From Algorithms to Accountability: Regulating Autonomous Weapon Systems in the Face of Ethical and Legal Challenges

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An Autonomous Weapon System refers to a technological platform capable of independently selecting and engaging targets without direct human control or intervention. It operates through a combination of sensors, algorithms, and decision-making processes to observe, analyze, decide, and act on its own. The level of autonomy can vary, ranging from semi-autonomous systems that require human input for target selection to fully autonomous systems that operate without human involvement. This article delves into the complex landscape of autonomous weapon systems (AWS) and their implications in modern warfare. The paper aims to analyze international humanitarian law to determine the principles to which Autonomous Weapon Systems need to adhere, with the objective of ensuring their compliance with international law. The paper also seeks to illustrate the international quandary surrounding the regulation of AWS by explaining the positions of various countries regarding the ban on AWS or the requirement of human control. Furthermore, the paper aims to identify potential regulatory approaches for AWS in light of ethical concerns and the associated risks they pose. The article aims to highlight the necessity for India to develop Autonomous Weapon Systems in response to security threats from China and Pakistan. It further seeks to propose a way forward for India regarding the issue of AWS. The article advocates for the creation of an international regulatory framework and the implementation of domestic laws to regulate AWS instead of an outright ban, considering the significant advantages these systems offer.

Keywords: *autonomous weapon system, technological platform, independently selecting, engaging targets, direct human control.*

INTRODUCTION

Automated weapons differ from autonomous weapons. Automatic weapons are rule-based systems, and their behavior can be predicted by studying their code. On the other hand, autonomous weapons possess the ability to self-learn and exhibit emergent behavior. Their behavior cannot be directly predicted from the code used during their manufacturing.[1]

There are three types of autonomous weapons based on their degree of autonomy:

Semi-autonomous weapons: These weapons involve humans 'in the loop'. Humans select the targets, and the weapons engage them.

Human-supervised autonomous weapons: These weapons have humans 'on the loop'. They independently select and engage targets, while humans constantly monitor their performance. Humans intervene to stop their operation when necessary.

Fully autonomous weapons: These weapons operate with humans 'out of the loop'. They have complete autonomy to select and engage targets on their own. Humans cannot select or even monitor the weapons' performance.[2]

For the purpose of this paper, autonomous weapon systems (AWS) refer specifically to fully autonomous weapon systems.

The autonomous weapon system performs four tasks:

Observe: It is common practice in military operations to use machines for observing and detecting military targets.

Orient: Normally, a human commander estimates the tactical and strategic implications by analyzing battlefield reports. However, autonomous weapons systems with machine learning functionality can independently identify potential courses of action and analyze them.

Decide: Autonomous weapons systems make decisions regarding a course of action.

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[1] Paul Scharre and Michael C Horowitz, 'An Introduction to AUTONOMY in WEAPON SYSTEMS' (*Center for a New American Security*, February 2015) <https://www.files.ethz.ch/isn/188865/Ethical%20Autonomy%20Working%20Paper_021015_v02.pdf> accessed 10 June 2023

[2] *Ibid*

Act: After deciding on a course of action, the final task is the application of lethal force.[3] Delegation of tasks such as 'Orient' and 'decide' to machines has raised concerns due to the value-laden judgments involved.[4] Autonomous weapons systems (AWS) employ machine learning to enhance their functionality. These learning systems analyze data patterns and statistical relationships to improve their performance through accumulated knowledge.[5]

ADVANTAGES OF AUTONOMOUS WEAPONS

- Instances of soldiers committing acts of sexual violence and other misconduct highlight the influence of negative human emotions like anger, fear, revenge, and lust.[6] AWS, being based on AI, lack such detrimental emotions.

- By harnessing AWS, fewer soldiers are required for missions as their effectiveness increases. Consequently, there is a notable reduction in human casualties.[7]

- Fighter pilots necessitate high levels of concentration, making them susceptible to fatigue and exhaustion, thereby endangering their safety.

- Autonomous weapons systems can be programmed to execute a wide range of attacks, including those that are unattainable to humans.

