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A LEGAL AND ETHICAL NARRATIVE OF USE OF AUTONOMOUS WEAPONS IN ARMED CONFLICT

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Abstract

Today, having driverless cars, advance flagging system on computers, robotic assistance in various ways; financial transactions, facial recognition etc. have become part and parcel of our lives. Nevertheless, technological prowess has always been a significant factor for competing military powers. Till today almost all of the states have deliberated on the use of Artificial Intelligence (AI) in the field of armed conflict. Nevertheless, States have exchanged reviews on development, usage, limitation, ex ante review, testing so on and so forth with reference to usage of AI in the military field. However, what is still dubious is the working, deployment; limitation on these weapons as AI poses serious implications on of human beings in an armed conflict especially with reference to unmanned weapon system. There is absolutely, a rising concern regarding AI's creating international instability and conflict when being used in Military field. No one can deny the technological growth of today however, how it needs to be tamed is the matter of concern. This research focuses that how the unforeseen risks of this strategic parity race in order to gain edge over the adversaries by using AI can be limited by the international community. This research further argues that by strengthening legal regime can offer a stable model of AI usage in military field.

Keywords

Artificial Intelligence, International Law, Autonomous Weapons, Armed Conflict

1. Introduction

Undoubtedly, we are living in the era of intelligent machines which under the head of Artificial Intelligence (AI) has pervaded our lives in a very smooth yet rapid manner. Intelligent machines has revolutionized today's world, from face detection in cyber world to detection and chasing targets in military field. Autonomous weapon system (AWS) with none or limited interference by humans has generated a legal and ethical debate at international platform which is required to be looked through many aspects mainly the legal prism. AWS is the development of (war) algorithms and software to reach the discretion and decision making capability of a human mind by possessing features of sensing, targeting, decision making and categorizing. Proponents of AWS in warzones considers these machines' decisions articulate and precise as they cannot be tampered with when compared with the judgment and emotions of a human mind under stress of war. (Vestner & Rossi, 2021). On the other hand, opponents voices concerns over risk of miscalculations, algorithmic bias and challenges to the existing legal norms of armed conflicts.

Indisputably, States have always measured their military might in terms of modernization, organization, readiness and sustainability. Likewise, modernization highly depends upon the technical sophistication reaches by the States and this time modern Artificial intelligence (AI) algorithms have taken the stage. Since the recent rise in usage and deployment of autonomous weapons international community is concerned regarding challenges of removing humans from the combat loop. From selecting to locking their target, these machines have not only gone far and beyond in revolutionizing the military muscle but also has created unique challenges legally and politically. Undoubtedly, artificial intelligence being the part of 2030 UN sustainable development goals, has the potential to contribute to health, wellbeing of human beings but is being silent or rather confused when applies in hostilities. The increase in usage of drones recently by states certainly contests international humanitarian law both practicality and theoretically. Working of AWS can be complicated and perplexing in complex situations such as Korean demilitarize zone (DMZ) stationing SGR-AI which automatically fires sensing any movement within the ambit. Alongside, Harpy of Israel and Kargu-2 of Turkey are loitering machines from the fire & forgot missile system. These machines constitutes automatic surveillance system which triggers on sensing any unusual movement (s) within their range. Engagement of Kargu-2 has been identified by UN Security Council in Libya to hunt down loyal soldiers to the Khalifa Haftar, a Libyan General. (United Nations Security Council, n.d.). The ability of AWS regarding distinction and precaution is contentious among legal scholars and policy drafters. The debate between proponents and exponents of usage of AWS is significant in determining the status of AWS in warzones. According to Professor Arkin, AWS decreases the risk of miscalculations due to exhaustion of mind unlike humans in conflicts. (Arkin, 2009). However, opponents such as Paul Scharre refute this argument by claiming that machines are unable

