No. 64/92, 68/92, African Comm’n on Human and Peoples’ Rights, ¶ 12 (1995); Factory at Chorzów (Indemnities) (Ger. v. Pol.), Judgement, 1927 PCIJ (ser. A) No. 17, ¶ 29 (1928).


\textsuperscript{49} Jo-Anne Wemmers, Victim Reparation And the International Criminal Court, 16 INT’L REV. OF VICTIMOLOGY 123, 123 (2009).
significant role in recognizing and interpreting the right to reparation. They have significantly increased the possibility of victims to get adequate reparations, not only from states but also from individuals.

In international law, reparation comes in various forms. It includes restitution, compensation, rehabilitation, satisfaction, and effective prosecution of the offender(s) as already mentioned above.

Adequate prosecution of perpetrators is one of the areas that are likely to be adversely affected by the use of AWS. Prosecution of perpetrators reinforces the victims' rights to reparation especially in view of achieving deterrence and non-repetition. Prosecution of offenders is a victim's right and is inherent in states' general responsibility to ensure effective human rights protection which has been consistently emphasized by many commentators and decisions of judicial or quasi-judicial international bodies.

The duty of the state to prosecute is connected to the victims' rights to justice and it has long been accepted by both the UN Security Council and General

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50. Zegveld, supra note 48, at 79.
51. See Commentary on art. 58 of Draft Articles on State Responsibility, supra note 35, art. 58, Cmt. (1)-(4).
53. Although the term compensation is used varyingly in national legislation, in international law it is a form of reparation which is given to victims for any economically assessable damage caused by the gross violation of IHL or IHRL. See Principles on the Right to a Remedy and Reparation for Victims, supra note 43, ¶ 20; INT'L. COMM'N OF JURISTS, THE RIGHT TO A REMEDY AND TO REPARATION FOR GROSS HUMAN RIGHTS VIOLATIONS: A PRACTITIONER'S GUIDE Ser. No. 2, at 123 (2006) [hereinafter A PRACTITIONER'S GUIDE]. Many IHRL and IHL treaties provide for the right to compensation and jurisprudence has shown that compensation can be provided for physical or mental harm, loss of opportunities, material loss of earnings, moral damage and expenses incurred in vindicating one's rights following the gross violations. See ICCPR, supra note 34, art. 9(5); Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts (Protocol I), June 8, 1977, art. 91, opened for signature Dec. 12, 1977, 1125 U.N.T.S 3, 16 I.L.M. 1391 (1977); Convention for the Protection of Human Rights and Fundamental Freedoms, art. 5(5), as amended by Protocols 11 and 14, Nov. 4, 1950, Europ. T.S. No. 5 (entered into force Sept. 3, 1953); ACHR, supra note 34, art. 10; League of Arab States, Arab Charter on Human Rights, opened for signature May 22, 2004, art. 16, (entered into force Mar. 15, 2008), reprinted in 12 Int'l Hum. Rts. Rep. 893 (2005); Rome Statute, supra note 46, art. 85; Geneva Convention Relative to the Treatment of Prisoners of War, art. 68, Aug. 12, 1949, 6 U.S.T. 3316, 75 U.N.T.S. 135.
55. See Principles on the Right to a Remedy and Reparation for Victims, supra note 43, ¶ 4, Preamble ¶ 8.
56. Id.
57. See, e.g., CAT, supra note 34, art. 4; Extrajudicial, Summary and Arbitrary Executions, G.A. Res. 57/214, ¶ 6 (Feb. 25, 2003).
58. Rep. of Mr. Louis Joinet on the Question of the Impunity of Perpetrators of Human Rights
Assembly. The UN Commission on Human Rights, the Human Rights Committee, the Inter-American Court and Commission of Human Rights, European Court of Human Rights and the African Commission on Human and Peoples’ Rights have all emphasized the importance of states’ obligation to prosecute offenders in the fight against impunity on gross violations of human rights and humanitarian law.

When offenders are prosecuted there is the concept of satisfaction as a form of reparation, which is aimed at repairing the moral damage done to the victim when their rights were violated. Satisfaction can be done through judicial condemnatory judgments, admission of responsibility by the offender and a sincere apology both to the victim and the public. The former ICC prosecutor, Morino Ocampo, in his address to the court after conviction of Thomas Lubanga, suggested the stiffest punishment but stated that the Office of the Prosecutor was "willing to cut the sentence to 20 years if Lubanga offered a ‘genuine apology’ to victims of his crimes." Of course, in the case of AWS, the person who deployed the machine may offer the apology but it is not the same since he or she was not the person on the ground, the direct perpetrator of the crime—the robot was.

Likewise, tied to the prosecution of offenders, is the right to information that encompasses the right to truth. Under the human rights regime, the UN Human Rights Committee has reaffirmed the victims’ right to know the truth about the perpetrators, their accomplices and the motives thereof. The right to truth has

been held to be substantive,\textsuperscript{73} inalienable,\textsuperscript{74} and non-derogable right,\textsuperscript{75} which entails “knowledge as to how, when, why and by whom violations were committed.”\textsuperscript{76} To that end, states have a duty to disclose the truth to the victims and the public at large.\textsuperscript{77} Access to information about what transpired may be easy in case of AWS since they can leave a digital trail of all events.\textsuperscript{78} In as much as this is a positive aspect, victims may not appreciate, for example, discovering that it was a robot that made an ill-informed decision to kill their relative after mistakenly identifying him or her as a legitimate target. Insult upon injury, the robot cannot offer an apology.

III. AWS AND THE ACCOUNTABILITY GAP

In 2001, a scholar by the name of Perri was among the first to articulate some of the serious challenges when it comes to legal responsibility for actions of intelligent machines.\textsuperscript{79} He argued that where a machine attains a certain level of intelligence—to the extent of “making decisions by itself”—difficulties arise in imputing responsibility.\textsuperscript{80} The problem arises out of the fact that no matter how machines’ autonomy increases, they do not have moral agency.\textsuperscript{81}

Thus, commenting on the problem of legal responsibility, Kenneth Himma has observed that unless and until machines such as AWS have a free will and deliberative capability, no moral agency or legal responsibility can be attributed to them.\textsuperscript{82} In the absence of moral agency in AWS, it is impossible to hold them accountable for any wrongful acts.\textsuperscript{83} The question is who, then, is responsible in the event of such machines committing crimes?

Sparrow rightfully notes that the law demands that someone be held accountable for unlawful acts in war and the fact that AWS may never meet this condition makes their deployment unethical.\textsuperscript{84} To elucidate the impossibility of attributing
responsibility to AWS, Sparrow gives an analogy of the prohibition on the recruitment and use of child soldiers in combat. He considers that in as much as child soldiers are autonomous—even much more than AWS, they “lack full moral autonomy.” This vitiates their “understanding [of] the full moral dimensions of what they do”, therefore making child soldiers “not appropriate objects of punishment” and ineligible for playing a combatant role.

For the above stronger reason, the considerations that AWS can be more reliable than human beings is not the crux of the matter; for “what makes the attribution of responsibility especially problematic [in the case of child soldiers] is not that child soldiers are necessarily unreliable or unpredictable,” it is their lack of “moral responsibility that makes child armies especially terrifying.”

The heinous actions of child soldiers in countries like DRC, Angola, Liberia, and Uganda have also been explained in terms of children’s lack of moral responsibility. Moral responsibility, it is argued, is one step towards deterrence.

For many decades now and in terms of the International Criminal Law, accountability has been on the basis of individual and command criminal responsibility. The importance of individual criminal responsibility can never be overstated. In addition to Heyns’ list of human factors that influence individuals to refrain from killing others—especially unlawfully—it is the fear of prosecution as one of the legal consequences that may follow after the facts that force humans to exercise restraint.

More so, the concept of individual criminal responsibility has made it impossible for violators to claim superior orders as a defence. This will not apply in the

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86. Sparrow, *Killer Robots*, supra note 84, at 73.
87. *Id.* at 73.
88. See CUSTUMARY INTERNATIONAL HUMANITARIAN LAW, supra note 85, at Rule 136.
93. A/HRC/23/47, supra note 1, ¶ 57 (observing that humans have “built-in constraints... against going to war or otherwise using force which continue to play an important (if often not decisive) role in safeguarding lives and international security. Chief among these are unique human traits such as our aversion to getting killed, losing loved ones, or having to kill other people.”).
95. YORAM DINSTEIN, THE DEFENSE OF ‘OBEDIENCE TO SUPERIOR ORDERS’ IN INTERNATIONAL
case of AWS especially if a belligerent chooses to program them to commit crimes. If AWS are to be seen as taking the position of human combatants, one level where deterrence considerations have been directed for years is ultimately taken away.

In response to the argument that AWS with full or high levels of autonomy are unpredictable thereby posing a challenge of accountability, Arkin argues that it is possible with AWS to make “responsibility transparent and explicit, through the use of a responsibility advisor at all steps in the deployment of these systems.” The ‘responsibility advisor’ can be incorporated into AWS “for pre-mission planning and managing operator overrides.” Such a ‘responsibility advisor’ will require explicit acceptance and authorization before its use and advises in advance of any mission on the ethical responsibility of commanders and operators. When deploying AWS, such responsibility acceptance is possible at many levels. Acceptance starts with the “authoring [and translation] of the [ethical] constraints that provides the basis for implementing [IHL]”; verification that only military personnel are in charge of the system; it may be during “command authorization of the system for a particular mission”; and, where there is an “override responsibility acceptance”, that is where the operator changes “the system’s ability to use lethal force, either by allowing it when it was forbidden by the ethical controller, or by denying it when it was enabled.”

If this responsibility adviser will allow the fighter to verify targets—thereby being the human who makes the final decision on the release of force and against whom—and overrides AWS actions or choices in cases where they are not in line with international law, then such AWS would be acceptable since the fighter will be exercising ‘Meaningful Human Control’ that clearly establishes his or her responsibility.

More in line with Arkin’s argument, Wendell Wallach notes that there is a challenge in computing legal responsibilities for AWS’ actions where a number of individuals are involved from their production up to their deployment. He, however, refers to five rules that have been developed by practical ethicists and social

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98. According to Arkin, cited above, where a system is able to advise the operator of the critical functions it is about to execute and the operator approves, he or she assumes responsibility of all the resulting actions of the machine.
99. Arkin, supra note 97, at 77–82.
100. The notion of "Meaningful Human Control" was coined by NGO Article 36 in 2013. This notion is new in international law and there is no agreed definition. I have discussed how this notion should be defined in Thompson Chengeta, Defining Meaningful Human Control in Autonomous Weapon Systems, N.Y.U. J. INT’L L. & POL. (forthcoming 2016).
theorists who insist on the "the principle that humans cannot be excused from moral responsibility for the design, development or deployment of computing artefacts."\(^{102}\)

The rules provide as follows:

Rule 1: The people who design, develop or deploy a computing artefact are morally responsible for that artefact, and for the foreseeable effects of that artefact. This responsibility is shared with other people who design, develop, deploy or knowingly use the artefact as part of a sociotechnical system.