- Manned fighter aircraft face various threats, leading to the inclusion of greater security measures such as life support systems. These safety considerations exponentially escalate costs. Additionally, the involvement of human life necessitates allocating significant power and weight for defensive capabilities, limiting offensive potential. In contrast, AWS can be designed as disposable assets, bypassing the need for extensive safety testing and reducing expenses.[8]

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[3] Shin-Shin Hua, 'Machine Learning Weapons And International Humanitarian Law: Rethinking Meaningful Human Control' (2019) 51 Georgetown Journal of International Law <https://www.law.georgetown.edu/international-law-journal/wp-content/uploads/sites/21/2020/03/GT-GJIL200015.pdf> accessed 10 June 2023

[4] *Ibid*

[5] *Ibid*

[6] Elliot Winter, 'The Compatibility of Autonomous Weapons with the Principles of International Humanitarian Law' (2022) 27(1) Journal of Conflict and Security Law <https://doi.org/10.1093/jcsl/krac001> accessed 10 June 2023

[7] Amitai Etzioni, 'Pros and Cons of Autonomous Weapons Systems' (2018) 11 Library of Public Policy and Public Administration <http://dx.doi.org/10.1007/978-3-319-69623-2_16> accessed 10 June 2023

[8] *Ibid*

- The military does not have a monopoly on the development of autonomous systems. The civilian sector is also heavily investing in the development and sophistication of these systems, thereby alleviating the burden on the military.

Autonomous weapons systems (AWS) can greatly assist in carrying out dull, dangerous, and dirty missions:

- Dull missions, such as conducting extended sorties or monitoring life patterns, can be efficiently performed using AWS due to their longer endurance capabilities.

- Dangerous missions, like bomb disposal, can be executed using AWS, eliminating the risk to human lives.

- Many environments, such as nuclear clouds, pose significant risks to human-crewed helicopters and submarines. AWS can operate effectively in these hazardous conditions.[9]

Human-crewed aircraft and submarines require constant upgrades to ensure the safety of their crews. Design flaws and necessary upgrades for AWS can be considered in the subsequent production cycles or designs to address these concerns adequately.

ETHICAL CONCERNS AND RISKS

- The algorithms upon which AWS operates lack the capability to comprehend the value of human life.

- AWS does not require expensive raw materials. However, once manufacturing and deployment commence, there is a risk of creating a black market, making them easily accessible to rogue states, private organizations, and dangerous individuals. Therefore, regulating the sale of AWS becomes imperative to prevent its misuse.[10]

- AWS has the potential to cause mass destruction, as the extent of damage is dependent on the number of deployed weapons rather than the number of soldiers involved.

- Due to their lower cost, the accessibility of AWS increases, which may lead to their misuse in perpetrating gender-based violence and race-based violence.

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[9] *Ibid*

[10] Merel Ekelhof and Miriam Struyk, *Deadly Decisions-8 Objections To Killer Robots* (PAX 2014)

- Conventional weapons can also malfunction, but in such cases, a human, such as an operator or manufacturer, can be held accountable. However, when AWS unintentionally kills or injures someone, no human can be held responsible as the decision is made by a machine.

- Humans possess the ability to comprehend the body language of others, enabling them to differentiate between enemies and civilians. AI lacks the understanding of contextual nuances. Machines, no matter how comprehensively programmed, can still cause unjustified harm.[11]

- Machines cannot assume moral responsibility for the harm they cause. Since humans cannot be held accountable for the harm caused by AWS, there may be an increase in their utilization, potentially leading to a rise in instances of war.

- To uphold moral responsibility, human agency in decision-making is necessary. Human control over decision-making is required for the death of a person to reflect human intentions.[12] When a machine assumes the responsibility of making life-and-death decisions for human beings, there is no room for mercy or compassion.

- The use of AWS may desensitize some individuals. As soldiers become detached from the process of killing or witnessing someone's death, they may rely more on AWS.

- When one state possesses highly developed Fully Autonomous Weapon Systems (FAWS) while another state does not, the state with FAWS gains an asymmetrical advantage.[13] This power asymmetry can lead to the abuse of power.

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[11] C Anthony Pfaff, 'The Ethics of Acquiring Disruptive Technologies: Artificial Intelligence, Autonomous Weapons, and Decision Support Systems' (2019) 8(3) PRISM <https://ndupress.ndu.edu/Portals/68/Documents/prism/prism_8-3/prism_8-3_Pfaff_128-145.pdf> accessed 10 June 2023

[12] 'What you need to know about autonomous weapons' (*The International Committee of the Red Cross*, 26 July 2022) <https://www.icrc.org/en/document/what-you-need-know-about-autonomous-weapons#:~:text=Autonomous%20weapon%20systems%2C%20as%20the,when%20that%20strike%20will%20occur.> accessed 10 June 2023

[13] C Anthony Pfaff (n 11)

- Economic and human costs act as deterrents to wars. However, countries with economic advantages can manufacture and acquire FAWS, perpetuating armed conflict.[14] Since there is no human cost involved, there would be no incentive for peace.