to distinguish between combatant and a noncombatant a key feature of international humanitarian laws. (Scharre, 2018). This research provides an in-depth study of how this current tide of technology finds its place within the existing laws of IHL. The fundamental legal issue surrounding AWS includes but not limited to the impact of IHL's principles of distinction, proportionality and precaution. This paper explores and intends to cover a gap between the existing technology and legal regime. With the changing war theaters and states' ambition to gain edge in AI requires a comprehensive and universally accepted definition of AI in order to work within the ambit of international legal paradigm. Although there is no one agreed definition of AWS, but for the purpose of this paper following definition is taken: "Any weapon system with autonomy in its critical functions—that is, a weapon system that can select (search for, detect, identify, track or select) and attack (use force against, neutralize, damage or destroy) targets without human intervention." (Davison, 2018). However, along with many states adhering to the development of AWS, a thoughtful debate generates regarding the AWS acquisition rules, if any in relation to non-state actors as noted by (Kallenborn, 2020) the use of AWS by proxies, regional or major powers could result in a tussle and arms race, further deteriorating the regional stability and peace. Hence, puts a requirement on international community to draft rules to regulate AI within the ambit of Laws of War. Existing clauses of IHL, as yet, provides no dedicated rules with respect to usage of autonomous weapons due to technicality and complexity attached to these intelligent machines as discussed. However, it is also not prudent to negate the existence of laws altogether and declare the current milieu as "inter *arma silent leges"*, as termed by Cicero, *literally* translating as "in times of war law becomes silent" (Mariam-Webster, 2016). Nonetheless, fact of the matter is that any unlawful use of weapons based on usage, manner and context is illegal and demands a remedy (Meagan & Loren,2014). During armed conflict fundamental principles of IHL such as proportionality, distinction, and precaution implies responsibility on states to review their weapons in conformity to the principles of IHL. (Haider, 2018). According to IHL any weapon not meeting the criteria mentioned in Geneva Conventions is considered illegal to be deployed. As stated in Article 35 (2) & (3) of Additional protocol 1 of Geneva Conventions, "It is prohibited to employ weapons, projectiles and material and methods of warfare of a nature to cause superfluous injury or unnecessary suffering. It is prohibited to employ methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment (Treaties, States parties, and Commentaries - Additional Protocol (I) to the Geneva Conventions, 1977 - 35 - Basic rules", 2022) .This paper intends to analyze the evolution of AI in war field and how it has changed the face of the armed conflicts. It then assesses International humanitarian laws to analyze the prospects of AI to be under the protection, limitation and distinction principles of the said law. Nevertheless, before

embarking on the legal and ethical constraints concerning AWS, it is imperative to briefly discuss some of the recent developments and deployments in order to discern their use and possible violations.

2. Autonomous Weapons and Changing Face of Armed Conflict

Rapid advancements in robotics and AI have brought prospect of autonomous weapons at forefront as a significant and daunting international legal issue. No one contradicts the precision and meticulousness attach with the character of AI, however, this advancement has come with a price as in the words of Antonio Gueterres "autonomous weapons that can select and target on their own raises multiple alarms and may lead to deadly arms race". (Guterres, 2018). Considering the current security milieu, deployment of AWS, clearly seems to jeopardies the strategic and international stability and balance of power (Sisson, 2019) Frank Pasquale noted that "authority during armed conflict is increasingly expressed algorithmically" (Pasquale, 2015). Algorithms are not new in developing weapon machinery and states have seen expressing power and authority through algorithms, for instance, identifying and intercepting inbound missiles has been there since decades. (Andriole & Gerald eds., 1988). What is novel today is the increasing capacity of states regarding surveillance, navigation, target locking which raises the ethical and legal concerns on the use of Artificial Intelligence in the war zones. Nevertheless, these developments in algorithmically –derived autonomy not only created benefits for the armed forces in war zones but also apprehensions for the limitation of its usage. Scholars have casted debates on the legal ethical and social aspects of the technological limits. This paper focuses on the legal and ethical aspects of autonomous weapons which is now a long generated debate.

