

LmunA 2022

Research report

Forum: Disarmament and International Security
Committee

Issue: Preventing Countries from Further Testing on
Lethal Autonomous Weapon Systems (LAWS)

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Introduction

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In the history of human civilization tension has always existed between different societies, based on their norms and way of life. Consequently, it is within human nature to want to protect and defend ourselves, and the people who form our communities, from those who disagree with our fundamental values and beliefs. This, along with the surge in technological development as time passed, lead to the inception of LAWS: robotised weapons that autonomously recognise and kill targets without need for human operators. With the added convenience and capabilities of modern technologies such as LAWS, that is slowly removing the human aspect of war, the definition of what is morally correct is shifting. It has furthermore once again raised the massive debate on the question of ethics within Artificial Intelligence.

The debate on LAWS brings forth both advantages and disadvantages. Some of the advantages entail improved military capabilities, including increased accuracy, precision and power at reduced financial costs. While some support LAWS with moral arguments others base their opposition to them on moral grounds. A soldier's inherent and natural resistance to taking human lives can be overcome by LAWS.

This subject is closely linked to the LmunA 2022 theme of Emerging Technologies in Shaping Modern Society. We must not let the emergent technology of LAWS lead to a more militarised, competitive and dangerous world: finding ways to limit the technology within this while allowing for other important technological developments in future.

It is of imperative importance that we recognise that LAWS are also conducive to escalations in arms races worldwide and place focus on the offensive military strengths of countries. As delegates in the UN, as a force founded on peacekeeping, and especially delegates in GA1 focused on international security and disarmament, delegates should realise the potential for escalation and misuse of LAWS and find methods to effectively limit this in order to preserve world peace. Many countries have decreased willingness to limit LAWS as they feel this infringes their national authority and reduces their potential to defend themselves if attacked by foreign military action: these desires must be weighed off with the need for a global move towards disarmament. This report aims to provide delegates with the necessary knowledge to achieve this goal.

Definitions of Key Terms

Arms race

A competitive increase in supply of military resources by two or more countries, often in competition with each other. Also refers to any military build up by a group of counties.

Artificial Intelligence (AI)

The quality of a computer or robot to be able to do tasks that usually require human intelligence and knowledge.

Lethal Autonomous Weapon Systems (LAWS)

Also known as “killer robots” or “slaughter bots”. They are a type of weapon that use artificial intelligence to identify, select and kill targets without human intervention and instead use precalculated algorithms to make the decision of taking a human life or targeting a vehicle.

Moral code

A formal set of rules accepted by a person or group of people to represent the ethically correct way the person or group should behave or carry out their actions.

Morality

Principles that define the difference between what is accepted as right or wrong, or good and bad behaviour.

Proliferation

An escalation in the number or amount of something, or its propagation in modern-day culture and society.

Algorithm

A procedure encoded in a machine or AI system that works under a set of rules to behave a certain way: often in terms of problem-solving or obtaining a predetermined result.

Less Economically Developed Countries (LEDCs)

Countries whose industries are not fully developed, that have overall lower GDP and increased amounts of people living with poor standards of living or below poverty lines.

More Economically Developed Countries (MEDCs)

Countries whose industries are more developed and have higher GDP: living standards in these countries tend to be improved and technological developments happen largely within these nations.

Quotas

An often governmentally decided upon limitation of the number of or quantity of money spent on a certain good that is developed, imported or exported.

General Overview

The main advantages cited for LAWS are that they improve the efficiency of warfare, both financially, in terms of military capability (as AI cannot be clouded, as with soldiers, by emotions such as fear and hysteria) and higher accuracy in target hitting, which is what led to a desire for their development. Today, there is not yet a sufficiently internationally agreed upon legal framework to regulate the testing, production, transfer and deployment of LAWS. The main issues surrounding the topics of testing on LAWS can be captured in two main categories that will be discussed in this report: Removing the human element and Arms race.

Removing the human element

Removing the human interaction that is involved in controlling and releasing weapons, in other words creating a weapon that is self-initiating, poses a risk to the blind killing of innocent lives whenever the algorithm used fails to function properly. With the ability that lethal autonomous weapons systems have to be remotely operated, leaving them devoid of any human emotion that is involved in taking human lives, there is a potential for great harm on a very large scale.

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Additionally, they have the potential of prolonging war because historically there have been two factors that have helped keep conflicts short and manageable: the first is the concern of a country for their soldiers, and the other is the effort to minimise the deaths of innocent civilians. LAWS diminishes both of these as it requires less soldiers to operate and furthermore causes more casualties in both civilians and military personnel. Given that autonomous weapons are ruled by algorithms lacking a human sense of morality and the extent of damage LAWS can cause, questions are raised about the need for a human aspect in war. LAWS allow for the more ruthless and unfeeling waging of war, which is unfortunately seen as advantageous in today's world where a country's aim is often to cause as much damage as possible and they see this potential mitigated by soldiers' unwillingness to take lives. However, humanity is still absolutely necessary in warfare as it is what can best lead to its termination and reduce infringement of human rights during warfare, which is already enormous due to other factors: we must, therefore, preserve this.

