

Forum: Disarmament and International Security Committee (DISEC)

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Introduction

The Disarmament and International Security Committee (DISEC) has had a broad history with weapons' threats to international peace and security, but now, it faces new challenges uprising from emerging technologies that might lead to a third revolution in warfare. It is often said that guns don't kill people, people do; but not for long. Soon, weapons will be able to do what was thought they could never do; think.

According to Eleonore Pauwels, Research Fellow on Emerging Cyber Technologies at United Nations University (UNU), **artificial intelligence (AI)** is "a growing set of autonomous and self-learning algorithms, capable of performing tasks that were commonly thought could only be done by the human brain. At its core, AI produces powerful predictive reasoning while minimizing the noise from unpredictable and complex human behaviour." Artificial intelligence operates with **autonomous technology**, which allows it to have functions such as visual perception, speech recognition, learning, reasoning, decision making and self correction. The development of artificially intelligent algorithms has grown exponentially and is starting to appear in our daily lives through the internet and social media, as well as autopiloted cars. Accordingly, many scientists are progressing in these technologies to help tackle some of humanity's greatest issues, such as fighting hunger, mitigating climate change, crime prevention, advance in the healthcare sector, etc. And in the attempts of creating artificially intelligent machines to increase security, the development of **lethal autonomous weapon systems (LAWS)** could do just the opposite for humanity.

Definition of Key Terms

Artificial Intelligence

Artificial intelligence is an area of computer science in which computer systems have the ability to perform certain tasks that would normally require human intelligence.

Lethal Autonomous Weapons System (LAWS)

Lethal devices that work without any human involvement or intervention, using algorithms that allow them to independently think, look for and capture previously programmed targets. Some of these include autonomous guns, robots, missile systems, drones, as well as unmanned naval, aerial, and terrain vehicles.

Autonomous Technology

A feature of artificial intelligence in which the technology governs itself and it does not involve human intervention.

General Overview

1) Lethal Autonomous Weapon Systems

LAWS are lethal devices that work without any human involvement or intervention. They use algorithms that allow them to independently think, look for and capture previously programmed targets with incredible accuracy, precision, and speed. Some of these include autonomous guns, robots, missile systems, drones, as well as unmanned naval, aerial, and terrain vehicles. Countries such as China, Russia, Israel, South Korea, the UK and the US have already begun the production of said weapons. At this rate, the campaign to stop killer robots argues that the world could enter a destabilizing robotic arms race, following in tension between nations and the disruption of international peace. Soon, this could lead to a third revolution in warfare; which has triggered a highly controversial, worldwide debate regarding ethical guidelines and legal implications of these lethal autonomous weapon systems. Some nations have already declared their desire to ban autonomous weapons, yet no clear conclusion has been agreed upon, and until then, their production will not stop.

2) Potential Benefits/Defects of LAWS

LAWS are designed to be able to recognize a previously programmed target, with the aim to reduce human error. Artificial intelligence is said to make fewer mistakes, less trigger assassinations and less accidental casualties than humans. They would increase effectiveness and the military's ability to carry out their objectives. Lethal Autonomous Robots (LARs), for instance, are thought to do a more thorough job than humans and be better equipped for different situations, with a superiority in accuracy and precision. For this reason, and as a means to reduce human military loss, nations could use autonomous machines to fight their wars for them. With the deployment of LARs, the replacement of military personnel for machines could become possible and millions of deaths could be avoided. Nonetheless, it is argued that if troops are replaced by LAWS, the decision to go to war might become easier.

In addition to the reduction of human error, these robots will not hold the ability to furnish emotions, such as fear, vengeance or spite, which might harm the military's objectives. However, these machines will carry the responsibility of deciding whether someone lives or dies. Without human characteristics such as compassion, intuition and moral judgement, some question their ability to make these complex ethical choices. Furthermore, they question their ability to "evaluate the proportionality of an attack, distinguish civilian from combatant, and abide by other core principles of the laws of war." Can autonomous weapon systems be trusted in making these decisions? Will they have the same discerning capabilities as humans? The autonomous use of force can bring up concerns such as algorithmic bias, black boxes in decision-making systems, software failures and cyber attacks. Whether it is statistical, moral, or legal, a bias would not only obstruct the military's duty, but threaten and possibly violate international humanitarian law.

Another limiting factors of autonomous weapons is that it is impossible to assure that these weapons will be maintained in armed conflict. They could be used in border control and policing, or on a bigger note, if it gets to the hands of criminals or terrorist organizations, LAWS can be used as weapons of mass destruction resulting in genocide

and ethnic cleansing. As mentioned by the delegation of Pakistan in a CCW, "LAWS could easily be used in anonymous and clandestine operations as well as for targeted killings". Given the fact that private artificial intelligence firms are ahead of the military in terms of LAWs' development, non-state armed groups are more propense to acquire these weapons.