Rule 2: The shared responsibility of computing artefacts is not a zero-sum game. The responsibility of an individual is not reduced simply because more people become involved in designing, developing, deploying or using the artefact. Instead, a person's responsibility includes being answerable for the behaviours of the artefact and for the artefact's effects after deployment, to the degree to which these effects are reasonably foreseeable by that person.

Rule 3: People who knowingly use a particular computing artefact are morally responsible for that use.

Rule 4: People who knowingly design, develop, deploy or use a computing artefact can do so responsibly only when they make a reasonable effort to take into account the sociotechnical systems in which the artefact is embedded.

Rule 5: People who design, develop, deploy, promote or evaluate a computing artefact should not explicitly or implicitly deceive users about the artefact or its foreseeable effects, or about the sociotechnical systems in which the artefact is embedded.\(^{103}\)

Of particular importance to me is Rule 2 which acknowledges that in the development of weapons like AWS, various individuals are involved but that does not mean individual responsibility is "reduced simply because more people become involved in designing, developing, deploying or using the artefact."\(^{104}\) This supports the argument I put forward that accountability forms of responsibility are not alternatives to the exclusion of the other. Everyone has a role to play, and if an accountability gap is created in one form or mode of responsibility, it cannot be ignored on the basis that there are other persons who can be held responsible.

\(^{102}\) Id.


Ron Arkin also adds that it is a “roboticist’s duty to ensure that [AWS] are as safe as possible to both combatant and noncombatant alike.” This is agreeable as far as the responsibility of roboticists is concerned. However, the responsibilities of a roboticist do not make the responsibility of the final weapon user irrelevant. The gist of international weapons law is that the warrior is the one in control of his or her weapon, therefore, responsible for violations committed through that weapon. It may even be similar to the case of motor vehicle manufacturers—they put in place many things such as brakes, speedometers etc. in the vehicle to ensure that the vehicle is safe for driving. However, that does not negate the responsibilities of the driver.

A challenge arises with the final user because, in International Criminal Law, it would be an injustice to impute responsibility to fighters who deploy these systems when they are incapable of precisely predicting or fully controlling the behaviour of AWS once they are activated. In my view, there are two choices for combatants or fighters: use AWS when you can meaningfully control them or do not use them at all.

There are commentaters who argue that as far as AWS are concerned, “criminal responsibility of individuals can be established for commanders and operators on the basis of command responsibility.” To the same end, Arkin argues that in the case of AWS which are programmed to be ethical, “it should be fairly easy to satisfy and demonstrate” the culpability of the “commander” since “the robot’s beliefs can be well-known and characterized, and perhaps even inspected [. . . therefore] the responsibility returns to those who designed, deployed, and commanded the autonomous agent to act, as they are those who controlled its beliefs.” On various occasions, Arkin uses the term “human commander” when referring to those who deploy AWS.

From the arguments that have been made by scholars so far in connection

109. Arkin, supra note 97, at 76.
with accountability over the actions of AWS, there are four points that I am going to address: Firstly, whether accountability over AWS’s actions is possible under the individual responsibility mode; secondly, whether the International Criminal Law concept of command responsibility is and to what extent applicable to AWS; thirdly, whether the proposed notion of “split responsibility” over the actions of AWS is acceptable in international weapons law as the lex specialis on weapons,\textsuperscript{111} fourthly and finally, the role of corporate and state responsibility in establishing accountability for violations committed through AWS.\textsuperscript{112}

IV. INDIVIDUAL CRIMINAL RESPONSIBILITY AND THE CHALLENGES POSED BY AWS

“If there are recognizable war crimes, there must be recognizable criminals.”\textsuperscript{113}

Accountability of individuals for their unlawful acts is not a new concept of law; it stretches across various branches of law—from domestic law, International Human Rights Law, International Humanitarian Law, and International Criminal Law.\textsuperscript{114} As Steven Ratner observes, individual accountability is “a complex amalgam of law and a wide spectrum of sanctioning processes that transcends the orthodox divisions of subjects [of] international law.”\textsuperscript{115} Individual criminal responsibility is part of customary International Law\textsuperscript{116} and ensues whether unlawful acts are committed in international armed conflicts or in non-international armed conflict.

As was observed in the case of \textit{Prosecutor v Tadic}, violations of the law “entail individual criminal responsibility, regardless of whether they are committed in internal or international armed conflicts.”\textsuperscript{117} Thus, whether or not AWS are used in international or non-international armed conflict is of no effect as far as individual responsibility for their use is concerned.

By insisting that AWS are weapons and not combatants or fighters, it means that whenever a crime is committed as a result of the use of AWS, it is the individual who deployed it who is criminally liable.\textsuperscript{118} However, due to the increased lev-

\textsuperscript{111} \textit{Lex specialis} – is a principle containing a generally recognized rule of interpretation pursuant to which the more specific provision takes precedence over the more general one. Definition available at http://www.trans-lex.org/910000.

\textsuperscript{112} ICRC Report, \textit{supra} note 96, at 8.

\textsuperscript{113} See generally \textsc{Michael Walzer, Just and Unjust Wars: A Moral Argument with Historical Illustrations} (2015).


\textsuperscript{115} Ratner et al., \textit{supra} note 114, at 3.


\textsuperscript{118} NATHALIE WEIZMANN ET AL., \textsc{Autonomous Weapon Systems under International
els of autonomy in some AWS or those that have attained full autonomy, liability is not cast in stone.\textsuperscript{119} It is inevitable to start by outlining some of the fundamental elements of individual criminal responsibility.

Since time immemorial, wars have been fought by armies and armed groups under the authority of a commander(s) or leader(s).\textsuperscript{120} It was not uncommon that acts that were committed on an individual basis were covered by excuses such as "my commander ordered me to do so" or "I had no choice, it was the idea of the group."\textsuperscript{121} With the intention of ending such kind of impunity and holding individuals accountable for their actions, under the current concept of individual criminal responsibility, individuals can neither claim superior orders as a defence nor can they hide behind the group.\textsuperscript{122}

Individual criminal responsibility thus focuses on the commission of a crime by the individual.\textsuperscript{123} It is applicable where an individual \textit{directly} commits a crime\textsuperscript{124} or \textit{directly} contributes to it through ordering, planning, instigating, inciting, co-perpetration, joint criminal enterprise, aiding and abetting.\textsuperscript{125} According to Article 25 of the Rome Statute:

\begin{enumerate}
\item A person who commits a crime within the jurisdiction of the Court shall be individually responsible and liable for punishment in accordance with this Statute.
\item In accordance with this Statute, a person shall be criminally responsible and liable for punishment for a crime within the jurisdiction of the Court if that person:
\begin{enumerate}
\item Commits such a crime, whether as an individual, jointly with another or through another person, regardless of whether that other person is individually responsible;
\end{enumerate}
\end{enumerate}

\textsuperscript{119} ICRC Report, \textit{supra} note 96, at 1, 4, 8, 9, 15.

\textsuperscript{120} FRANCIS TREVELYAN MILLER & ROBERT SAMPSON LANIER, \textit{ARMIES AND LEADERS} 272 (describing U.S. Troops serving under a Major and Colonel).

\textsuperscript{121} See JONES, \textit{supra} note 25, at 459 (2003) (stating that superior orders are no longer a defense in international criminal law).

\textsuperscript{122} \textit{id.}


b) Orders, solicits or induces the commission of such a crime which in fact occurs or is attempted;

c) For the purpose of facilitating the commission of such a crime, aids, abets or otherwise assists in its commission or its attempted commission, including providing the means for its commission;

d) In any other way contributes to the commission or attempted commission of such a crime by a group of persons acting with a common purpose. Such contribution shall be intentional and shall either:

i) Be made with the aim of furthering the criminal activity or criminal purpose of the group, where such activity or purpose involves the commission of a crime within the jurisdiction of the Court; or

ii) Be made in the knowledge of the intention of the group to commit the crime;

e) In respect of the crime of genocide, directly and publicly incites others to commit genocide;

f) attempts to commit such a crime by taking action that commences its execution by means of a substantial step, but the crime does not occur because of circumstances independent of the person's intentions. However, a person who abandons the effort to commit the crime or otherwise prevents the completion of the crime shall not be liable for punishment under this Statute for the attempt to commit that crime if that person completely and voluntarily gave up the criminal purpose.126

The question that will be considered below is whether it will be possible to charge a fighter who deploys an Autonomous Weapon System that subsequently commits a crime in terms of Article 25 of the Rome Statute.127 Thilo Marauhn argues that Article 25(3)(c) of the Rome Statute is best suited to deal with designers and manufacturers of AWS.128 In order to agree or disagree with this statement, I will consider in what ways a designer or manufacturer can be said to have "aided, abetted or otherwise assisted in the commission of a crime" when the weapon is finally used. I will argue that this will depend first of all, on whether the crime allegedly abetted or aided by the designer or manufacturer is within the jurisdiction of the International Criminal Court.130 In any event, the commission of a crime re-

126. Rome Statute, supra note 46. Similar provisions are found in Article 7 of the Statute of the International Criminal Tribunal of the Former Yugoslavia and Article 6 of the Statute of the International Criminal Tribunal of Rwanda. (emphasis added)

127. See Rome Statute, supra note 46, art. 25.


130. Rome Statute, supra note 46, art. 5.
quires the proving of both the *actus reus* and *mens rea*.  

**A. Importance of *mens rea* and *actus reas* for individual responsibility**

It is important to note that in general, the basis for individual criminal responsibility hinges on a guilty criminal state of mind (*mens rea*) coupled with wrongful action (*actus reas*) of the perpetrator. In armed conflict, this is where a combatant or fighter, fully aware that certain conduct or weapon is prohibited by law, nonetheless proceeds to engage in that conduct or use that particular weapon. The idea of punishing only those with a guilty mind is well grounded in natural justice and human rights. As early as 1819, Bagshaw observed that the fact that "no man ought to be punished, except for his own fault" is a clear maxim of natural justice.

**B. Forms of participation for individual responsibility**

The forms of participation outlined in Article 25 of the Rome Statute have been interpreted by international courts most of which emphasize the need to make clear which form of liability is applicable to the accused person. The form of liability is of paramount importance for the court when it comes to sentencing. For example, "there may be an enormous difference in terms of sentencing between an instigator, an aider and abettor and a direct perpetrator of a completed offense." In terms of the jurisprudence of international courts and tribunals, a person who commits the crime is the perpetrator. It is important to note that there can be many perpetrators of one crime, as long as the actions of each person satisfy the

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133. See JONES, supra note 25, at 414–24.

134. See WILLIAM COBBETT, COBBETT’S PARLIAMENTARY HISTORY OF ENGLAND: FROM THE NORMAN CONQUEST, IN 1066 TO THE YEAR 1803 1079 (1819).


requisite substantive elements of the crime. In all cases, for individual criminal liability to be established, both *actus reus* and *mens rea* must be proved.