- AWS engages targets based on a target profile. The absence of human intervention results in unpredictability. The intricate interplay of algorithms makes it challenging to predict the behavior of AWS.

- FAWS raises the likelihood of civilian casualties, as civilians who exhibit behavior similar to that of a soldier may be targeted by FAWS. For instance, a young boy playing with a toy gun could be attacked by FAWS. Once activated, FAWS lacks human discretion, unlike semi-autonomous weapons and human-supervised autonomous weapons. Consequently, even the individual who activated it cannot prevent civilian casualties once the target profile is matched.

- The international arms race will intensify[15], posing a threat to national security.

EXISTING LEGAL FRAMEWORK

Distinction: The principle of distinction is enshrined in Article 48, Article 51(2) and Article 52(2) of Additional Protocol 1 of the Geneva Convention.

- AWS should possess the capability to differentiate between military and civilian objects. While military objects like fighter jets and tanks can be easily identified and programmed, distinguishing between civilian and military objects becomes contextual in certain instances. AI must consider the nature, location, and purpose of an object before initiating an attack.[16]

- AWS should be able to distinguish between combatants and civilians, civilians and civilians involved in hostilities, and combatants and individuals in a non-combatant status. When combatants in an armed conflict do not wear uniforms, their identification

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[14] Melisa Foster and Virgil Haden-Pawlowski, 'Regulation Robocop: The Need for International Governance Innovation in Drone and LAWS Development and Use' (2015) 33(2) Sicherheit Und Frieden (S+F) / Security and Peace <https://www.jstor.org/stable/e26427113> accessed 13 June 2023

[15] *Ibid*

[16] Anoushka Soni and Elizabeth Dominic, 'Legal and Policy Implications of Autonomous Weapons Systems' (*The Centre for Internet and Society*, 31 October 2020) <https://cis-india.org/internet-governance/legal-and-policy-implications-of-autonomous-weapons-systems> accessed 13 June 2023

is based on their engagement or intent to engage in hostilities. Therefore, AWS must be capable of recognizing and interpreting human behavior.[17] Even humans make errors, so it is crucial to establish a specific threshold to determine the acceptable level of error that an AWS can tolerate. Extensive testing is required to assess whether an AWS meets this criterion.[18]

According to Article 50(1) of Additional Protocol 1, in cases of doubt regarding whether a person is a civilian or combatant, that person shall be considered a civilian. The suspicion must cause a 'reasonable attacker in the same or similar circumstances to hesitate before attacking.' This threshold is based on human reasonableness. As AWS is a new phenomenon, a threshold must be developed to test and qualify AWS. Predictability is essential for weapons to comply with international humanitarian law. The user of AWS may not be able to reasonably foresee how AWS will function in a given situation, as it will apply force in an unknown place and time.

Proportionality: It is the principle that collateral damage to civilians must be proportional to the military advantage. If the damage to civilians exceeds the direct military advantage of the attack, the attack must be prohibited.[19] AWS should be able to determine the amount of harm to civilians and civilian objects, as well as the potential military advantage. The military advantage is highly contextual, for example, one civilian per combatant, three civilians per unit commander, and so on. To determine military advantage, the threshold is that of a 'reasonable commander.[20]

- To weigh collateral damage against military advantage, AI needs objective criteria, specifically in terms of quantity. However, ethical questions arise when attempts are made to quantify it, as it involves the value of human life. A clear-cut formula cannot be provided for determining how much civilian damage can be caused to achieve a given military advantage.

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[17] Jarna Petman, *Autonomous Weapons Systems And International Humanitarian Law: 'Out Of The Loop'?* (Helsinki 2017)
[18] Amitai Etzioni (n 7)
[19] *Ibid*
[20] *Ibid*

Precaution: The principle of precaution necessitates taking measures to protect civilians and civilian objects, as codified in Article 57 of Additional Protocol 1 of the Geneva Convention.[21] Although precautions are taken, it may not always be possible to spare all civilians. The threshold for this principle is 'most probably.[22] The requirement to take precautions to decrease collateral damage applies not only to commanders but also to the manufacturers and programmers of AWS. AWS needs to constantly reassess the possibility of collateral damage; therefore, some commentators argue that AWS must keep humans 'in the loop'.