3) Legal Implications

The production of these technologies is moving faster than the elaboration of their legal framework in international law. The characteristics and abilities imposed on these robots assimilate humans to the extent in which it becomes a challenge for the International Humanitarian Law and the Geneva Conventions to determine whether these robots should be considered man or machine. If one of these 'killer robots' commits an unlawful act or does something without the states' consent, who does the responsibility correspond to? the commander of the robot, whoever programmed the software, the manufacturer or the actual machine? Will these automated weapons be aware that they can govern their own actions and have their own thinking processes, in order to work in an ethically correct way? Will these weapons be able to follow the laws of war? Some believe that there is a humanitarian element of mercy and empathy in war that these machines will not be able to replicate, suggesting that it is morally wrong to bring these machines into warfare. Given the controversy and subjectivity associated with the matter, as well as the fact that these technologies are still in development, state armies do not have the right to use said weapons in war. The 1977 Geneva conventions Additional Protocol I, marks that 'states don't have complete autonomy to choose their preferred "methods or means of warfare"' (Article 35). However, these protocols have been ignored in the past.

4) Possible Implementation/Banning of Autonomous Weapons

It is possible that within the next decade or so, such weapon systems will be implemented, bringing the third revolution of warfare in arms history and posing a huge potential threat to international security. Experts in the field of artificial intelligence such as Elon Musk and Bill Gates called for a complete ban on the use of 'killer robots',

suggesting their complete awareness of the possibilities at stake if such machines are left for use in warfare.

Year after year at the United Nations Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons (CCW) the debate and any outcomes are delayed to the following year. Russia and the United States claim that there is no need to discuss the topic of LAWS because no autonomous weapon has been deployed yet, continuing to ignore all opinions expressed regarding the topic and its potential severity. Correspondingly, nations' inability to reach consensus on the definitions and legal implications on the matter has delayed any actions, while first world countries continue to develop LAWs. Nations such as Israel, Russia and the United States, have begun to deploy weapons with some autonomy, making the possibilities of having fully autonomous weapon systems increase everyday. Given their economic stability, unlike others, first world countries have the ability to develop these sorts of weapons: giving them an advantage over others. In the situation where a country has these weapons and the other does not, it is no longer called war, but one sided killing.

This not only puts these countries in an advantage, but it can initiate an arms race between each other. An arms race between Russia and the United States, would build even more tension and hostility, and if they decide to implement these weapons, it can turn the tide for proxy wars such as Syria. Without a clear understanding on all possible consequences of LAWs, and no guidelines in the International Humanitarian Law or the Geneva conventions, these weapons would pose a huge potential threat to international security.

However, it is possible that a weapon is completely banned before its implementation and use, for example, in 1995 the Protocol on Blinding Laser Weapons (Protocol IV to the CCW) completely banned the use of such weapons, marking a historic moment in disarmament history. This leaves hope for the 28 countries in the United Nations that endorsed the call for a ban of LAWS and the Campaign to Stop Killer Robots.

Major Parties Involved and Their Views

United States

The United States of America submitted three working papers on autonomous weapon systems for the 2018 CCW; the third one aiming to raise awareness regarding “humanitarian benefits of emerging technologies in the area of lethal autonomous weapon systems”. The US government argues that further research and development of this technology is necessary to learn about the challenges or potential benefits that these machines could bring to exalt the implementation of the International Humanitarian Law. They believe that using artificial intelligence weaponry could be used to save lives rather than destroy them. Additionally, they argue there is not enough shared knowledge on lethal autonomous weapon systems to develop a definition for it, let alone to prohibit such technologies.

The report on “Artificial Intelligence and National Security” by the Congressional Research Service (CRS) marks, “AI is also being incorporated into a number of other intelligence, surveillance, and reconnaissance applications, as well as in logistics, cyberspace operations, information operations, command and control, semi-autonomous and autonomous vehicles, and lethal autonomous weapon systems.” In 2016 they launched an autonomous warship named Sea Hunter, functioning without human intervention. It is predicted that its daily usage will be significantly cheaper than a destroyer.

China

During the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons, China's delegation in the Group of Governmental Experts on lethal autonomous weapons systems, declared their desire to negotiate and conclude on a new protocol to ban the use of fully autonomous weapon systems. However, later that day the Chinese air force “released details on an upcoming challenge intended to evaluate advances in fully autonomous swarms of drones”. China is already two years into its “Three-Year Action Plan for Promoting Development of a New Generation

Artificial Intelligence Industry." It looks like China supports a ban on its use, but not on its development.