A person who instigates plans and orders the commission of the crime is the co-perpetrator. This includes a person(s) who, with full knowledge and intention, participates in a crime in what is referred to as the "common criminal purpose" doctrine. The activities of the person participating "must have a direct and substantial effect on the commission of the crime." The said conduct must also be performed with *mens rea*, knowledge that participation "will assist the principal in the commission of the criminal act." As far as co-perpetration is concerned, all the participants may have the same criminal intent while one or more of them executes the criminal conduct. Criminal intent can also be said to be present where participants had knowledge of the alleged criminal conduct or its planning and they intentionally furthered it. Even where one of the participants will act out of the common plan, if his actions were foreseeable, courts have held that the other participants will be held to have possessed the criminal intent.

In this regard, for persons involved in the production of AWS to be held as co-perpetrators, they must have been aware that a particular Autonomous Weapon System was going to be used to commit a crime and they made a conscious decision to provide the system to principal perpetrator all the same. Furthermore, they must also have been aware that the autonomous system was going to commit a specific crime, knowledge of which was shared with the one deploying the system. It can be argued that if the actions of AWS with full autonomy are unpredictable to the individual deploying them, they are as well unpredictable to the individual who manufactured or programmed the robot. Establishing a criminal state


140. JACQUELINE MARTIN & TONY STORY, UNLOCKING CRIMINAL LAW 18 (2015).

141. Rome Statute, supra note 46, art 25(b).


146. Id.

147. Id.

148. See Prosecutor v. Delalic et al., supra note 142, ¶ 326 (supporting this reasoning).

149. This is in line with the concept of Command Responsibility cited above.
of mind may be difficult if not impossible on all the levels of responsibility.

In relation to planning as part of co-perpetration, the manufacturer or programmer of the AWS would have helped in the preparation of the commission of a specific crime through manufacturing or programming a weapon in a specific way that would assist in the execution of a particular crime. Planning as a form of co-perpetration has thus been defined as the "designing the commission of the crime at both the preparatory and executive phases." Chances, where this will actually happen in terms of the development of AWS, are very slim.

Further, it is also important to remember that individual criminal responsibility arises on various levels. For example, political leaders have been held individually responsible for having directly influenced the commission of war crimes. This may point to a scenario where an individual who is involved in the production of AWS directly influences the commission of a crime; such an individual may be held individually responsible. Thus in both the ICTY and ICTR, "both leaders and executants' are held responsible." Leaders who make irresponsible decisions on the deployment of AWS may also be held responsible—the UN Security Council in Resolution 1329 of 30 November 2000 emphasized the prosecution of leadership figures for war crimes.

Nevertheless, as was noted in the trial judgement of Prosecutor v Delalic, responsibility of political leadership and other high ranking figures—in the case of AWS, political leadership and those involved in the production of the technology—does not excuse the responsibility of the "ordinary soldier" involved in the commission of the crime. In the case of AWS, the individual involved in the final deployment of the weapon.

In as much as international tribunals and courts may, as a matter of policy concentrate on the "big fish", "small fish" still need prosecution in national courts for example.

C. Actus reus and mens rea for participation

As far as the objective elements of actus reus and mens rea in a criminal act

151. See the case of Prosecutor v Karadžić et al., Case No. IT-95-5-D, In the Matter of a Proposal for a Formal Request for Deferral to the Competence of the Tribunal Addressed to the Republic of Bosnia and Herzegovina in Respect of Radovan Karadžić, Ratko Mladic and Mico Stanisic, ¶ 25 (Int'l Crim. Trib. for the Former Yugoslavia May 16, 1995); see also John R.W.D. Jones & Steven Powles, supra note 25, at 410 (observing that in international criminal tribunals and courts, there is always a 'subtle and often complex interplay between different levels of responsibility and policy choices to be made as to whom it is most appropriate to prosecute...').
152. Statute of the International Criminal Tribunal For the Former Yugoslavia, article 7(1) (May 25, 1993) [hereinafter ICTY Statute] and Statute of the International Tribunal for Rwanda, article 6(1) (Nov. 8 1994) [hereinafter ICTR Statute].
154. See the case of Prosecutor v. Delalic, supra note 142, ¶ 1283.
are concerned, the Tadic case observed that for actus reus of perpetrators in a common criminal purpose or joint criminal enterprise, there is no need for an organized military, political or administrative structure. All that is needed is "the existence of a common plan, design or purpose which amounts to or involves the commission of a crime." It is not necessary, for example, for the plan to have pre-existed before the perpetration of the crime since "common plan or purpose may materialise extemporaneously and be inferred from the fact that a plurality of persons acts in unison to put into effect a joint criminal enterprise." The manufacturer or developer of AWS does not need to be involved in the commission of a specific crime as long as there is some form of "contribution to the execution of the common plan" by the individual deploying AWS.

As far as the mens rea element of perpetrators in a joint criminal enterprise is concerned, what needs to be satisfied is that the accused person(s) had "intent to perpetrate a certain crime; or intent to pursue the common criminal design plus foresight that those crimes outside the criminal common purpose were likely to be committed."

In the case of aiders and abettors, regarding actus reus, the accused must have carried out acts that were "specifically directed to assist, encourage or lend moral support to the perpetration of a certain specific crime." The support that was given by the aider or abettor must also have "a substantial effect upon the perpetration of the crime" as already indicated above. Since some commentators have pointed out that manufacturers and designers of AWS may be perfectly charged under Article 25(3)(c) of the Rome Statute, questions may arise as to how one would prove that there was a common plan between the manufacturer and the individual who deploys AWS that subsequently commit crimes. However, according to the jurisprudence on aiding and abetting, an "aider and abettor is always an accessory to a crime perpetrated by another person" and because of that "no proof is required of the existence of a common concerted plan, let alone of the pre-existence of such a plan." The person deploying the AWS who is the principal may not even know about the accomplice’s [manufacturer or programmer’s] contribution. All that is needed is that there was a contribution to the commission of the crime with "knowledge that the acts performed by the aider and abettor assist the commission of a specific crime by the principal."

157. Id.
158. Id.
161. Id.
162. Id.
166. Id.
The above interpretations of aiding and abetting by international criminal tribunals also point to the argument I emphasize in this paper that while the responsibility of manufacturers, programmers, and other actors is important, it does not, however, repudiate the responsibilities that are borne by the person involved in the final deployment of the weapon. The number one rule that governs the final user of the weapon is that the means and methods of warfare are not unlimited. Belligerents and specifically combatants may only choose weapons whose effects they can control. If there is a possibility that AWS, on account of high levels of autonomy or full autonomy, will act in an unpredictable way – unpredictability that may result in the commission of crimes – then the fighter or combatant has no ‘meaningful control’ over the weapon since he or she cannot limit its effects.

D. The challenges posed by AWS to individual responsibility

But it would be still a greater injustice to lay blame and vindictive punishment of a guilty [manufacturer, programmer, robotician] upon an innocent and inoffensive being [the combatant or fighter], for, in this case, the guilty would be exempted from their punishment, and the innocent unjustly suffer for it; which holds up to view two manifest injustices; the first consists in not doing justice to the guilty, and the second in actually punishing the innocent.

There are two issues that I note concerning the concept of individual criminal responsibility and AWS technology. Firstly, it has been pointed out that AWS may be too complex to the extent that those who deploy them may not understand how

167. ICTY Statute, supra note 152.
168. For example Article 25(4) of the Rome Statute clearly provides that the provision relating to individual criminal responsibility shall not affect other forms of responsibilities in international law like state responsibility.
170. Protocol additional to the Geneva Conventions of 12 August 1949, and relating to the protection of victims of international armed conflicts (Protocol I), art. 51(4) (c).
171. However, Schmitt argues that “autonomous weapon systems are not unlawful per se. Their autonomy has no direct bearing on the probability they would cause unnecessary suffering or superfluous injury, does not preclude them from being directed at combatants and military objectives, and need not result in their having effects that an attacker cannot control.” See Michael Schmitt, Autonomous weapon systems and international humanitarian law: A reply to the critics HARV. NAT’L SEC. J. 35 (2013).
172. Allen, supra note 134, at 87.
they function.\textsuperscript{173} Marco Sassoli disagrees, noting that there is no need for individuals deploying AWS to understand the complexities of their programming, rather, all they need to understand is the result of what an Autonomous Weapon System can do and not do.\textsuperscript{174}

If Sassòli’s argument\textsuperscript{175} is followed to its logical conclusion, it does not hold water. If AWS are said to be unpredictable, how then can one understand what they can and cannot do? Fighters may learn all year what AWS can and cannot do but as long as there remains a chance of AWS being unpredictable once they are deployed,\textsuperscript{176} then the individual that deploys an Autonomous Weapon System may not anticipate all the actions of the robot. As a result of that unpredictability, it is difficult if not impossible to establish a guilty mind, therefore, diminishing the culpability of the individual deploying it.\textsuperscript{177} Even in the development of AWS, there are reports that it is impossible to anticipate all situations that AWS may face on the battlefield, therefore, making it hard to effectively control them or understand all they can and cannot do as suggested by Sassòli.\textsuperscript{178}

In the 2014 CCW Expert meeting on AWS, the US delegation suggested that there should be thorough training of individuals who deploy AWS.\textsuperscript{179} That is a valid point. However, and as pointed out above, as long as there remains an iota of unpredictability of how the robot will act, then imputing responsibility to the one who uses the weapon will always be problematic.\textsuperscript{180}

Some commentators have suggested strict responsibility for those who deploy AWS.\textsuperscript{181} However, in International Criminal Law and in view of the rules of fairness and natural justice, such an approach will vitiate the rights of the accused person.\textsuperscript{182} It would be unfair for governments to develop weapons that are sophisticated and highly unpredictable once they are deployed, with input from many actors like roboticists, manufacturers, programmers, engineers, etc. and put all the blame


\textsuperscript{174} Marco Sassòli, Autonomous weapons and international humanitarian law: Advantages, Open Technical Questions and Legal Issues to be Clarified, 90 INT‘L L. STUD. 324 (2014).

\textsuperscript{175} Id.

\textsuperscript{176} Nathalie Weizmann et al., supra note 118, at 24.

\textsuperscript{177} See MINISTRY OF DEFENCE, DEVELOPMENT, CONCEPTS AND DOCTRINE CENTRE, THE UK APPROACH TO UNMANNED AIRCRAFT SYSTEMS, 2011, JDN 2-11, ¶ 510 (U.K.).


\textsuperscript{180} See MINISTRY OF DEFENCE, supra note 177, ¶ 510.

\textsuperscript{181} Marauhn, supra note 108, at 3.

\textsuperscript{182} Allen, supra note 134, at 87.
on the deploying individual.\textsuperscript{183} This is where other scholars suggest a system of splitting responsibility, from the roboticist up to the individual who deploys the machine.\textsuperscript{184} This suggestion is addressed below.