2.1 Autonomous Weapons Changing Face of Modern Warfare

In order to understand the legal clauses impacting the use of AWS in the war field, it is essential to understand the purpose to which these are being utilized; which is majorly surveillance and target attacking (Council, 2010) . AWS is the development of (war) algorithms and software to reach the discretion and decision making capability of a human mind. Programs such as Dominator by USA, Gurdium by Israel, having the capacity of carrying missiles, reconnaissance mission surveillance incorporates varying degrees of autonomy to strike triggers the debate on their capacity and limit to response without human intervention. (Crootof, 2015) Moreover, machines such as K-Max Titans, a newer and finer version of KMAx helicopters, designed to use cargo lifts, firefighting during battles is capable to manage single flights with minimal ground operator oversight. (Blain, 2021) Recently an AI simulation defeated an F-16 pilot with a score of five to zero in a project by Defense Advanced Research Project Agency (DARPA). (Payne, 2018). Some examples of AWS are: drone swarms, unmanned drones, Israel's Iron Dome and weapons guard ships such as Phalanx CIWS and Sea Hunter. Moreover, similar to drones are shoals made up of small robots that could gather around ocean's bottleneck and are

sensitive to the magnetic field of the earth. These could easily spot a traditional nuclear submarine that provides an assured second strike capability. Phalanx CIWS is in use by US Navy since 1980 and is also in service in the British and Australian Navies respectively; it's used to detect incoming threats like surface torpedoes, small boats and anti-ship missiles. US Navy and DARPA's recent development, Sea Hunter (Anti-Submarine Warfare Continuous Trail Unmanned Vehicle-ACTUV) was developed in 2016. It's an unmanned autonomous vehicle designed to travel and stay under water for months with no onboard crew. It can detect enemy submarines and report them back to remote human operators. The US Navy, DARPA and Pentagon can develop small, unmanned robots to attack enemy submarines instead of spending budgets on commissioning a huge battalion. While the US Air Force is testing software that would help fighter pilots guide or accompany unmanned aircrafts to enemy targets, the US Army is testing its variant of Killer Robots which are known as Squad Multipurpose Equipment Test (SMET) and Robotic Combat Vehicle. Russia and China conducted a light show of more than 2000 drones in 2020, these aerial, land or underwater swarm could be equipped with guns, missiles or nuclear warheads (Klare, 2019).These weapons once launched possess complete autonomy in selecting, locking and targeting without any human assistance suggestively builds up a debate over situational decisions as taken by soldiers on field which these machines certainly unable to take. Despite these challenges it is appropriate to consider that states seems more eager and concern about the usage, development and production of AWS and not drafting the rules and regulation to regiment them. For instance China's NFU doctrine (no first use) seems abstruse and unclear similarly, Pluto Plus of Italy, platform M of Russia and EURO of France, are developed AWS but with no domestic regulations. Likewise, China's recent pledge to develop AI under 'New Generation Artificial Intelligence Development" aiming to become global leader in AI till 2030 **(**Roberts et al., 2020) put international community under an immediate requirement to draft robust, uniform and effective governing mechanism to regulate AI in the field of war. The likelihood of misperceptions, unpredictability, and absence of well-defined and accepted international norms of war regarding AWS might lead to miscalculations of magnitude of harm, differentiation between combat and non-combat targets etc. Along with the above mentioned weapon system, states has also launched missile system "fire & forget", unlike previous programs of missiles which included human command and control. This system as apparent from the name relies on the information in the system and possesses the capability to strike without any human assistance and intervention. "Harpy" by Israel FMJ-148,"Javelin" by USA, "Joint strike missile" by Norway are some of the examples of fire & forget missile system. Moreover, FMG-148 Javelin can work independently once fired and is fully capable to track the target autonomously. (Lockheed Martin,2020) .Similarly, Brimstone and Brimstone

