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Content

Autonomous lethal weapons

Tackling the question of usage of autonomous weapon systems in military conflicts.

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Introduction

Our world is changing rapidly and the technological progress is as fast and as significant as never before. New inventions that are being released every day are making our life easier and reshaping our ways of living. Reality has become impossible without the technological advances that we are currently making. Very soon, our modern society will be so dependent on technology, that life without it will be very hard to imagine without it. Right now, technology is developing towards autonomy in all aspects of life. People are being replaced by robots in their working places and easy jobs are being done by machines and computers. A self driving car can not surprise anyone anymore- it has become something that we are used to. Unfortunately, the use of these technological advances is being made in military too. Autonomous weapons are being created and used. It is vital to tackle the question of creating regulations for such and not to let autonomous weapons become weapons of mass destruction.

Definition of Key Terms

Lethal autonomous weapons
‘’Lethal **autonomous weapons** (LAWs) are a type of military robot designed to select and attack military targets (people, installations) without intervention by a human operator. ‘’

Artificial Intelligence
‘’The theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages.’’

Human Factor
‘’In industry, **human factors** (also known as ergonomics) is the study of how humans behave physically and psychologically in relation to particular environments, products, or services.’’

General Overview

Autonomous weapons are able to select and engage with targets without any intervention from humans. Essentially, those are killer drones which are often able to attack subjects in places and positions where a human pilot would never be able to do so. This is so due to the fact that the use of LAWs completely eliminates the human factor from the battlefield which means that it does not make mistakes and so can attack targets with much larger efficiency than a human pilot would. Besides, the machine is not frightened to risk itself, as there is no value in those drones when compared to the value of achieving a goal of attacking an important

subject. The LAWs come in many forms and shapes. There are ones that fly, ones that travel on earth and ones on sea. Primarily, they can be in any form of normal military vehicles, but often smaller, faster and more efficient. Many LAWs are equipped with complex computer technology, which allows it to function independently from any base at which a human could access it. Fortunately, such machines are not yet being mass produced and implied in military. First of all, the technology is not yet perfected and often those drones, which in theory should be unmistakable, make errors. Second, the engineering, designing and production of such machines is very expensive and therefore they are not being used a lot yet.

In fact, the most of them are samples that are being used to understand how they can be useful. On the other hand, many countries have been using autonomous surveillance drones for a while now and are quite successful with it. But, those are not used to attack any target and therefore will not be discussed in this paper. The Lethal Autonomous Weapons are only being used in limited scope on the border of North and South Korea due to the fact that it is a very politically sensitive area and therefore the human factor is eliminated as much as possible. Besides, there the tension is very alarming and therefore LAWs are being used to ensure peace. On the other hand, there are many conflict areas in the world where plans are made to use LAWs to improve the situation. However, thorough plannings often find out that the usage of LAWs will only worsen it. In conflict areas such as the Middle East and Northern Africa, where there is constant conflict, drones are often used for surveillance purposes. Often, drones without pilots also attack targets. However, those do not fall under the category of LAWs as they are piloted from far away.

The main argument for the use of LAWs is that they will imply a ‘’riskless war’’ and a ‘’war without casualties’’ as many people believe that the war of the future will be robots against robots. However, that is barely possible due to the fact that not all conflicting parties can afford the use of such machinery and therefore the implementation of LAWs will most likely cause massive casualties and all in all, unfair warfare. Another argument for the use of LAWs is that it completely eliminates human decision making. This can be both good and bad. Good- because sometimes humans make mistakes and machines don’t. Bad- because sometimes a situation changes fast and a human reacts to that and changes their decisions. However, a machine follows the strict protocols and its decisions are not influenced by human factor. So far, there have been some organisations that have moved strongly against those systems and many of those organisations are backed up by powerful influencers. This issue is quite new as the development of LAWs has just began and therefore it is important to solve it before it alters warfare completely.

Major Parties

The industry
116 founders of companies that produce and design robotics and artificial intelligence have come together to step up against LAWs and even wrote an open letter to UN suggesting to ban the use of LAWs in warfare. They claim that any further use or development of LAWs will lead to massive casualties and possible dominance of machines over humans.

Developers of LAWs
The companies that develop LAWs technology are much more optimistic about the future of LAWs than their opposing colleges. They think that warfare without intervention from humans is the future of military conflict.

UN
UN does not really have a clear stand on this, as the status of LAWs is still being decided. It is up to the members of UN whether LAWs will be banned or allowed int the future.

China, Russia,Israel,South Korea,US and UK
Those countries use LAWs right now and have plans of using them in the future. They are against the banning of autonomous weapons in the world as they are main developers of such.

Timeline of Key Events

1. 2007- Noel Sharkey, a roboticist uses ‘’The Guardian’’ to warn the public about the developments of LAWs and the fact that now they are able to do lethal damage
2. 2008- a non governmental organisation- ‘’Action on Armed Violence’’ supports for the creation of an international treaty which would put a ban on the development of so called ‘’killer robots’’

3. 2009- The International Committee for Robot and Arm control is established by Noel Sharkey, Jürgen Altman, Rob Sparrow and Peter Asaro
4. 2010- A report by UN mentions the need to apply regulations on LAWs
5. 2012 March- Article 36(an anti-militarisation organisation) calls for for a ban on LAWs
6. 2012 October- ‘’Campaign to Stop Killer Robots’’ is agreed upon and formed
7. 2012 November- US Department of Defence spells out a policy on LAWs
8. 2013 April- ‘’Campaign to Stop Killer Robots’’ is launched in London
9. 2014 February- The European Parliament adopts the first resolution to ban LAWs

(Chronology)

Previous Attempts to solve this issue

To solve this issue, multiple organisations have been formed to call for the ban of Lethal Autonomous Weapon Systems. Those organised campaigns and protests to inform the public about the danger of LAWs and to express their distrust to robots. Multiple times the ban of LAWs has been mentioned during UN conferences. The European Parliament has already adopted a resolution that calls for the ban of LAWs.

Appendix

Useful Websites:
http://www.telegraph.co.uk/technology/2017/11/14/killer-robots-almost-reality-need-banned-warns-leading-ai-scientist/

Article 36: http://www.article36.org/issue/autonomous-weapons/

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