The second point concerning the use of AWS and the concept of individual criminal responsibility relates to the watering down of the power of deterrence as far as the individual responsibility of soldiers on the ground is concerned.\textsuperscript{185} As mentioned above, individual criminal responsibility deters the foot soldier at an individual level – neither can he or she claim superior orders nor can he or she hide behind a group.\textsuperscript{186} Thus in armed conflict, deterrence from committing crimes operates on two levels: i) at the commanding level, where commanders do not give criminal or unlawful orders for fear of being held individually responsible.\textsuperscript{187} Commanders also ensure that their subordinates are not committing crimes by preventing, stopping or punishing those who have committed crimes.\textsuperscript{188} ii) At the primary level, where the individual fighter on the ground refrains from committing crime because they are aware they can be held individually liable.\textsuperscript{189}

Now, where the individual soldier is replaced by an Autonomous Weapon System—a bloodless robot with no sense of self-preservation, fear of prosecution after the fact or punishment by the commander—an important part of deterrence is watered down.\textsuperscript{190}

In view of the idea of protecting and saving lives, Heyns argues that soldiers in armed conflict do not automatically kill because they have a right to kill legitimate targets.\textsuperscript{191} When faced with a target, human soldiers rethink whether it is nec-

\textsuperscript{183} See Allen, \textit{supra} note 134, at 87(arguing that punishment must come only when one is to blame).

\textsuperscript{184} See Nathalie Weizmann et al., \textit{supra} note 118, at 25 (noting that Heyns and other scholars' approach on split responsibility is criticized "for violating the fundamental principle that no penalty may be inflicted on a person for an act for which he or she is not responsible.").

\textsuperscript{185} See, Ezio Di Nucci and Filippo Santoni de Sio, Drones and Responsibility: Legal, Philosophical and Socio-Technical Perspectives on Remotely Controlled Weapons 22-24 (2016).

\textsuperscript{186} Yoram Dinstein, The Defence of 'Obedience to Superior Orders' in International Law 80–81 (1965); Jones, \textit{supra} note 25, at 459. However, I note that there are scholars who argue that there are many factors that contribute to an individual committing a crime and in many cases fear of prosecution is not much of a deterrent factor. Notwithstanding such arguments, there is wide agreement that fear of prosecution plays its part as far as deterrence is concerned.

\textsuperscript{187} See Rome Statute, \textit{supra} note 46, art. 28; see also T. Markus Funk, Victims' Rights and Advocacy at the International Criminal Court (2010) 16 n.28.

\textsuperscript{188} See Rome Statute, \textit{supra} note 46, art. 28; see also T. Markus Funk, \textit{supra} note 187, at 16 n.28.

\textsuperscript{189} See Rome Statute, \textit{supra} note 46, art. 25; see also T. Markus Funk, \textit{supra} note 187, at 16 n.28.

\textsuperscript{190} T. Markus Funk, \textit{supra} note 187, at, 16 n.28.

necessary to kill that legitimate target in that particular circumstance.\textsuperscript{192} This is not to say that this has any bearing on individual criminal responsibility but just to note that there is a lot of consideration that goes on before a human soldier pulls the trigger.\textsuperscript{193} The same happens, albeit not always, before a human soldier commits a crime. There is, at least, some consideration of the criminal sanction that will follow.\textsuperscript{194} This is not the case with AWS. The situation will be worse where an individual will specifically program the robot to commit crimes. There is no guarantee that such situations will not arise because once the technology is available, conscience will only be the limit and conscience fails us many times.

As far as the notion of individual responsibility and AWS is concerned, it can be summarized that persons involved in the production of AWS up to the final user of the system can be held individually responsible.\textsuperscript{195} The pillars of criminal liability - \textit{mens rea} and \textit{actus reas} - must be satisfied in all cases.\textsuperscript{196} For designers, manufacturers, and other actors, it is likely that their prosecution may be in terms of the domestic law in domestic courts. In the event, however, that they are aids and abettors to the commission of a crime within the jurisdiction of the International Criminal Court, for example, satisfying all the constitutive elements of aidsers and abettors, then, they can be prosecuted at the international level.\textsuperscript{197} In terms of international law accountability principles, the responsibility of a particular person does not affect the responsibility of another.\textsuperscript{198} In other words, the fact that a manufacturer has certain responsibilities does not mean the end users do not have responsibilities.\textsuperscript{199} For the end user - the fighter or combatant deploying the weapon - the golden rule is that he or she must never use a weapon whose effects he or she cannot control.\textsuperscript{200} The combatant or fighter must only use those weapons that do not obfuscate his or her responsibilities under international law.\textsuperscript{201} To that end,
the combatant must be in “Meaningful Human Control” of the weapon. “Meaningful Human Control” of a weapon in terms of the responsibilities of the combatant or fighter deploying it is where all the decisions to employ lethal force are made by the fighter in real time and there is an abort function. This eliminates the question of unpredictability of AWS – an issue that presents an accountability gap in terms of the responsibility of the weapon user.

V. COMMAND RESPONSIBILITY AND AWS

As indicated above, there are commentators who suggest that command responsibility can be used to establish the responsibility of those who deploy AWS. It is not uncommon that in the debate on AWS, some commentators refer to persons deploying AWS as the commanders while the Autonomous Weapon Systems are referred to as agents. This gives an impression that AWS are replacing the human fighters as robot combatants. I object to this idea. Hereupon, I consider whether the notion of command responsibility—a concept founded and developed to govern the relationship between a human commander and a human subordinate—can be used to govern this new relationship between a human commander and a robot.

To ascertain the applicability of command responsibility to the case of AWS, it is inevitable to start by explaining what this notion entails. Command responsibility is an International Criminal Law mode of imputing responsibility that has been developed in the jurisprudence of various international criminal tribunals and courts. Command responsibility is part of customary International Law and has been considered an important tool as far as reinforcing deterrence and countering impunity is concerned. Command responsibility is where a commander is held responsible for actions of her or his subordinates by virtue of her or him failing to prevent or punish the commission of crimes by the subordinates.

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203. MINISTRY OF DEFENCE, supra note 177, ¶ 510 (discussing the issues of predictability of AWS, suggesting unpredictability); see Directorate-General for External Policies of the Union, Pol'y Dept., Human Rights Implications of the Usage of Drones and Unmanned Robots in Warfare, at 39 (May 2013); GENEVA ACAD. OF INT’L HUMANITARIAN LAW, supra note 8, at 24; REPORT OF THE ICRC EXPERT MEETING, supra note 7, at 2.

204. Roff, supra note 108, at 14; Schmitt, supra note 108, at 33; Marauhn, supra note 20, at Part E.

205. See generally Arkin et al., supra note 110.

206. Id.

207. Id. at 3–5.

208. Swart, supra note 92, at 88–89.


210. FUNK, supra note 187, at 16 n.28.

211. Swart, supra note 187, at 88; see INT’L CRIMINAL LAW SERV., MODES OF LIABILITY: SUPERIOR RESPONSIBILITY 3–7,
The idea of command responsibility goes back to as early as the 15th century when in 1439, Charles VII of Orleans promulgated a law stating that:

The King orders that each captain or lieutenant be held responsible for the abuses, ills, and offences committed by members of his company, and that as soon as he receives any complaint concerning any such misdeed or abuse, he bring the offender to justice . . . If he fails to do so or covers up the misdeed or delays taking action, or if, because of his negligence or otherwise, the offender escapes and thus evades punishment, the captain shall be deemed responsible for the offence as if he had committed it himself and shall be punished in the same way as the offender would have been.212

The modern form of command responsibility was clearly spelt out after the World Wars and during the prosecution of war criminals.213 For example, after World War I, the Commission that was tasked to work on issues of responsibilities of those responsible for the war noted and emphasized that rank and position does not excuse one from criminal liability but rather can be a basis for it.214 The position of a commander or superior can also be used to establish individual responsibility for example where the commander ordered, aided and abetted the commission of a crime.215 There is a number of cases after World Wars I and II that clearly spells out the duties of the commander as far as his or her obligation towards the conduct of subordinates is concerned.216

It was, however, only in 1977 that the concept of command responsibility was included in a binding international treaty—Additional Protocol I to the Geneva Conventions of 1949.217 In Article 86 (2), it provides that the fact that the unlawful act was committed by a subordinate does not absolve the superior of responsibility when the commander “knew or had information which should have enabled” him

http://wcjp.unicri.it/deliverables/docs/Module_10_Superior_responsibility.pdf.

212. THEODOR MERON, HENRY’S WARS AND SHAKESPEARE’S LAWS: PERSPECTIVES ON THE LAW OF WAR IN THE LATER MIDDLE AGES 149 n.40 (1993) (citing Meron’s translation of LOUIS GUILLAUME DE VILEVAULT & LOUIS G.O.F. DE BREQUIGNY, ORDONNANCES DES WIS DE FRANCE DE LA TROISIEME RACE (1782)).


to know that subordinates were committing crimes and did not take feasible steps to stop or prevent them.218

The modern form of command responsibility is contained in Article 28 of the Rome Statute—applicable to both military and civilian commanders.219 Article 28 of the Statute provides that in addition to other grounds of criminal responsibility under [the Rome] Statute for crimes within the jurisdiction of the [ICC]:

a) A military commander or person effectively acting as a military commander shall be criminally responsible for crimes within the jurisdiction of the Court committed by forces under his or her effective command and control, or effective authority and control as the case may be, as a result of his or her failure to exercise control properly over such forces, where:
   i) That military commander or person either knew or, owing to the circumstances at the time, should have known that the forces were committing or about to commit such crimes; and
   ii) That military commander or person failed to take all necessary and reasonable measures within his or her power to prevent or repress their commission or to submit the matter to the competent authorities for investigation and prosecution.

b) With respect to superior and subordinate relationships not described in paragraph (a), a superior shall be criminally responsible for crimes within the jurisdiction of the Court committed by subordinates under his or her effective authority and control, as a result of his or her failure to exercise control properly over such subordinates, where:

218. Geneva Convention Protocol I, supra note 53, art. 86(2). Likewise, Article 87 of Additional Protocol I also provides that:

1. The High Contracting Parties and the Parties to the conflict shall require military commanders, with respect to members of the armed forces under their command and other persons under their control, to prevent and, where necessary, to suppress and to report to competent authorities breaches of the Conventions and of this Protocol.
2. In order to prevent and suppress breaches, High Contracting Parties and Parties to the conflict shall require that, commensurate with their level of responsibility, commanders ensure that members of the armed forces under their command are aware of their obligations under the Conventions and this Protocol.
3. The High Contracting Parties and Parties to the conflict shall require any commander who is aware that subordinates or other persons under his control are going to commit or have committed a breach of the Conventions or of this Protocol, to initiate such steps as are necessary to prevent such violations of the Conventions or this Protocol, and, where appropriate, to initiate disciplinary or penal action against violators thereof.