2, possess the capability of pursuing the target even when the target is not in the line of sight at the time of launch. (Brimstone, 2021). Brimstone has been used in wars of Iraq and Afghanistan, and world has seen the geniuses of autonomy in weapons, yet with a price. Nevertheless an advanced algorithm comes with "Loitering Munitions": such missiles sit passively around the target and becomes responsive to a set of physiognomies detecting with onboard sensors. Paul Scharre defines loitering munitions as a type of fully autonomous weapon that can "search for, decide to engage, and engage targets on their own" in such a way that no human can intervene. (Scharre, 2018). Lately, loitering munitions were used in Azerbaijan -Armenia conflict, where these tiny machines gave an edge to Azerbaijan on one hand, and on the other proves to the world that advancement in AI is mandatory for a military superiority, meanwhile confronting the precision and dehumanizing in the battlefield a godsend or a disaster. Further the debate on legality surfaced with the incident of Khalifa Hafter's attack, as discussed above where loitering munitions were used and generated the response to either ban or regulate them from the human rights activists and the United Nations. (Hernandez, 2021) The demand for banning these also supported by the already prohibited landmines by the Anti-Personal Landmines Convention 1997, on the basis of violation of principle of distinction under International Humanitarian Laws (IHL). Likewise, the threat posed by these deadly loitering munitions which can rightly be said loitering towards disaster, must also be strictly monitored/limited through legal regime. Nonetheless, the improvisation in AWS is a plain truth of today, weapons such as Kashtan CIWS (close in weapon system) which can simultaneously aim 6 targets at a time are prove of the fact that states are determined in continuing vertical proliferation of AWS. However, in the absence of any existing robust legal system, these AIs seem to conquer the military market may be on the cost of human rights and respect of IHL.

3. Autonomous Weapons, State Responsibility and Laws of Warfare

"If there are recognizable war crimes, there must be recognizable criminals" (Walzer, 2015) seem to be a debatable statement in the paradigm of AWS. Surely, AWS can increase stability by meticulous decision making but the prospects of miscalculations and escalation of lethal engagements cannot be denied. International Humanitarian Law commonly known as Laws of armed conflict (LOAC) or IHL sets out prohibitions and restrictions regarding means and methods to which all states should comply with during an armed conflict. Geneva Conventions, whilst enjoying the status of *Jus Cogens* explicitly laid down the criteria of code of conduct during an armed conflict both international and internal, mostly, making principles of distinction, proportionality and precaution as basis of its compliance. These principles have been emphasized on and established in treaties such as 1899 and 1907 Hague Convention and the 1949 Geneva Convention and additional protocols (AP 1 & AP II). Before discussing IHL and AWS in detail, this paper throws light on state responsibility

with respect to usage, designing and development of AWS.

3.1 State Responsibility:

International law treats principles of responsibility and accountability of states as significant and consequential factor and not as *brutum fulmen.* But is it the same when it comes to AWS? May be not as AWS are difficult to identify within the parameters of established rules of responsibility of states or the individual(s). Instances, such as a drone of Unites States killing elderly women in 2012 in northern Pakistan, in front of her grandchildren while she was busy in farming (International, 2013) led the international community to ponder on the doctrine of responsibility all anew. A part from some defenses and justifications there is unanimous inference that drone attacks do violate international law and pilots can potentially be prosecuted. (Shachman, 2010) However, what if you minus the pilot's equation from the situation? Who will be liable? In words of Meagen Burke " 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 recognized ... as unlawful conduct tantamount to a rights violation" (Burke & Persi-Vicentic, 2014). It is nonetheless, a paramount duty of states under International law to provide remedy to the victims as stated in draft articles of state responsibility such as prosecution, reparations especially in form of compensation, rehabilitation (Draft Articles on Responsibility of States for Internationally wrongful Acts, 2001). There is undoubtedly a uniform consensus among all the committees and commissions of UN who emphasizes on the importance of states' responsibility to prosecute the offenders. (Veasquez Rodriguez v. Honduras, 1988). Nevertheless, challenge poses to these established norms of accountability of states when the law has to deal with the machines and not humans. As per Kenneth Himma, AWS can only owe responsibility if they have free will or moral agency which definitely these machines don't. (Himma, 2009) On the basis of established norms of international law of accountability , one can say that international law demands accountability and if these machines cannot be accountable then may be there deployment is sheer violation of international law, though, with the current advancement of states in this area, it seems an impossible solution to this persisting challenge. Nevertheless, Arkin has taken this argument little further and has advised that AWS can be accountable while making "responsibility and authorization transparent" through "responsibility advisor" who advices on ethical issues before its launching. Also according to Arkin, this responsibility adviser will be liable to verify targets (Arkin, 2011). However, this seems perplexing and difficult to implement as typically there is a long line up of hierarchies of command and control when the working and deployment of these machines materializes. However this approach has its own challenges amid the confounding jurisdiction of International Court of Justice (ICJ), the challenge of dealing with such violations has certain technical limitations at ICJ.