Legal reviews of weapons: According to Article 36 of Additional Protocol 1 to the Geneva Conventions, states are required to conduct legal reviews of new weapons.[23] These reviews are essential to ensure that states use the weapons in accordance with international law. Legal reviews are a national procedure and do not have international oversight.[24]

- During the legal review process, states should adopt a multi-disciplinary approach, involving experts from various fields. Currently, government agencies have limited technical expertise in autonomous systems and artificial intelligence. Therefore, it is important for states to share information and cooperate with each other on technical aspects.[25]

- The review process should include studying the performance, behavior, and effects of autonomous weapons systems in various environments. The capabilities and effects of the weapon systems should be thoroughly tested. Predictability and reliability also need to be assessed. [26] Autonomous weapons systems need to be reviewed not only as individual weapons but also as methods of warfare. [27] The legal review must consider

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[21] *Ibid*

[22] *Ibid*

[23] 'Autonomous weapon systems under international humanitarian law' (*International Committee of the Red Cross,* 31 January 2018) <https://www.icrc.org/en/document/autonomous-weapon-systems-under-international-humanitarian-law> accessed 13 June 2023

[24] Dr. Vincent Boulanin et al., 'Autonomous Weapon Systems and International Humanitarian Law' (2021) Stockholm International Peace Research Institute <https://www.sipri.org/publications/2021/other-publications/autonomous-weapon-systems-and-international-humanitarian-law-identifying-limits-and-required-type> accessed 13 June 2023

[25] *Ibid*

[26] *Ibid*

[27] *Ibid*

both treaty and customary laws, as well as any restrictions on specific weapons in International Humanitarian Law (IHL). [28] Furthermore, it is crucial to consider the principles of International Human Rights Law (IHRL) and International Criminal Law (ICL) when evaluating the impact on the right to life and the dignity of victims of autonomous weapon systems.

Martens Clause: The Martens Clause, codified in Additional Protocol II to the Geneva Convention, Article 1, states that when there is no specific framework in international humanitarian law to regulate a particular issue, established customs, principles of humanity, and the dictates of human conscience should guide the regulations. [29] Different states hold varying views on whether the legal review of autonomous weapon systems should consider the Martens Clause. Some argue that autonomous weapon systems are already regulated by international humanitarian law, making the clause unnecessary to consider. However, other states believe that the Martens Clause can contribute to the evolution of customary or treaty law. Therefore, discussions held by the Group of Governmental Experts (GGE) on AWS need to be taken into account. [30]

GLOBAL EFFORTS AND COUNTRIES' POSITIONS

In 2013, the Convention on Conventional Weapons (CCW) meeting of the high contracting parties decided that the chairman would convene an informal meeting of experts to discuss questions related to lethal autonomous weapons systems (LAWS). Three informal meetings of experts took place in 2014, 2015 and 2016.

In 2016, during the fifth CCW review conference, the high contracting parties decided to establish a Group of Governmental Experts (GGE) on LAWS to assess questions related to lethal autonomous weapons systems.[31] However, the countries have not yet reached a consensus on negotiating a treaty to govern the use of these weapons.[32] States hold different views on the

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[28] *Ibid*

[29] Amitai Etzioni (n 7)

[30] *Ibid*

[31] Subhrangshu Pratim Sarmah, 'India Must Remain Practical Amid Politics Around 'Killer Robots'' *The Quint* (28 December 2021) <https://www.thequint.com/opinion/india-must-take-a-practical-approach-amid-politics-around-killer-robots> accessed 13 June 2023

[32] *Ibid*

regulation of autonomous weapons systems. Russia, Israel, the US, the UK and other countries are developing advanced autonomous weapon systems. They are unwilling to support a legally binding treaty that would ban these weapons as they aim to maintain their military advantage and strategic position in the global arms race.[33]

On the other hand, countries like Spain, Sweden, Kuwait and Portugal believe that human control is necessary. While they are not interested in possessing autonomous weapon systems themselves, they do not support a ban on these weapons.[34] China is actively developing and producing autonomous weapon systems. While they support banning the use of autonomous weapon systems, they do not advocate for a ban on their production and development.