Id. at art. 87(1)–(3). See George W. Mugwanya, The Contribution of the International Criminal Tribunal of Rwanda to the Development of International Criminal Law, in PROSECUTING INTERNATIONAL CRIMES IN AFRICA 63, 88 (Chacha Murungu & Japhet Biegon, eds., 2011).

i) The superior either knew, or consciously disregarded information which clearly indicated, that the subordinates were committing or about to commit such crimes;

ii) The crimes concerned activities that were within the effective responsibility and control of the superior; and

iii) The superior failed to take all necessary and reasonable measures within his or her power to prevent or repress their commission or to submit the matter to the competent authorities for investigation and prosecution.\(^220\)

According to Thilo Marauhn, Article 28 of the Rome Statute on command responsibility is best suited to deal with programmers and operators of AWS since they are "much closer to 'effective command and control'" as required under command responsibility.\(^221\) As will be discussed below, this may be a wrong approach to responsibility for AWS—the concept of command responsibility as developed under international criminal law and as contained in Article 28 of the Rome Statute may not be applicable to a human-machine relationship.\(^222\)

As interpreted by courts, command responsibility provides that a commander may only be held responsible where he or she "knew or should have known" that his or her subordinates were about to or are committing a crime and the commander fails to take action to prevent or stop them or that no punishment was meted against the perpetrators after commission.\(^223\)

Furthermore, in order to be held accountable for the actions of his or her subordinates, the commander must have "exercised effective control" over them.\(^224\) The ICTY, ICTR and the ICC have articulated some elements of what constitutes effective control for the commander to be held responsible.\(^225\) There must be a superior-subordinate relationship between the commander and the combatants or fighters\(^226\) that allows the commander to control his or her subordinates\(^227\) while

\(^220\) Rome Statute, supra note 46, art. 28 (emphasis added); see ITCR Statute, supra note 152, art. 6(3); ICTY Statute, supra note 152, art. 7(3); see also Murungu, supra note 142, at 114–17.

\(^221\) Marauhn, supra note 20, at Part D.

\(^222\) Rome Statute, supra note 46, art. 28.


\(^225\) See supra note 223-24 and accompanying text.

\(^226\) Prosecutor v. Bemba, Case No. ICC-01/05-01/08, Decision Pursuant to Article 61(7)(a) and (b) of the Rome Statute on the Charges of the Prosecutor Against Jean-Pierre Bemba Gombo, ¶ 417 (June 15, 2009), https://www.icc-cpi.int/CourtRecords/CR2009_04528.PDF; JONES, supra note 25, at
the subordinates depend on his or her orders. The question, therefore, is whether this mode of responsibility is applicable to AWS.

A. Inapplicability of command responsibility to AWS

I disagree with commentators who suggest that responsibility for the actions of AWS can be ascertained by resorting to the rules of command responsibility. I disapprove of the labelling of Individuals who deploy AWS as commanders and AWS as agents or combatants. Whether scholars who do this do it intentionally or unwittingly, referring to individuals who deploy AWS as commanders give the impression that AWS are the combatants or fighters. AWS must not be referred to or treated as combatants or fighters. They must be weapons and when they are developed, they must not be given autonomy or functions that make them cease being weapons but robot combatants.

I, therefore, argue that the concept of command responsibility cannot and should not be applied to AWS. This is so because in International Criminal Law and International Humanitarian Law, command responsibility as a mode of computing criminal liability has been introduced and developed as a concept governing the relationship between a human commander and a human subordinate. Referring to the person who deploys an Autonomous Weapon System as a commander is wrong and misleading. Even the simple literal meaning of a commander states that it is an individual in authority over a body of troops during a military operation. In IHL and International Criminal Law, a commander has been understood to be a natural person exercising authority over natural persons in a military opera-

See generally Arkin et al., supra note 110.

231. Rome Statute, supra note 46, art. 28. In terms of international law rules on treaty interpretation, surely, the drafters of the Rome Statute and other treaties providing for command responsibility did not intent this concept to apply to a relationship between a human commander and a machine. A weapon cannot be a subordinate in the strict sense of the word.

tion. Likewise, Article 28 of the Rome Statute uses terms such as "forces" and "subordinates" who are capable of being subjected to prosecution and punishment. That alone shows that the drafters of the Rome Statute clearly intended and rightly so, for the concept to be applied to a *human to human* relationship.

More so, a consideration of the key elements of command responsibility referred to above clearly shows that it is a concept that was developed strictly to govern the relationship between *humans* on the battlefield. In order for a commander to be held responsible for the actions of his or her subordinate, there are three important elements that should be satisfied:

i) That the commander knew or ought to have known that crimes were about to or were being committed by his or her subordinates;

ii) That the responsible commander failed to prevent or stop commission of the crimes by his or her subordinates;

iii) And that the commander did not punish the subordinate after the fact.

The above elements have been developed by courts over the years and they are the thumb rule when establishing command responsibility in any court. Now, the first two elements refer to commanders and subordinates, terms that have consistently been used to refer to humans, not machines. Furthermore and more importantly, the third element refers to the duty of the commander to punish his or her subordinates when they commit crimes. As I have mentioned above, machines have no moral agency and for obvious reasons cannot be punished. This shows clearly that when it was introduced and developed, the concept of command responsibility was and still is only meant to cover *human to human* relationships on the battlefield. Of course concepts of law are sometimes extended and fine-tuned to cover and address new situations but in the case of AWS and the concept of command responsibility, this cannot and should not be done.

Thus, in regard to the concept of command responsibility and AWS, Peter Asaro also observes that:

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233. JONES, supra note 25, at 424; Smidt, supra note 213, at 168–69, 176.

234. Rome Statute, supra note 46, art. 28.


236. Rome Statute, supra note 46, art. 28; see also Geneva Convention Protocol I, supra note 53, arts. 86(2), 87.


238. See METTRAUX, supra note 16, at 5–11.

239. Rome Statute, supra note 46, art. 28.

240. See supra notes 81–83 and accompanying text.

241. See Geneva Convention Protocol I, supra note 53, at. 86(2) and 87; Rome Statute, supra note 46, art. 28; see also Asaro, supra note 5, at 700–01.
The nature of command responsibility does not allow one to abdicate one's moral and legal obligations to determine that the use of force is appropriate in a given situation. One might transfer this obligation to another responsible human agent, but one then has a duty to oversee the conduct of that subordinate agent. Insofar as autonomous weapon systems are not responsible human agents, one cannot delegate this authority to them.\textsuperscript{242}

The only instance where the issue of command responsibility is relevant is when the commander or civilian who supervises the individual programming or deploying an AWS knew or should have known that his or her subordinate was programming or using an AWS in an unlawful manner and did nothing to prevent or stop his or her subordinate or punish them after the fact.\textsuperscript{243} This is just the same line of reasoning in relation to other weapons.

The argument I maintain in this case is that AWS should be weapons and those who deploy them are the warriors. From a legal perspective, AWS cannot and should not commit crimes. As Seneca observed, "a sword is never a killer, it is a tool in the killer's hands."\textsuperscript{244} Therefore, if this is a case of a warrior and his weapon, to establish liability of the combatant or fighter over the use of an AWS, the correct mode of imputing criminal liability is individual criminal responsibility.\textsuperscript{245} Command responsibility is restricted to the situation highlighted above, where a command of the person who used an AWS is liable for having failed to prevent, stop or punish his subordinate in relation to the use of AWS.

Nevertheless, as discussed above, AWS present serious challenges to the concept of individual criminal responsibility if they have full autonomy or high levels of autonomy to the extent that the weapon bearer is no longer exercising "Meaningful Human Control." Meaningful control over AWS by the fighter or combatant is thus emphasized. Michael Schmitt however, expresses a different view as far as control of weapons during their use is concerned. He states as follows:

The mere fact that a human might not be in control of a particular engagement does not mean that no human is responsible for the actions of the autonomous weapon system. A human must decide how to program

\textsuperscript{242} Asaro, supra note 5, at 701.
\textsuperscript{243} See Schmitt, supra note 108, at 33.
\textsuperscript{244} Id. at 1 (quoting Seneca).
\textsuperscript{245} Sassoli, supra note 15, at 324–25. Although Sassoli uses the term 'commander' to refer to the individual deploying the AWS, he supports the above noted argument when he states that [\textit{it} is obvious that a commander deploying autonomous weapons must understand how they function, just as for any other means and method of warfare. In my view, the responsibility of such a commander is not a case of—nor is it analogous to—command responsibility, but a case of direct responsibility, just as that of a soldier firing a mortar believing that it can land only on the targeted tank, but which will kill civilians he knows are following the tank. This is a question of the \textit{mens rea}, intent and recklessness with which criminal lawyers are familiar.

\textit{Id.} at 324.
Like Sassoli, Schmitt also ignores the problem of unpredictability of AWS with full autonomy or high levels of autonomy and functioning in unstructured environments. If followed to its logical conclusion, Schmitt’s argument is that once one has programmed an AWS and deployed it, all the eventual actions of the AWS are attributable to the programmer or the individual deploying it. In this regard, Schmitt’s argument suggests that programming of an AWS alone is sufficient control by the weapon user leading to responsibility for all ensuing acts. This idea has a chilling effect of throwing the important element of mens rea out of the window and putting in place some form of “strict criminal liability.” It suggests that once programmed all actions of AWS are foreseeable. This is arguably not true, since there can be situations where a combatant with no intentions to commit any crime programs and deploys an AWS to kill legitimate targets but the system ends up killing innocent civilians. AWS with full autonomy, for example, will make other important decisions once they are deployed—decisions that may not be in line with the intentions of the person deploying them. The situation is even more horrendous where the system does not allow or need human intervention once it is activated. In those circumstances, establishing the important element of mens rea becomes difficult.

Thus, contrary to what Schmitt seems to suggest, the idea of control over the weapon one uses is central to their responsibility. For it to be meaningful control, programming alone is not sufficient. There is a need for some form of supervision after activation. Such supervision must be in real time. The actions of an Autonomous Weapon System must be well within the control of a human combatant who approves targets, prevent or abort missions whenever the situation requires.