Nevertheless, normatively, it would be easier to make state owning and launching that machine accountable for crimes committed by AWS rather than commanding officials. This situation seems challenging and puzzling as the answer to these questions is neither simple nor pretentious; they deal with ground realities of warzone which are exclusive and unique to every situation. States' does require speaking about state's responsibilities and there is an imminent need of a new legal mechanism of accountability in order to attach crimes of AWS with the state employing and deploying them.

3.2. Laws of Armed Conflict and implications for AWS

Jus in Bello (conduct of war) and Jus ad Bellum (just cause to go to war) form the core essence of IHL and use of AWS falls into the category of Jus in Bello. These principles govern the conduct of war and hence have held a major position when it comes to hostilities. They are set by the Geneva Conventions (original being in 1864) of 1949, along with the Additional Protocols of 1977. The legal constraints regarding the incorporation of AI in the military are profound as they range from violations of IHL to the AWS status in international law and the need of a new treaty (Docherty, 2020). Under IHL weapons' legality is checked under two sets: weapon is considered illegal per se by its design or it becomes illegal due to its use; AWS seems to challenge this criteria in both ways. In June 2020, states party to the Convention on Conventional Weapons (CCW) held various meetings discussing the status of AWS with no success. Some have stressed on prohibiting them entirely to a "preemptive" partial ban for example China has argued to agree on the drafting of a protocol. CCW since 2014 has also brought together the "Group of Governmental Experts" (GGE), who present and discuss their findings and UNGA's First Committee on Disarmament and International Security also looks into the recent findings of AWS regularly. At the moment, there is no treaty or agreement that could accommodate AWS while USA and Russia have rejected the possibility of a treaty and advocates apply and comply approach. Few of the states are of the view that the present legal system addresses and incorporates AWS or else this could be achieved by conducting a comprehensive legal review of the weapon based on its function and characteristics as permitted under Article 36 of AP1 of Geneva Conventions states *"In the study, development, acquisition or adoption of a new weapon, means or method of warfare, a High Contracting Party is under an obligation to determine whether its employment would, in some or all circumstances, be prohibited by this Protocol or by any other rule of international law applicable to the High Contracting Party"* (Vestner & Rossi, 2021). However, despite of its broad interpretation and acceptance still Article 36 does not provide any concrete guidance of how this review should be conducted which was tried to be resolved in 2006 by ICRC in "A Guide to Legal Review of Weapons, Means and Methods of Warfare: Measures to Implement Article 36 of Additional Protocol 1", giving a legal clarity to the Article. As

explained, though the language of Article 36 does not provide the method to conduct legal reviews but it considers the following aspects such as, 1) prohibition of the weapon by any other existing treaty such as in the case of Chemical Weapons Convention, on the other hand if no such document or provision exists then IHL's fundamental principles should be followed. Article 36 also restricts the use of a weapon if, for instance, the use of projectiles or any such method would cause superfluous injury under Article 35(2) of AP1 and Article 23(e) of Hague Regulations, 2) under Article 48 and 51 of AP1, weapons which cannot distinguish between legal targets and 3) under Article 35(3) and 55 of AP1 weapons which can cause severe harm to the environment are prohibited (ihl-databases.icrc.org, n.d.) Debating AP1's customary status, it becomes difficult to decide whether it applies to all states or only to member states (Nasu, 2019). Considering the above discussion, it would become extremely difficult to make states agree and adhere to an internationally accepted legal review for AWS. Also, the states already working on AWS could go for a regime akin to the nuclear one, starting a global and regional trend. Since it is evident that AWS would violate the already existing conditions set by IHL, a comprehensive treaty to prohibit their use is need of the current times.