While some argue that LAWS will bring added accuracy in hitting specific targets, grave concerns have been raised about target mis-identification taking place: algorithms are never infallible as they are, ultimately, written by humans and frequently do not account for all possible situations a robot may find itself in when it is in a war setting. An example may be a group of young boys playing with toy rifles being confused by a lethal autonomous weapon system as a group of soldiers from the opposing military. System errors may also occur such as automatic rifles continuing to shoot long after the target has been reached due to a malfunction. These risks of miscalculations and defects have the potential to massively increase civilian casualties, and when it concerns human lives, these are mistakes that we simply cannot allow or justify. Some may argue that if the lethal autonomous weapon system is designed well enough the potential of this is reduced, but this can be rebutted in three ways: firstly, it is rare that there will ever exist an AI so well programmed that it has no faults and can account for all possibilities; secondly, a reduced potential is not a null potential and any potential for unnecessary death should be eradicated; and thirdly, the resources needed to design an AI of this quality are arguably better used elsewhere in furthering a nation's economy. Especially in LEDCs, the use of large amounts of resources and funding for the development of LAWS is less justifiable as this would be better used to help develop the country's industry or the people within it living below poverty lines. This therefore invalidates a frequent argument made by LAWS supporters that sustains that it saves money as it requires less military power to operate.

Proliferation

The existence of LAWS has a 'fight fire with fire' effect. This means that the only way to match the capabilities of countries in possession of LAWS is for competing countries to produce more of them and in larger amounts, leading to a potential global arms race that can be massively detrimental to both national economies and human rights. In addition, this creates competition to develop increasingly devastating forms of lethal autonomous weapons that could include the combination of chemical, biological and nuclear arms in them. This phenomenon has given rise to what was by experts as the "third revolution in war technology" - the first being gunpowder, and the second being nuclear power - we must limit this in hopes for a more peaceful future with societies less focused on military spending.

Proliferation raises a series of additional questions. For instance, in worsening the disparity between LEDCs and MEDCs in terms of their military capabilities. The development and use of the weapons system could be the cause of asymmetric wars between nations, leaving poorer

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countries at a greater disadvantage and furthering disparities in terms of development. Another question that has been raised is the use of artificial intelligence (AI), such as in LAWS, for what is considered to be negative impacts on human life and whether technology should even be used for these purposes.

This issue is the subject of an influential letter written on July 15th 2015 that called for “a ban on autonomous weapon systems beyond meaningful human control.” . While the letter notes that artificial intelligence (AI) has the ability to save and help those in need, the use of it in LAWS could tarnish the benefits of AI. The letter was signed by an impressive list of influential individuals including Elon Musk, inventor and founder of Tesla, the world renowned physicist Stephen Hawking and Noam Chomsky from the Massachusetts Institute of Technology, among others. Another 1000+ AI and robotics researchers have also signed the letter.

An unintended consequence of the increase in production of LAWS is the potential for them to operate outside of government control, leading to a second type of problem with proliferation. Autonomous weapons have the potential of being produced by market pressures and leading to widespread sales, which in an unregulated market run the risk of falling into hands of the wrong people including terrorist groups. If LAWS are commercialised, countries run enormous security risks as they cannot regulate who buys these on black markets, for example.

Major parties involved

USA

The U.S. has consistently opposed any preemptive ban on LAWS, arguing that LAWS could potentially provide a humanitarian benefit and that it is possible to govern the development and use of LAWS. The United States developed LAWS during the 1980s but as of December 2021 reportedly did not have LAWS in its inventory. The US is primarily concerned with retaining its international influence and power, and its ability to defend in case of military attack.

China

China maintains “strategic ambiguity” about its position on LAWS. A Chinese manufacturer “Ziyan” has produced a fully autonomous system (helicopter drone) which it has reportedly exported to the Middle East. As an emerging economy whose interests are at times in conflict with those of Western countries, it prefers to protect its interests and does not condemn LAWS.

Russia

Russia has opposed a preemptive ban on LAWS, noting that LAWS could “ensure the increased accuracy of weapon guidance on military targets, while contributing to lower rate of unintentional strikes against civilians and civilian targets.” It would be in their interest to retain this position due to their current military endeavours, and being an influential power, they have the capability to limit the attempted progress on reduction of LAWS.

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Israel

Due to its military capabilities, another major party involved is Israel. The Israeli weapons manufacturer “IAI” has produced a fully autonomous weapon that has been exported to Chile, China, India, South Korea and Turkey. The international community previously expressed concern on their desire to use this in their ongoing conflict with Palestine.