VI. INAPPROPRIATENESS OF THE PROPOSED CONCEPT OF ‘SPLIT RESPONSIBILITY’

Arguments have been made that the control of AWS is done by various stakeholders, such as manufacturers, programmers, roboticists, and other players in the development of AWS; therefore, the need to take into account a number of individuals when assigning responsibility for their actions. Other scholars have thus

247. Id. at 16–17.
248. See id. at 16–17, 33.
249. See supra note 246–48 and accompanying text.
251. Id. at 16–17.
252. See id.
253. See, e.g., Sassoli, supra note 15, at 324–25; Marauhn, supra note 20, at Part D.
255. Heyns, supra note 1, ¶ 79.
256. Id. ¶ 81.
suggested the sharing and splitting of responsibility among all these actors.\footnote{Noel Sharkey, \textit{Killing Made Easy: From Joysticks to Politics}, in \textit{ROBOT ETHICS: THE ETHICAL AND SOCIAL IMPLICATIONS OF ROBOTICS} 111, 123-24 (Patrick Lin et al., eds., 2010); Sparrow, \textit{supra} note 84, at 69-73.}

For example, in the 2014 Convention on Conventional Weapons expert meeting on AWS, the U.S. delegation suggested that “Meaningful Human Control” starts right from manufacturing of different components of AWS, programming of software up to the final deployment of autonomous weapon systems.\footnote{Closing Statement U.S., \textit{supra} note 179.} Thus, there was a suggestion that in considering what “Meaningful Human Control” of AWS means, there should be a “capture [of] the full range of human activity that takes place in weapon systems development, acquisition, fielding and use; including a commander’s or an operator’s judgment to employ a particular weapon to achieve a particular effect on a particular battlefield.”\footnote{Id.}

In as much as the suggestion of splitting responsibility may sound attractive, I contend that it is misdirection. As noted above, these many players are responsible in their own capacity, individually, through command or corporate responsibility.\footnote{Heyns, \textit{supra} note 1, ¶ 79.} Within those forms of responsibilities, there is no “splitting of responsibility” as it were.\footnote{See \textit{id}. ¶ 81.} In particular, if we are discussing the issue of the responsibility of the combatant or fighter over their use of a particular weapon—in this case, AWS—that responsibility cannot be split or shared with manufacturers for example. For the purposes of holding a combatant or fighter responsible for war crime, International Humanitarian Law and International Criminal Law is not concerned about the manufacturer of the weapon he or she used.\footnote{See \textit{infra} note 263 (noting the lack of reference to manufacturers).} It is concerned about the bearer of the weapon; the one who chose to use that particular weapon.\footnote{See Geneva Convention Protocol I, \textit{supra} note 53, art. 75(4)(b); Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of Non-International Armed Conflicts (Protocol II), art. 6(2)(b), June 8, 1977, 1125 U.N.T.S. 609; Geneva Convention Relative to the Protection of Civilian Persons in Time of War, art. 33, Oct. 21, 1950, 75 U.N.T.S. 287; Convention (IV) Respecting the Laws and Customs of War on Land and its Annex: Regulations Concerning the Laws and Customs of War on Land, art. 50, Oct. 18, 1907; \textit{Jean-Marie Henckaerts \\& Louise Doswald-Beck, CUSTOMARY INTERNATIONAL HUMANITARIAN LAW 1, rule 102 (2009); GENEVA ACADEMY OF INTERNATIONAL HUMANITARIAN LAW, \textit{supra} note 8, at 25 (noting in footnote 159 that Heyns and other scholars’ approach on split responsibility is criticized “for violating the fundamental principle that no penalty may be inflicted on a person for an act for which he or she is not responsible”).} The reasoning behind it is that the combatant or fighter who is in control of the weapon and who makes choices regarding which weapon to use. Of course, as discussed above, this is not to say the manufacturer cannot be a co-perpetrator, aider or abettor of the crime if conditions are fulfilled. Those forms of liability, however, are not “splitting of responsibility”; persons are being held individually liable in their own capacity.\footnote{See Rome Statute, \textit{supra} note 46, at art. 25.} Likewise, the same reasoning applies in connection with corpo-
rate responsibility which will be discussed below.

Therefore, a suggestion of “split responsibility” over the use of AWS by combatants or fighters is a dangerous attempt to conflate different modes of responsibility such as individual, command and corporate responsibility—modes that stand independently. From an International Humanitarian Law perspective, companies and their workers are not part of an armed conflict unless they directly participate in an armed conflict. This body of law is concerned with the combatant and his weapons, not the manufacturers or other individuals involved in the production of the weapon—unless of course they become a party by directly participating.

VII. CORPORATE RESPONSIBILITY AND AWS

As already noted, the above is not to say that other players in the production of AWS such as manufacturers, engineers, roboticists, etc. are exonerated from any form of responsibility. There are other laws, ethics, and codes of conduct that govern them. Article 25(4) of the Rome Statute clearly provides that the provision relating to individual criminal responsibility, for example, shall not affect other forms of responsibilities in international law like state responsibility. This supports the argument which I highlighted in the introduction that forms of responsibility are complementary. They are not mutually exclusive or alternatives to the exclusion of the other. Thus, in her book titled *The Relationship Between State and Individual Responsibility for International Crimes*, Béatrice Bonaře observes that “state and individual responsibility are two separate sets of secondary rules attached to the breach of the same primary norms.” She argues that it is important to understand them as “two different regimes, each of which aims to foster compliance with the most important obligations owed to the international community as a whole.”

Other persons—natural and legal—involved in the production of AWS can be held criminally liable or sued under civil law. Corporate responsibility used to be the domain of domestic jurisdictions to the exclusion of the international com-

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265. *Contra* Sharkey, supra note 257, at 123–24; Sparrow, supra note 84, at 69–73.
268. Sassoli, supra note 15, at 325.
269. Rome Statute, supra note 46, art. 25(4).
271. Id. at 24–25.
272. Id. at 241.
However, this is no longer the case since corporate responsibility is now the subject of International Law.\textsuperscript{275}

A. International Law on Responsibility and Corporations

There used to be arguments that International Law is concerned about states; therefore, corporations and other entities are outside the purview of International Law.\textsuperscript{276} However, currently, there is a general agreement that criminal liability of corporations is well grounded in International Law.\textsuperscript{277} Treaties, general principles of International Law and customary International Law support that corporations are not immune from responsibility under International Law.\textsuperscript{278} For example, the European Convention on the prevention of terrorism provides in Article 10 that:

1. Each Party shall adopt such measures as may be necessary, in accordance with its legal principles, to establish the liability of legal entities for participation in the offences set forth in Articles 5 to 7 and 9 of this Convention.
2. Subject to the legal principles of the Party, the liability of legal entities may be criminal, civil or administrative.
3. Such liability shall be without prejudice to the criminal liability of the natural persons who have committed the offences.\textsuperscript{279}

In furthering the argument that treaty law supports the criminal liability of corporations, Ralph Steinhardt argues that there is nothing, for example, in the drafting history of the 1948 Genocide Convention to suggest that the drafters did not intend to include corporations.\textsuperscript{280} That argument is premised on the fact that Article IV of the Convention provides that persons responsible for genocide must be punished "whether they are constitutionally responsible rulers, public officials or private individuals."\textsuperscript{281} Steinhardt argues that private individuals may include corporations since there is no suggestion that the referred "private individuals" should be humans.\textsuperscript{282}

More directly, treaties proscribing development, transfer and stockpiling of

\textsuperscript{274} Steinhardt, supra note 10, at 508.
\textsuperscript{275} MENDES, supra note 273, at 210–11.
\textsuperscript{276} Steinhardt, supra note 10, at 510–20.
\textsuperscript{277} See id. (reasoning that arguments suggesting that corporations may not be subjects of international law since they are a creation of domestic laws are misdirected); see also supra note 273.
\textsuperscript{278} Steinhardt, supra note 10, at 520.
\textsuperscript{280} Steinhardt, supra note 10, at 521.
\textsuperscript{282} Steinhardt, supra note 10, at 521.
certain weapons transcend to the private sector which includes corporations. For example, Article 9 of the 1977 Convention on the prohibition of the Use, Stockpiling, Production and Transfer of Anti-personnel Mines provides as follows:

Each State Party shall take all appropriate legal, administrative and other measures, including the imposition of penal sanctions, to prevent and suppress any activity prohibited to a State Party under this Convention undertaken by persons or on territory under its jurisdiction or control.

Notwithstanding that responsibility of corporations is pronounced in International Law, given the non-human nature of corporations, Ralph Steinhardt points out that there are various difficult technical questions that arise particularly in relation to corporations involved in the production of weapons:

When will the corporation be responsible for the acts of its human agents? When will a parent company be responsible for the acts of its subsidiaries and joint ventures, its suppliers and distributors, or its contractors? For those wrongs that require a mental element — mens rea — what does it mean for a corporation to have a mental state at all, and how would one go about proving what it is or was? And even if the corporation was in principle responsible, how could a punishment be devised and administered without punishing innocent third parties such as investors, customers, employees, or the public?

Although there is no definite answer to some of these questions, the discussion below will attempt to map the way out with a specific focus on the responsibilities of corporations involved in the design and manufacturing of AWS.

**B. Corporate Criminal Responsibility**

A company that manufactures or designs AWS in a way that will violate the International Law can be held criminally liable. There is a number of jurisdictions providing for criminal sanctions against corporations that involve themselves in criminal conduct. A corporation can, for example, be charged with manslaughter and punishment ranges from the termination of operation licence, repara-
Corporate criminal responsibility is not, however, universally accepted as certain jurisdictions refute the fact that entities “with no soul to damn and no body to kick” can be meaningfully penalized for unlawful acts. More so, one of the challenges to corporate criminal responsibility is that in certain jurisdictions it is subject to limitations. For example, a corporation is only criminally liable when the conduct alleged was the intention of the top executive rather than some low-level personnel.

Furthermore, some jurisdictions also exclude the criminal liability of corporations if the alleged conduct relates to military-sanctioned developments or public functions-related developments. In such jurisdictions, corporate criminal liability for AWS manufacturing companies will face the same limitations.

C. Corporate civil responsibility

As mentioned above, one of the forms of remedies available to victims—in this case, victims of AWS—is reparations in the form of compensation. The victims can sue the responsible parties such as state agents who deployed AWS, persons involved in the development of such weapons such as manufacturers and programmers. However, suing a manufacturer may be difficult to sustain because the manufacturer or other individuals may not be directly linked to the harm suffered by the victim. Manufacturers of many different kinds of weapons are not necessarily liable when those weapons are used to violate the rights of other people. More importantly, “product liability laws are largely untested in robotics.” This means that for victims of AWS, launching a successful civil lawsuit will be an uphill task unless where it is clear that the corporation operated with malafides.

Both in a civil lawsuit and corporate criminal responsibility, the victim as-

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288. GENEVA ACAD. OF INT’L HUMANITARIAN LAW, supra note 8, at 22.
291. Id.
292. Id. at 22 n.140.
sumes an onus to start a claim usually in a foreign jurisdiction. There are various jurisdictional technicalities and difficulties that the victim has to face in addition to monetary costs. Christof Heyns has questioned whether such an approach is equitable to the victim.

There are four entry points at which responsibility of corporations can be articulated in International Law: at the point of design, at the point of manufacture, at the point of sale and transfer and at the point of the use of the weapon already discussed above. I am now going to address these in turn.

D. Corporate responsibility for the design of AWS

Corporate responsibility will attach clearly where AWS would be designed to violate International Human Rights and International Humanitarian Law or other relevant laws. For example, a corporate entity that intentionally designs an Autonomous Weapon System that once activated, “shuts out” the human controller while at the same time it is incapable of distinguishing civilians and combatants or engages in unlawful acts or cause unnecessary suffering. The responsibility of corporations at this stage will be, in most cases, in terms of domestic laws where such corporations are registered. Nevertheless, as noted by Steinhardt, the challenge is that most weapons may not be specifically designed to violate International Human Rights Law or International Humanitarian Law; such weapons might have:

Sufficient dual uses to make them lawful at the design stage; moreover the design of such weapons without the actual deployment or operational use of the weapon might belong in the realm of sadistic fantasy before it triggered legal sanction. The mens rea or mental state for a violation is generally a necessary but insufficient condition for liability in the absence of some actus reus.