3.3 Legal Challenges to Laws of Armed Conflict

IHL triggers amid an attack and primarily deals with combatants and civilians protection and treatment .However, this complex nexus of humans and machines complicate the relation between acts of states and IHL through its pre-defined concepts of "attack" and "combatants". Whether the activation of weapons or searching and reaching of target amounts to an attack or not? Article 49 of API does not identify "where an attack begins and ends" and whether AWS is a weapon or a combatant needs amplification and interpretation. This current debate has no finality in opinion as yet, as majority of states interpret them as weapons but scholars such as Hin-Yan-Liu declares them as combatants relying on the systems' capability of decision making. (Liu, 2012) Liu further distinguishes between weapons and weapon system by terming weapon as all arms and ammunition and weapon system as combatant on the basis of autonomous decision making capacity.

This existing confusion as to what constitutes" means and methods of warfare" and who falls into the criteria of combatant, pushes IHL into grey area when it comes to the application and regulation of AWS. States and legal scholars are still to articulate detailed positions on this set of questions.

However, the dominant framing view seems to be that these questions cannot be answered in abstract and requires in-depth understanding of characteristics of environment in which these weapons are used.

As discussed above, in absence of concrete treaty over the usage of AWS states are obliged to respect and ensure respect of IHL rules, particularly the primary rules of principles of proportionality, distinction and precaution, with regard to the conduct of hostilities.

3.3.1 Proportionality, Distinction & Precaution

The principle of proportionality checks whether the attack conducted exceeds the civilian injury and damage than the required military advantage (ICRC, 2021).With the above discussion one can clearly see that these intelligent machines without any human intervention have capacity to cause collateral damage which is prohibited under the rule of proportionality. However, it is patently clear that any autonomous weapon searching for target in a wider area might not be able to judge accurately with distinction and proportionality. (Sisson, 2020). Autonomous weapons are trained in a particular environment which is not close to the actual situation on a battlefield; the performance of AWS cannot be predicted and relied upon. The principle of distinction another crucial aspect of IHL distinguishes between lawful and unlawful targets. For example, if the weapon is trained to recognize a particular group of combatants, there are evident chances that it could mistake the group with another ethnic group or target, causing immense harm and injury (ICRC 2021). As AWS work on war algorithms and have been trained in environments which are starkly different from the battlefield, predictability and reliability cannot be guaranteed (Davison, 2018). However, according to Arkins, AWS are more compassionate than humans as they would comply more rigorously with IHL rules (Arkin, 2009). On the other hand scholars like Walzer take notes that sometimes in war combatants resist killing other combatants on basis of humility and humanity which he believes machines do not possess to judge and act as they are commanded (Walzer,1977). For instance, as termed as "tragic mistake" by the American military where a drone hit a car killing 10 civilians and 7 children is a glaring example of miscalculations and lethality attached with AWS (Hennigan, 2012). Another fundamental principle of IHL is Precaution which put obligation on sates to take stringent precautions before and during the attack. Distinguishing civilian and civilian objects after verification, checking feasibility of attack keeping in mind means and methods of warfare, minimize incidental loss etc. Moreover, it also obliges states to cancel or suspend the attack if it there is any possibility of violation of IHL rules. From this standpoint, it seems difficult to access that to what extent AWS can fall into this regime of limiting means and methods of warfare. According to Human Rights Watch, actors in the battlefield are required to demonstrate "compassion" while making legal and ethical judgments (Human Rights Watch, 2018) but AWS with reference to their characteristics are unable to show compassion and decision making right at the spot. Such acts raises question on to the extent of usage of autonomous weapons in the military field. Nevertheless, in the absence of concrete laws regarding use of AI in the military field, ICRC is of the view that the Martens Clause is relevant here which covers the "principles of humanity and dictates of public conscience" bridging the ethical apprehensions and IHL principles. This holistically means that those scenarios that are not covered by any treaty, agreement or convention in IHL, are protected by the "customary IHL". Therefore, the clause clearly

negates the idea that what is not prohibited is allowed. Martens clause, though provide the link between ethical considerations and usage of autonomous weapons, yet, due to its customary status and various interpretations in different scenarios, it shouldn't be relied on solely.