Israel

Israel Aerospace Industries (IAI) already produced a drone that flies over the the battle area in order to detect a target and "locks in on the threat and attacks it for a quick, lethal closure." This fully autonomous weapon is called the Mini Harpy "loitering munition". During the 2018 CCW, Israel, along with Italy and Australia proposed discussing not only the challenges but the potential benefits of LAWs.

Campaign to Stop Killer Robots

The 'Campaign to Stop Killer Robots' was created in October 19, 2012 in order to procure the prohibition of the development, deployment and utilization of completely self-governing weapons. The campaign comprises of five international NGOs, a regional NGO network, and four national NGOs that work internationally. The campaign emerged with the aim to bring issues on the matter to light that individuals may neglect to see, to question the moral righteousness of leaving a matter of life or death to a robot taking into account their lack of human judgement, leaving them with an inability to comprehend the context of a situation. If they were to be utilized in warfare, there are huge ethical implications that have yet to be resolved.

Representatives of the campaign have made appearances on meetings around the world, which include all UN CCW meetings, which allowed them to debate with member states in regards to the issue at hand, yet failing to arrive at an accord. The campaign to stop killer robots has called for a pre-emptive ban on LAWS and felt their support from the UN once UN Secretary General Antonio Guterres informed them of the UN's shared worry on these weapons, resulting in a spark of hope that a solution might come their way.

Russia

On 'Knowledge Day', president Vladimir Putin participated in an open lesson, where he declared to students, "Artificial intelligence is the future, not only for Russia, but for all humankind. It comes with colossal opportunities, but also threats that are difficult to predict. Whoever becomes the leader in this sphere will become the ruler of the world,". So it was no surprise when, along with the United States in the CCW, Russia declared their disinclination towards reaching any solutions or conclusions, as they believed such measures were unnecessary since these weapons have not been fully implemented yet. Still, Russia is one of the most supportive countries on autonomous weapons and has already created a fleet of robots for their army.

European Union

The European Union believes Artificial Intelligence has the potential to solve the world's biggest challenges from "curing diseases to fighting climate change and anticipating natural disasters, to making transport safer⁴ and fighting crime and improving cybersecurity". That is why they want to become a "leading player" in IA and developed an EU strategy on Artificial Intelligence (AI) adopted in December 2018 to support the development of an "ethical, secure and cutting-edge AI made in Europe". They believe AI can be used in weapon systems complying with international law and respecting human dignity. The EU sums up their position in the following four points; "International law, including International Humanitarian Law and Human Rights Law, applies to all weapons systems; Humans must make decisions with regard to the use of lethal force, exert control over the lethal weapons systems they use, and remain accountable for decisions over life and death; The UN Convention on Certain Conventional Weapons is the appropriate framework to discuss regulate these kinds of weapons; and Given the dual use of emerging technologies, policy measures should not hamper civilian research, including artificial intelligence (AI)."

Pakistan

Pakistan was the first country to call for a prohibition on fully autonomous weapon systems the 30th of May 2013 through a statement in the interactive dialogue with the special rapporteur on extrajudicial, summary or arbitrary executions in the 23rd session of the Human Rights Council. They expressed their "far-reaching concerns" on the legal

and human rights issues brought up by LAWS. At the CCW in 2015 they mentioned “LAWS are by nature unethical” and will make war more inhumane than it already is. They believe that as seen with drones, once the weapons are developed and operationalized, it is almost impossible to restrict their use. That is why they urged restrictions on the earliest stage in their development as possible to prevent violations of human rights. They mentioned, “The states that are currently developing and using LAWS can rest assured that such capabilities will proliferate over time and hence they too shall become vulnerable.”

Timeline of Events

| Date | Description of event |
|-------------------|--|
| 2009 | International Committee for Robot Arms Control (ICRAC) is launched, for the ‘prohibition of the development, deployment and use of armed autonomous unmanned systems.’ |
| Oct. 19, 2012 | The Campaign to Stop Killer Robots is created, aiming to secure the prohibition of the development, deployment and use of fully autonomous weapons. |
| Nov. 21, 2012 | The US Department of Defense is the first government to issue a policy statement on the use of such weapons. |
| May 30, 2013 | After a report on extrajudicial killings by the UN special rapporteur, the topic is debated by 20 nations for the first time in the Human Rights Council. |
| February 27, 2014 | “The European Parliament adopted its first resolution calling for a ban on ‘development, production and use of fully autonomous weapons which enable strikes to be carried out |