The argument on the dual use of technology has been noted in relation to AWS. Various components of AWS have dual use making it difficult if not impossible to impose an obligation on states to proscribe the design of such components. The first part of Steinhardt’s statement is agreeable; however, the second

299. Steinhardt, supra note 289 at 508, 531–32.
300. Id. at 531.
302. See Steinhardt, supra note 289, at 531.
304. See Presentation of Michael Biontino, Expert Meeting Lethal Autonomous Weapon Systems, 3
part in relation to mens rea and actus reus needs qualification. Where for example, there is a domestic criminal sanction against the designing of AWS that violates international law, the mens rea is the guilty mind to create such a design and the actus reus is the actual designing of the AWS—the actus reus is thus present. To that end, it would be possible to prosecute the designer in the circumstances without necessarily having to wait until that particular design is used to create the AWS or it being used to commit the actual crime.\textsuperscript{305}

**E. Corporate responsibility for the manufacture of AWS**

The clear cut responsibility of the manufacturer at this stage is where the manufacturer chooses to manufacture weapons that are illegal per se—such illegality may be established in terms of treaty law prohibiting the manufacture or stock piling of that particular weapon.\textsuperscript{306} The weapon may also be illegal on the basis of customary International Law.\textsuperscript{307} In the case of AWS, this is tricky because AWS are not as yet proscribed by any treaty and there is no agreement as to whether they are prohibited under customary International Law. In the case where the manufacturer produces AWS which are not illegal per se but are then used illegally, this will not “trigger liability unless the company has substantial knowledge of the illegal use of that particular customer” as already indicated above when forms of perpetration such as planning, aiding and abetting were discussed.\textsuperscript{308} Thus a machete manufacturing company in India, for example, will not be liable for the use of the machetes in Africa unless it supplied the machetes to a customer in full or substantive knowledge that they were going to be used to commit war crimes. In that case, the manufacturer is liable for aiding and abetting.\textsuperscript{309}

**F. Corporate Responsibility for the Sale and transfer of AWS**

Of course in terms of treaty obligations on the sale and transfer of weapons, it is the duty of the state to ensure that certain kinds of weapons are not sold or transported.\textsuperscript{310} To that end, the state has an obligation to put in place measures that govern both natural and legal persons not to act in a manner that would be inconsistent with the international obligations of the state.\textsuperscript{311} Thus, where a corporation engages in conduct that is inconsistent with the hosting state’s international obligations like

\begin{itemize}
\item 305. See id.
\item 306. E.g., 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.
\item 308. See Steinhardt, supra note 289, at 531.
\item 309. See Steinhardt, supra note 289, at 532.
\item 310. See Steinhardt, supra note 289, at 532.
\end{itemize}
arms embargoes, for example, a state can choose various forms of sanctions against such a corporation discussed above.312

G. Corporate Responsibility for the use of AWS

Where corporations are directly involved in military operations or where force is used, there are guidelines in terms of the liability of such corporations.313 For example, and in relation to direct involvement in combat, military companies are of course liable for the weapons they use in combat.314 However, stakes are different if the issue is where the weapon is used by other actors other than by the corporation in a direct manner. A question thus arises whether corporations can be held criminally liable for the use of weapons by fighters under the lex specialis of weapons—International Weapons Law.315

In as much as corporate criminal liability is important, it is a separate issue and should not be conflated with individual criminal liability of the individual deploying or using a weapon during war time or law enforcement as already noted above.316 The manufacturer and the combatant may not split or share responsibility for the final use of a weapon because that will dilute the responsibility that the latter must exercise over weapons they choose to use.317 There is no weapon in use presently, where the user of the weapon—after committing a war crime for example—will say “it was not me, something went wrong with my weapon; ask the manufacturer.” The manufacturers and other players have their own responsibilities related to the producing of the weapon. Likewise, the warriors or fighters have their own responsibilities when using the weapon. However, as noted already, employees of these corporations may incur individual criminal responsibility.318

Scholars like Marco Sassòli have questioned whether, in terms of International Humanitarian Law, roboticists and other actors can be held accountable for war crimes committed by AWS when they did their job before the armed conflict started.319 Marco Sassòli considers it to be a tricky issue but, however, suggests that the

312. See generally, PUTTING TEETH IN THE TIGER: IMPROVING THE EFFECTIVENESS OF ARMS EMBARGOES (Michael Brzoska & George A. Lopez eds., 2009).
315. See Steinhardt, supra note 289, at 530.
318. See ICRC Rule 151, supra note 316.
individual who knowingly and intentionally programs an AWS to commit crimes is an "indirect perpetrator of the war crime committed during the conflict." In the event that the person who is deploying the AWS is aware of the defect, then the programmer is considered to be an accessory to the crime. Marco Sassòli's proposition is correct and a close scrutiny of the modes of responsibility as developed by international tribunals and courts may even show that the issue is not tricky at all. For the roboticist or manufacturer to be prosecuted for a war crime as a direct perpetrator, co-perpetrator, aider or abettor, there must be a direct link with the armed conflict in question and the legal requirements of mens rea and actus reus must be satisfied. Otherwise, where there is no direct link with the war crime in question, the manufacturer or the roboticist may be prosecuted under the general domestic criminal law.

An example of the above proposition is where a manufacturer, aware of the existence of an armed conflict or an impending war (preparations for war) produces and supplies AWS to one of the parties to the armed conflict fully aware that the system is going to be used to commit war crimes. In that case, the manufacturer is not different from a political leader like Charles Taylor who aided the commission of war crimes and crimes against humanity.

This example can be explained in terms of the British case of Bruno Tesch et al, where an owner of a firm, Bruno Tesch, his assistant Weinbacher, and a gassing technician, Drohins, were charged with war crimes for supplying poisonous gas used in the killing of people in concentration camps. The charge specified that the accused persons fully knew what the gas was being used for. The prosecution particularly argued that the accused persons were war criminals because they knowingly supplied gas to an organization of a state which used it to commit war crimes. The gas so provided, or the formulas used to make it, may as well have been produced or formulated before the outbreak of the war, but that would not ex-
cuse the accused persons from being part of a war crime as long as there is a direct link to the war crime alleged and mens rea.

Another scenario is when a manufacturer produces and sells AWS to a customer who is either a party to an armed conflict or becomes a party thereafter but without knowledge that the AWS are to be used to commit crimes. That manufacturer may not be charged for committing those specific war crimes because mens rea must be specific to the particular war crime alleged.\textsuperscript{330} However, if the AWS manufactured are illegal \textit{per se}, the manufacturer may not be prosecuted for the specific war crime for lack of mens rea to the alleged crime but is still subject to prosecution under domestic criminal laws for example.\textsuperscript{331}

The above reasoning was particularly the argument that was raised by the Defense Counsel for Bruno Tesch and others.\textsuperscript{332} In principle, counsel correctly argued that a war crime charge is not in blanket form but specific.\textsuperscript{333} Therefore, there is a need for specific intent. It is not enough to say that accused persons supplied toxic gas; the supply will only be considered to be part of the alleged war crime if the gas was supplied with the supplier's specific intention to contribute to the killing of humans in the concentration camps.\textsuperscript{334} Otherwise "to supply material which also had quite legitimate purpose is no war crime."\textsuperscript{335} In principle, the court agreed with the Defense Counsel noting, specifically that in order for the court to convict the accused persons of having committed a war crime, three points must be proved: that people were killed by gas in concentration camps; that the gas was supplied by the accused persons; and, that the accused persons knew the purpose for which the gas was going to be used.\textsuperscript{336}

Likewise, in the U.S. case of IG Farben, the \textit{Trials of War Criminals before the Nuremberg Military Tribunals}, employees of IG Farben—a German multinational corporation of chemical firms—Fritz Gajewski, in his capacity as Director of Agfa-Gevaert NV; Heinrich Hörlein, as the Head of Chemical Research; Christian Schneider, as the Head of Department in charge of nitrogen and gasoline production plant leaders Hans Kühne and Carl Lautenschläger; Wilhelm Rudolf Mann as Head of Pharmaceuticals, August von Knieriem, as Chief Counsel and Head of the legal department; intelligent plant police officers Heinrich Gattineia and Erich von der Heyde—were charged along with others of conspiracy to commit war crimes and crimes against humanity through participation by providing Zyklon B, the poison gas that was used at the extermination camps.\textsuperscript{337} The accused persons were ac-

\begin{itemize}
\item \textsuperscript{330} See Trial of Carl Krauch, \textit{supra} note 325, at 1168–72.
\item \textsuperscript{331} See above on corporate criminal responsibility.
\item \textsuperscript{332} See Bruno Tesch, \textit{supra} note 323, at 98.
\item \textsuperscript{333} Id.
\item \textsuperscript{334} Id.
\item \textsuperscript{335} See Bruno Tesch, \textit{supra} note 323, at 98; J Doria et al., \textit{The Legal Regime of the International Criminal Court: Essays in Honour of Professor Igor Blishchenko} 144 (José Doria et al. eds., 2009).
\item \textsuperscript{336} See Bruno Tesch, \textit{supra} note 323, at 101; see also Badar, \textit{supra} note 327, at 234–52.
\item \textsuperscript{337} See Trial of Carl Krauch, \textit{supra} note 325, at 168–72.
\end{itemize}
quitted as the tribunal concluded that they reasonably believed that the gas they were providing was being used for lawful purposes. 338

An important issue can also be noted from these cases; even provision of lawful material may constitute a war crime if the material is provided with full or substantive knowledge that it is going to be used for unlawful purposes. 339

H. Case study: Use of weapons and corporate responsibility

Complicated issues of extra-territorial application of Human Rights and competence of courts in terms of jurisdiction always arise when foreign nationals are involved. To give a hypothetical case: A fictitious company called RoboAWS is registered in country A and is involved in the production of AWS. RoboAWS has branches operating in country B and C. It sells its products to country D which in turn uses the AWS against citizens of country E in the territory of country E. Relatives of victims who are killed unlawfully by AWS in country E are residing in country B and they bring a civil lawsuit against RoboAWS in the supreme court of country B claiming that RoboAWS aided and abetted country D by providing it with malfunctioning AWS.