4. Need for a New Treaty

Human Rights Watch has argued for a new treaty that would prohibit the use of AWS. To consider increasing states' interest in AI algorithms in war it is evidently clear that a complete ban is not a viable option. The "normative and operational framework provided by CCW" in 2020 and 2021 is "vague" and does not provide a clear intention. The new treaty should have a scope to prohibit any weapon that engages without human control and should emphasize on the need for a human control in the development and activation stages. States under the new treaty and in obligation to the old commitments should work to limit their use of force in the context of AWS. New regime of laws in apprehension to avoid specific lacunae or situations should entail prohibitions (should ban the development and production of any such weapon and provide a provision for those which can select the target). Legal reviews of existing weaponry to be done in a legal and specific way as prescribed by IHL. These self- learning and able to make choices machines are difficult for humans to intercept or predict.

5. Ethical Concerns

Antonio Guterres, the then UN General Secretary once remarked, "Autonomous machines with the power and discretion to select targets and take lives without human involvement are politically unacceptable, morally repugnant and should be prohibited by international law" (Kallenborn, 2020). Talking about ethics in relation to war decisions, it seems difficult to comprehend that how machine will take decision which comes in human domain? For ex. recognizing *hors de combat*. As rightly said, that AWS has made the wars easier for the leaders but it has also made them less ethically responsible for the acts they commit. Delegating roles of humans to machines in an armed conflict has generated a large scale debate over its ethics. *Malum in se* a philosophical phrase in Latin that means "a wrong in itself" (Sauer, 2016), goes hand in hand with AI algorithms when used in military. As seen above, that when machines are involved to kill humans it may lead to disrespecting their basic and fundamental right to dignity. The development of AWS seems an unethical and unthinkable idea for the activists because killing someone without ethical consideration and human judgment violates the respect for life that goes beyond the scope of IHL. While looking at the categories, functions, capacity and the characteristics of AWS, one can clearly seek potential differences on the question of human dignity for example completely autonomous munitions carry different potential and responsibility than semi-autonomous drones. However it is also obvious and accepted fact that subtracting AWS from battlefield is not possible at this stage where states have sworn in to compete in AI regimes. Now the only concern for the legal regime is to limit and control the usage of AI and

make states responsible and accountable of their actions. AI and AWS present a moral and ethical quandary for human rights activists and promise a new era of warfare and technology for those who favor them. It is important for the states attempting to develop AI in battlefield to explore risk reduction and confidence building measures along with technical cooperation to avoid any prospected violation of IHL. It can also be argued that till the drafting of robust legal regime, AWS can keep humans in the loop, such as supervisory, identification and targeting cycle. This command and control system will also automatically bring states under accountability. Moreover, restricting the use of lethal autonomous weapons is also a requirement.

6. Conclusion

In current times, the probability of the use of AI in the military field is a reality and a new global climate in military. AWS has transformed war fighting as non-other in the history of war, however replacing humans with machines taking decision power from the actor on the field has threatened many conventional definitions and theories. To date the problem is not only the absence of treaty or conventions regulating AI algorithms but also states' lack of technical knowledge and their unwillingness to disclose their national security technologies which makes it difficult to come up with any unanimous set of rules for the states. In the presence of IHL and customary international rules it will be an exaggeration to say that there is a legal lacunae or a vacuum when dealing with AI regulation in military field however, existing legal uncertainties cannot be denied and overlooked. This equation complicates when align with ethical aspect of usage of AWS. States are obligated however minimum to the legal accountability under the principles of right to life and dignity as well as Martens Clause setting forth the public conscious. Therefore, a legal framework stating common position of the states is required to be adopted that would not give unnecessary margin to states who possess the ability to develop and use AWS. Despite all the lacunas discussed, it is an undeniable fact that states are slowly raising their voices to make usage of AI in military filed accountable, transparent and within the paradigm of LOAC. Pakistan sponsored resolution has been approved by UN Human Rights Council to call upon states to ensure transparency regarding the operations involving drones and unmanned vehicles (UN Human Rights Council, 25th Session, 2014). It has yet to be decided that how AWS would affect nuclear technology and deterrence along with involvement of private military companies on the battlefield with the responsibility factor. States required to draft laws which humanize the use of dehumanize machines in warzone. One thing is evident that states political will, their understanding of practical enforcement and the acceptance of war algorithms in international criminal law is required to reach a unanimous and uniformed regulation. Ultimately AI algorithms in war seem achievable with proficiency in legal framework and technical architecture along with political and ethical consciousness.

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