The Human Rights Watch

This NGO is a very active participant in the discussions surrounding LAWS. Their campaign called “Stop Killer Robots” was started in 2012 and publicly launched in 2013 and it is joined by more than 180 member organisations globally. They are advocates for world peace and condemn the production of killer robots for the damage they can hold for civilians especially if they are misprogrammed and in general as an encouragement to wage war. The NGO strives to protect human rights especially in countries with growing mobilisation of military resources, and therefore rightfully views LAWS as a hindrance to this.

Timeline of Key Events

2012	A joint report between the HRW and Harvard Law International Human Rights Clinic states that LAWS are unable to properly distinguish between civilians and military targets
2013	Campaign to Stop Killer Robots formed
2014	Debate begins after UN Convention on Certain Conventional Weapons (CCW) regarding the ban of such weapons
July 15th 2015	Over 1,000 experts in AI sign a letter warning of an arms race in military artificial intelligence and calling for a ban on LAWS
October 2016	President Obama of the US publicly states wariness on future drone warfare
2020	Azerbaijan uses Israeli-supplied IAI Harop drones in its war with Armenia
December 2020	USAF employs algorithm MuZero to select targets in a training exercise
March 2021	UNSC releases report outlining use of LAWS in conflict with Libya and expresses concern
May 2021	International Committee of the Red Cross releases their position on the human rights effects of LAWS
August 2021	Kabul drone strike: US military kills 10 civilians leading

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up to its withdrawal from Afghanistan

December 2021

6th review conference of CCW to set an agenda on regulating LAWS

Previous attempts to solve the issue

As mentioned, the July 15th letter entailing the ethics of AI achieved worldwide attention when it was signed by large numbers of researchers and figures in science. Other advocacy campaigns such as the Campaign to Stop Killer Robots have done similar work in terms of raising overall social awareness and education on the issue despite some saying they have had little impact on the international diplomatic community's attitudes towards this.

There have been many arms limitations treaties in the past that have been cited as potential models for new treaties on LAWS: the Nonproliferation of Nuclear Weapons Treaty of 1970 is one such example that succeeded to appeal to both major and minor global powers of the time, allowing an international organisation to monitor this as part of their responsibilities. Similar approaches to prohibition treaties have also had some success such as in the Ottawa convention of 1997, the 2008 Oslo Accords, and the Treaty on the Prohibition of Nuclear Weapons in 2017 - the first ever treaty to completely ban nuclear weapons. The main issue with these treaties was that many large world powers, in protection of their own interests, did not sign them.

Ongoing debate has taken place in the UN's CCW Convention regarding a ban on the weapons' development and the IEEE Global Initiative on Ethics of Autonomous Intelligent Systems has established common principles LAWS must have in order to be considered well-designed. This is key as a large factor causing unsatisfactory progress in this issue is over contention on the definition of LAWS and what technologies count as LAWS that countries have failed to reach an agreement upon. The Group of Governmental Experts (GGE) has many times reconvened for CCW after 9 years of discussion for them to begin formulating proposals. Their 6th Review conference saw a failure to agree on a path forward on this issue, mainly caused by Russia having resisted the opening of the meeting and blocking procedural decisions to hinder the meeting as they did not want to have these discussions in the wake of their war with Ukraine.

Possible solutions

In order to find methods to limit slaughter bots without causing international disagreements, as aforementioned, delegates must find ways to weigh off countries' interest in their military protection. International action and legislation on the fair use of LAWS is the most direct way to tackle this. This can involve many facets.

Firstly, the creation, use or collaboration between various peacekeeping forces must be ensured to protect human rights (under the UN's Charter and Declaration of Human Rights) for civilians in warfare, especially warfare involving LAWS. Advocacy organisations should also be considered. While this does not tackle the problem at the root, rather respond to it, diverting funding or support to these organisations can help reduce the scale of problems that have already been caused by weapon systems, and generally promote international peace.

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A common solution implementable within legislation is the setting of quotas. The consensus on these is that they are effective: the only reason they are still not used widely enough is because they require well thought-out logistics, that nations often cannot agree upon, relating to both overall quotas or aims and the issue of proportionality. Some nations argue that the amount of weapon systems a country can possess should be determined based on the quantity of population or mass of land the country must defend. Again, this solution tackles existing slaughter bots only. Immediate bans or limitations can also be considered for countries currently in states of conflict.

The main purpose of this issue is to prevent all further testing: therefore, endeavours to monitor testing, to consider limitations on materials frequently used to build LAWS and to sanction countries that continue to test their systems is necessary. Delegates should be aware that some countries may view it as infringement to their national sovereignty to allow international entities to monitor whether testing occurs within their territory: furthermore, it should be determined what organisation or entity should monitor this and how frequently.

All nations should be aware of the potential for autonomous weapons systems to proliferate on the market and within society: organisation of sections of police or peacekeeping organisations can be dedicated to this. Delegates should keep in mind the broader topics of how we can work towards increased ethics in AI or parameters for this, and how we can reduce the world's growing desire for military power.

Further reading

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