Although of different facts, the above situation is similar to the Kiobel case that was brought to the U.S. Supreme Court in 2013. 340 In this case, petitioners were a group of Nigerian nationals residing in the U.S. 341 They filed a law suit in the U.S. Federal Court against certain Dutch, British and Nigerian corporations. 342 None of the corporations are registered in the U.S. 343 The petitioners sued under the Alien Tort Statute 28 U.S.C 1350 (ATS) alleging that the corporations aided and abetted the Nigerian Government by enlisting it to violently suppress demonstrations by the Ogoni people who felt their environment was being polluted by the activities of the corporations. 344

To that end, petitioners alleged that corporations helped in the commission of extra-judicial killings, crimes against humanity, torture and cruel treatment, arbitrary arrests and detention only to mention a serious few. 345 In relation to the jurisdiction of the U.S. courts in such matters, the ATS provides that “the district courts shall have original jurisdiction of any civil action by an alien for a tort committed in violation of the law of nations or a treaty of the United States.” 346 The legal question in this case was “whether and under what circumstances” the

338. Id.
339. Id.; see also Bruno Tesch, supra note 323, at 93–104.
340. See Kiobel v Royal Dutch Petroleum Co., 133 S. Ct. 1659 (2013); see also Steinhardt, supra note 289, at 533–41 (analyzing the Kiobel case from the view of weapons responsibility of corporations).
342. Id.
343. Id.
344. Id.
345. Id.
US courts may recognize "a cause of action under ATS for violations of the law of nations occurring within the territory of a sovereign other than the US" and consequently, whether the petitioners' lawsuit can be entertained in the U.S. courts.

The court held that corporations can be found liable for human rights violations, and cannot be "harbored" when they have committed serious human rights violations. It also noted that there are certain serious crimes of international concern that obligate states to prosecute or remedy victims of such crimes. Such victims include of piracy, genocide, and crimes against humanity. To such crimes, the presumption against extraterritoriality is inapplicable because whoever commits such crimes becomes "enemy of mankind." However, the court found that the presumption against extraterritoriality was applicable in the present case. It reasoned that there was no clear indication of extraterritorial application of the ATS in the petitioners' case since all the relevant conduct took place outside the borders of the U.S. Consequently, the petitioners were denied relief in the U.S. courts. This was notwithstanding the fact that the concerned corporations were listed on the U.S. stock exchange and had offices in New York.

In arriving at that decision, the U.S. Supreme Court reasoned that extraterritorial application will only be allowed where claims "touch and concern the territory of the U.S. with sufficient force to displace the presumption." The court further stated that since both petitioners and respondents are aliens and remotely associated with the U.S., the "sufficient attachment" test was not satisfied, and as a result, the presumption against extraterritorial application must be respected as it is important because it avoids clashes between not only the judiciary and policy makers but also other sovereigns; that entertaining the petitioners and applying ATS "extraterritorially" would lead to a situation where U.S. citizens would be haled.
before foreign jurisdictions;\(^{360}\) that the U.S., after all, is neither a “uniquely hospitable forum for the enforcement of international norms” nor the “custos morum of the whole world”;\(^ {361}\) and that allowing the court to entertain the case would lead the court into an arena of decision—making where it has no right, clearly violating the separation of powers doctrine.\(^ {362}\)

Ralph Steinhardt, and in view of the idea of holding corporations responsible for weapons they manufacture, criticises the U.S. Supreme Court’s interpretation of the ATS, and that such precedent may not be in the interest of victims in the future.\(^ {363}\) He, however, notes that the ATS “offers a normatively and logistically superior approach to assuring that corporations are accountable for their role in weapons-related violations of international human rights law.”\(^ {364}\)

Now that AWS are a product of various companies with operations likely to be carried out across borders, it is foreseeable that some of the above challenges may be faced by victims who will attempt to file civil lawsuits against corporations. As such, states may not proceed to develop AWS on the basis that if things go wrong and individual criminal liability is impossible; victims can rely on civil lawsuits. In any event, very few victims will be able to afford such legal processes.

VIII. STATE RESPONSIBILITY AND AWS

Another facet of accountability over the actions of AWS is through state responsibility for violations committed by AWS. In terms of International Law, there are three ways by which the state will assume responsibility for the actions of AWS on the battlefield or wherever they are used:

(i) Where a state agent deploys – be it lawfully, unlawfully or extra-legally – AWS which end up violating protected rights. This is so because the conduct of a state’s organs or agents is attributable to the state.\(^ {365}\)

(ii) Where, with the authorisation, “acquiescence, complicity or acknowledgment of state agents” a non-state actor deploys an Autonomous Weapon System which violates protected rights.\(^ {366}\)

(iii) Where a private party – like corporations in the production of AWS – without attribution to the state is involved in the production of AWS not up to the standard which in the end violate certain protected

\(^{360}\) Id.

\(^{361}\) Id. at 1668.

\(^{362}\) Id. at 1668.

\(^{363}\) See Steinhardt, supra note 289, at 509–10.

\(^{364}\) See Steinhardt, supra note 289, at 509–10.


Needless to say, for item i) and ii), the state is liable and has a duty to give effect to the rights of victims by providing reparations.\textsuperscript{368} The general rule to provide reparations whenever a state is responsible was well enunciated in the \textit{Chorzow Factory case}, which held that as a principle of International Law, whenever there is a violation by the state, “reparation is the indispensable complement of a failure to apply a convention.”\textsuperscript{369} This rule is also applicable to International Humanitarian Law violations.\textsuperscript{370}

Of course in terms of state responsibility, reparations were understood to be applicable to a situation between two countries, where one state would pay reparations to another state.\textsuperscript{371} There is, however, an acknowledgment of “the right of individuals to seek reparations directly from a state.”\textsuperscript{372} In any event, the Draft Articles on the Responsibility of States for International Wrongful Acts declare that its provisions are “without prejudice to any right, arising from the international responsibility of a state, which may accrue directly to any person or entity other than a state.”\textsuperscript{373}

With regard to violations by private parties, the state still has a duty to take diligent steps to protect its citizens from actions of private parties,\textsuperscript{374} and as such should investigate and prosecute private parties like corporations and rebel groups.\textsuperscript{375}

There are two main reasons why the state should accept primary responsibility for AWS used by non-state actors and provide reparation to the victims. Firstly and as referred to above, the state has failed in its duty to protect the rights of persons within its jurisdiction whose rights were abused by the non-state actor.\textsuperscript{376} Secondly, in line with principles of fairness and non-discrimination, a state must not “discriminate against one set of victims because their rights were abused by a

\textsuperscript{367} This is where the State fails to regulate the conduct of a corporation registered in its territory for example.


\textsuperscript{369} See the Case Concerning the Factory at Chorzów (Germany v Poland) Judgment, (1927) Permanent Court of International Justice.

\textsuperscript{370} See Art. 91 of Additional Protocol I to the Geneva Conventions; Art. 3 of the 1907 Hague Convention IV; Rule 149 of the ICRC Customary International Humanitarian Law Study (2005).

\textsuperscript{371} Geneva Academy, \textit{supra} note 290, at 23.

\textsuperscript{372} Geneva Academy, \textit{supra} note 290, at 23.

\textsuperscript{373} Art. 33(2) of the Draft Articles.

\textsuperscript{374} General Comment Number 31, CCPR/C/21/Rev.1 Add. 13, ¶ 8.

\textsuperscript{375} MS Soluman, \textit{The international Criminal Court and rebel groups} 5 (2012); see also SEIBERT-FOHR, \textit{supra} note 24, at 34, 36.

\textsuperscript{376} This is a duty that has been well-developed within the inter-American human rights system, for example. See the seminal decision in the Velasquez-Rodriguez case by the Inter-American Court of Human Rights, Series C, No. 4, 29 July, 1988, para. 172.
non-state actor." Fairness and non-discrimination when dealing with victims are extremely important especially in post war scenarios where the state needs to achieve reconciliation amongst different groups. Thus, if the international community is going to insist on the development of AWS and their deployment, states assume the risk of bearing responsibility in cases where this technology ends up in the hands of irresponsible non-state actors.

If a case ends up in international criminal tribunals, victims can access reparations for violations perpetrated against them by non-state actors. This is because most international criminal tribunals or courts, the ICC, for example, have a victim’s fund. Where a leader of a rebel group is indicted by the ICC, victims who are admitted to participate in the proceedings have access to reparations irrespective of the fact that the violation was committed by a non-state actor.

Commentators have also noted that AWS may affect the notion of state responsibility because AWS and other unmanned systems can be deployed in non-attributable ways. This may see states using force against each other in ways that are difficult to pin point the source of the armed attack. Furthermore, because of the unpredictability of AWS in certain circumstances, commentators have argued that some “states may be tempted to plead force majeure in order to evade international responsibility for an armed robot’s unforeseen ‘decision’, for example, to attack civilians.”

IX. CONCLUSIONS

The challenges that are posed by AWS as far as accountability of violations is concerned must be taken seriously. This is so because accountability is the crux of International Law—without accountability, we may as well forget about it. Not only does accountability counter impunity, it is the basis on which victims of international crime, violations of International Human Rights and International Humanitarian Law realize their right to a remedy.

Where a victim’s right is violated, he or she must be able to find a remedy through state responsibility, individual and command responsibility, civil and criminal responsibility of corporations. All these forms of responsibility are complementary to each other, each being important in its own right and therefore not

alternatives to the exclusion of the other. AWS—those with full autonomy or high levels of autonomy to the extent of no “Meaningful Human Control” after deployment—create accountability gaps in terms of individual criminal responsibility of weapon users.

As was discussed in this paper, that accountability gap can only be dealt with by making sure that humans maintain a “Meaningful Human Control” over AWS even after deployment. AWS must be developed in a way that they remain mere weapons in the hands of warriors. The potential accountability gap as far as individual criminal responsibility is concerned cannot be dealt with by splitting responsibility between the user of the weapon and other individuals who are involved in the production of AWS such as manufacturers, programmers and roboticists. These actors have their own individual responsibilities.

The notion of command responsibility is inapplicable to the relationship between a human and a machine or robot. AWS are not human subordinates—command responsibility is only applicable in the relationship between a human commander and his or her human subordinate. The relationship between AWS and the person deploying it must remain that of a weapon and a warrior. Referring to the person deploying an Autonomous Weapon System as the “commander” may thus be misleading. To that end, command responsibility only remains applicable to the extent that the human commander is responsible for the actions of the human subordinate deploying the AWS if he/she knew or ought to have known that the human subordinate was programing or deploying an Autonomous Weapon System in a way that would violate international law and failed to prevent, stop the human subordinate or punish him or her after the fact.

Other forms of accountability such as civil and criminal liability of corporations are important. However, in the case of AWS, they present various challenges to the victim who chooses to pursue such legal remedies. To this end, prosecution—at the instance of the state or international community—of the individual persons who commit crimes through AWS remains an integral and indispensable part of accountability.

382. See A Bianchi, State responsibility and criminal liability of individuals in THE OXFORD COMPANION TO INTERNATIONAL CRIMINAL JUSTICE 16, 18 (A Cassese eds., 2009). Bianchi, for example reiterates that “state responsibility and individual criminal responsibility are considered as distinct in international law.” See also the case of Bosnia and Herzegovina v Serbia and Montenegro concerning the Application of the Convention on the Prevention and Punishment of the Crime of Genocide 173 (2007).