In 2019, India expressed support for human control over autonomous weapon systems, particularly regarding final decision-making. However, in the 2021 GGE meeting, India stood against a legally binding treaty regulating autonomous weapon systems. [35] Furthermore, Pakistan called for a pre-emptive ban on lethal autonomous weapon systems (LAWS).[36]

These differing positions highlight the ongoing debates and challenges in reaching a consensus on the regulation and governance of autonomous weapon systems. In the meeting of the Group of Governmental Experts (GGE) on LAWS, countries disagreed on the definition of autonomous weapons. The UK and some other countries defined autonomous weapons as fully autonomous weapons that are still under development. This definition pushes the discourse around lethal autonomous weapons into the future, as fully autonomous weapons do not yet exist. Switzerland and some other countries agreed on the definition of lethal autonomous weapons systems, which includes semi-autonomous weapons that currently exist. [37] During the GGE

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[33] Bedavyasa Mohanty, 'Amidst calls for a ban, India leads the debate on Lethal Autonomous Weapons' (*Observer Research Foundation*, 29 November 2017) <https://orfonline.org/research/amidst-calls-ban-india-leads-debate-lethal-autonomous-weapons/> accessed 13 June 2023

[34] *Ibid*

[35] *Ibid*

[36] *Ibid*

[37] Johannes Lang et al., 'States Disagree on Definition of Lethal Autonomous Weapons: FAILURE TO DEFINE KILLER ROBOTS MEANS FAILURE TO REGULATE THEM' (*Danish Institute for International Studies*, February 2018)
<https://pure.diis.dk/ws/files/1358230/Failure_to_define_killer_robots_means_failure_to_regulate_them.pdf> accessed 13 June 2023

meetings, many countries emphasized the need for 'meaningful human control'. However, countries have not reached a consensus on the requirement of meaningful human control either.

INDIA: CURRENT SITUATION AND FUTURE OUTLOOK

In 2013, the Defense Research and Development Organisation (DRDO) confirmed that India is developing 'robotic soldiers' capable of differentiating between combatants and civilians.[38] In July 2022, a government press release further confirmed the development of autonomous weapons systems in India.[39] The Indian Air Force also showcased offensive AI-based drone technology during the Army Day parade held in Delhi Cantonment in 2021. Additionally, the DRDO introduced India's first unmanned remotely operated tank with three variants known as 'Muntra'. [40]

India faces constant threats from China and Pakistan. Autonomous weapon systems could potentially assist India in defending the Line of Control and other international borders, considering the challenging geographical and weather conditions that soldiers often encounter.[41] While there may be ethical and legal concerns surrounding the current deployment of autonomous weapons at the border, it is possible that these concerns will be addressed and resolved in the future. Failure to develop autonomous weapon systems now could leave India falling behind in the global arms race, potentially limiting its ability to deploy such systems in the future. In such a scenario, India may be forced to rely on importing autonomous weapons, putting itself at a significant disadvantage. Developing autonomous weapon systems would also aid in addressing the challenge of protecting space assets. [42] While China is actively developing autonomous weapon systems and Pakistan has called for a preemptive ban, it is important to approach Pakistan's stance with caution, considering its simultaneous pursuit of

[38] R Shashank Reddy, 'India and The Challenge of autonomous weapons' (*Carnegie Endowment for International Peace*, June 2016) <https://carnegieendowment.org/files/CEIP_CP275_Reddy_final.pdf> accessed 13 June 2023
[39] 'Raksha Mantri launches 75 Artificial Intelligence products/technologies during first-ever 'AI in Defence' symposium & exhibition in New Delhi; Terms AI as a revolutionary step in the development of humanity' (*Ministry of Defence*, 11 July 2022) <https://pib.gov.in/PressReleasePage.aspx?PRID=1840740> accessed 13 June 2023
[40] Johannes Lang (n 37)
[41] R Shashank Reddy (n 38)
[42] Amitai Etzioni (n 7)

nuclear capabilities alongside its calls for a nuclear-free South Asia. [43] Furthermore, recent drone attacks conducted by Pakistan on India highlight the potential threats posed by autonomous weapons systems. To safeguard its interests, India needs to develop its own autonomous weapon systems. This would provide military advantages such as reducing casualties and enhancing the effectiveness of individual soldiers, while also presenting potential opportunities for future exports. Although India is not a party to the Ottawa Treaty or the First Additional Protocol to the Geneva Convention, [44] its stance in the recent GGE meeting on LAWS was against the prohibition of AWS. Considering these factors, it appears highly unlikely that India will sign an international treaty that seemingly bans the development of autonomous weapons.