- without human intervention.'”
- May 13-16, 2014 “Representatives from 87 nations, UN agencies, the ICRC, and the Campaign to Stop Killer Robots participate in the first multilateral meeting on ‘lethal autonomous weapons systems’ at the UN in Geneva. Convened under the auspices of the Convention on Certain Conventional Weapons (CCW), the informal meeting features presentations by 18 experts on technical, ethical, legal, and operational questions raised by the weapons.”
- Nov. 13-17, 2017 First meeting of the Group of Governmental Experts on lethal autonomous weapons systems (LAWS), conducting the fourth CCW annual meeting in which 6 countries insist on delaying the reaching of any outcome.
- July 4, 2018 “The Belgian Parliamentary Defence Committee approved a resolution calling for the Belgian government to support international efforts to prohibit the use of fully autonomous weapons and ensure that the Belgian army will never use them.”
- July 5, 2018 “The European Parliament adopted a resolution that calls for the urgent negotiation of ‘an international ban on weapon systems that lack human control over the use of force.’ The resolution called on the European Council to work towards such a ban and ‘urgently develop and adopt a common position on autonomous weapon systems.’”
- July 2018 More than 200 organizations and 3,000 individuals, including Elon Musk, Google DeepMind’s founders and other robotics firms pledged to “neither participate in nor support the development, manufacture, trade, or use of lethal autonomous weapons.”
- August 2018 The second meeting of the Group of Governmental Experts

(GGE) on lethal autonomous weapon systems met through the Convention on Certain Conventional Weapons (CCW), where 28 countries supported a ban on LAWs

Nov., 2018

U.N. Secretary-General Antonio Guterres stated, "Imagine the consequences of an autonomous system that could, by itself, target and attack human beings. I call upon States to ban these weapons, which are politically unacceptable and morally repugnant."

May 8, 2019

"The Dutch Parliament adopted a resolution calling for a legally-binding instrument on new weapons technologies, including autonomous weapons."

July 8, 2019

"Parliamentarians from the Organization for Security and Co-operation in Europe (OSCE) concluded their annual session by adopting a 19-page declaration that urges participating states to support negotiations on legally binding rules on lethal autonomous weapons."

UN involvement, Relevant Resolutions, Treaties and Events

The UN has taken this issue seriously, as it hosts the annual CCW with a purpose to "ban or restrict the use of specific types of weapons that are considered to cause unnecessary or unjustifiable suffering to combatants or to affect civilians indiscriminately."

- 2014/2567(RSP): European Parliament resolution on the use of armed drones. <http://www.europarl.europa.eu/sides/getDoc.do?type=MOTION&reference=P7-RC-2014-0201&language=EN>

- A/RES/72/68 (2017): regarding the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects.
http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/72/68
- DOC 54 3203/001: for the prohibition of the deployment of "killer robots" and armed drones by the Belgian Defense.
<https://www.dekamer.be/FLWB/PDF/54/3203/54K3203001.pdf>
- 2018/2040(INI): on a European Parliament recommendation to the Council on the 73rd session of the United Nations General Assembly.
http://www.europarl.europa.eu/doceo/document/A-8-2018-0230_EN.html?redirect

Evaluation of Previous Attempts to Resolve the Issue

At the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons, states have the opportunity to discuss this controversial issue, they have the opportunity to debate ethical and legal guidelines and the possible benefits or threats LAWs can bring into warfare. However, since 2013, (the year it was created) countries have repeatedly postponed any outcomes to the following year. In 2018, even though the majority of the states had reached consensus, Russia and the United States said they would "reject a mandate to negotiate a legally binding instrument on AWS."

The International Committee for Robot Arms Control and the Campaign to Stop Killer Robots have sought to ban the use of autonomous weapon systems before they are implemented, but they see themselves stuck, as they do not have the complete support of all member states.

Possible Solutions

All possible solutions that could be implemented to solve this issue start with developing specific definitions on any key terms relevant to the issue. In order for legal guidelines to be addressed, states need clear definitions for terms such as lethal autonomous weapon systems and lethal autonomous robots. As previously mentioned, at the CCW meeting in August 2018, 28 countries supported the banning of these weapons, however, another solution might be to simply restrict the degree of autonomy that these machines can have and therefore allowing some human control to reduce its risks. Delegates can also suggest ways to prevent these technologies from getting into the hands of non-state armed groups, or lastly, they can come up with ways in which lethal autonomous weapon systems could be used in a positive way.

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