While there is still a long way to go in the global development of autonomous weapon systems, an outright ban at this stage would impede technological progress. However, given the risks of proliferation and other concerns, it is imperative to establish international regulations for autonomous weapon systems. India could lead by example by developing a robust domestic legal framework to regulate rules of engagement, conditions for export, and other aspects related to autonomous weapons. [45] It is crucial to have appropriate trade regulations in place to prevent proliferation. To address these concerns effectively, India must advocate for fair international regulation of autonomous weapon systems.

POSSIBLE WAYS OF REGULATION

War Torts: As mentioned earlier, there is an accountability gap regarding who should be liable for the damage caused by autonomous weapon systems. This makes it difficult for the international criminal regime to hold individuals accountable for the acts of autonomous weapon systems. One possible solution is to identify and apply 'war torts' for violations of international humanitarian law to hold states liable. [46] States have deep pockets and can

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[43] *Ibid*

[44] *Ibid*

[45] *Ibid*

[46] Rebecca Crootof, 'War Torts: Accountability for Autonomous Weapons' (2016) 164(6) University of Pennsylvania Law Review <https://scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=9528&context=penn_law_review&httpsredir=1&referer=> accessed 13 June 2023

compensate the victims of autonomous weapon system actions. The principle of strict liability can be applied to the actions of autonomous weapon systems since they are not entirely predictable and inherently dangerous.[47] Instead of negligence, strict liability should be used to impose liability because negligence requires identifying a specific individual who failed to exercise reasonable care.[48] By forcing states to pay compensation, this approach helps victims and acts as a deterrent to the use of autonomous weapons.

Dynamic Diligence: The problem of the accountability gap can be addressed by modifying the doctrine of commander responsibility. This approach involves three key aspects:

- The interface of an autonomous weapon system should be adaptable. When operating in a complex environment, it should require human intervention.

- Commanders should regularly assess the machine learning process to ensure compliance with the principles of distinction, proportionality, and precaution in international humanitarian law. Changes should be made when the machine learning process fails to comply.

- Limits should be set on time, distance, and maximum collateral damage to minimize potential harm in unfortunate events. When these limits are exceeded, the autonomous weapon system should halt until human intervention takes place. This ensures compliance with the principle of proportionality.[49]

CONCLUSION

To comply with provisions of International Humanitarian Law, autonomous weapon systems must be developed in a way that enables them to distinguish between combatants and civilians, military objects and civilian objects. AWS must be able to recognize and calculate the proportionate harm caused to civilians and civilian objects in relation to potential military advantage. Countries that are developing AWS are against a ban and define them as fully autonomous weapons that are still under development. On the other hand, countries that are not developing AWS advocate for the requirement of human control or a complete ban.

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[47] *Ibid*

[48] *Ibid*

[49] Amitai Etzioni (n 7)

Reaching a consensus and developing a regulatory framework is the need of the hour. China is actively developing autonomous weapon systems, which highlights the urgency for India to develop AWS, considering the constant threat it faces from China. India must continue its development of AWS, considering the advantages they offer, such as reducing casualties, and also because India cannot afford to lag behind in the global arms race, as many developed nations are pursuing the development of Autonomous Weapon Systems.

Countries should strive to reach a consensus on the definition of autonomous weapon systems in order to engage in meaningful discussions regarding their regulation. Rather than imposing a pre-emptive ban on a technology that is still in the developmental stage, it would be more constructive to establish a framework for international regulation. Instead of relying solely on international regulations, countries should undertake legal reviews of autonomous weapon systems and enact domestic laws accordingly. Governments should determine the necessary level of human control to establish effective international regulatory mechanisms.

Addressing the issue of the accountability gap requires considering the option of holding states strictly liable for damages caused by autonomous weapon systems until a comprehensive legal framework is in place. India should advocate for legal regulations rather than support a complete ban on autonomous weapon systems. It is crucial for India to continue its research and development efforts in this field, taking into account the advantages offered by autonomous weapon systems and the security threats faced by the country.

Striking a balance between ethical considerations, compliance with international humanitarian law, and national security interests is vital in shaping the future trajectory of AWS.