

Forum: Disarmament and International Security

Issue of: Creating obligatory ethical rules for the use of autonomous weapon systems to prevent inhuman warfare.

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I. Introduction

Since 2014, the challenges posed by autonomy in weapon systems have been the focus of an intergovernmental discussion under the framework of the Convention on Certain Conventional Weapons (CCW). Experts from SIPRI and the ICRC share a similar understanding of the challenges posed by autonomy in weapon systems and how these might be addressed.

While autonomy will never entirely exclude humans from decision-making, the fear is that it will increase the time, space, and awareness gap between human decisions to use force and the consequences. This distancing, as well as the unpredictability of its implications, raises questions regarding the implementation of international humanitarian law, legal acceptability,

and organizational effectiveness. The key challenge is: How do we ensure that humans continue to play an important role in decisions to use force in individual attacks in military conflict, regardless of technological maturity, while fulfilling legal, ethical, and organizational requirements?

Weapons systems that pick and engage targets without meaningful human oversight are dangerous and must be made to follow certain rules. Both governments have an obligation to defend mankind from these creations by creating obligatory ethical rules for the use of autonomous weapons. It is an ethical imperative, a legal requirement, and a religious obligation to maintain meaningful human influence over the use of force.

II. Defining key terms

a) Autonomous weapons

Lethal autonomous weapons (LAWs) are a type of autonomous military system that can independently search for and engage targets based on programmed constraints and descriptions. LAWs are also known as lethal autonomous weapon systems (LAWS), autonomous weapon systems (AWS), robotic weapons, killer robots, or slaughter bots. Being "autonomous" has different meanings in different fields of study. A weapon system does not need to be able to make decisions completely by itself to be called autonomous. Instead, it should be treated as autonomous as long as it actively involves one or multiple parts of the "preparation process", from finding the target to final firing. In simple terms 'autonomy' can be defined as the ability of a machine to execute a task, or tasks, without human input, using interactions of computer programming with the environment.

b) Disarmament

Disarmament, as defined in the scenario concerning nuclear weapons, is the process of reducing the number of nuclear weapons with the intent of eliminating them. The process of disarmament is gradual, and international treaties such as the Non-Proliferation Treaty (NPT), which aims to prevent any further spread of nuclear weapons and achieve nuclear disarmament, play a crucial role.

c) The marten's law

In international humanitarian law, notions of humanity and public conscience are drawn from the Martens Clause, a provision that first appeared in the Hague Conventions of 1899 and 1907, was later incorporated in the 1977 Additional Protocols to the Geneva Conventions and is considered customary law. It provides that, in cases not covered by existing treaties, civilians and combatants remain under the protection and authority of the principles of humanity and the dictates of the public conscience.

c) Ethics and Law

Ethics and law are intimately linked, especially where the purpose of the law – such as international humanitarian law and international human rights law – is to protect persons. Subsequent legal restrictions are, therefore, a social construct, shaped by societal and ethical perceptions. These determinations evolve; what was considered acceptable at one point in history is not necessarily the case today.⁷ However, some codes of behavior in warfare have endured for centuries – for example, the unacceptability of killing women and children, and of

poisoning. **contemporary ethical concerns can go beyond what is already codified in the law.**

III. A General Overview

Ethical issues about autonomous weapon systems have been regarded as secondary concerns at times. Many states have felt more at ease debating whether modern arms can be produced and used per international law, especially international humanitarian law, and with the presumption that the primary factors limiting the production and usage of autonomous weapon systems are legal and technological in nature.

A notable feature of the ethical controversy has been an emphasis on “lethal autonomy” or “killer robots” – meaning weapon systems designed to kill or harm people, as opposed to autonomous weapon systems designed to destroy or damage objects, which are now used to a small degree. There seems to be widespread recognition in ethical debates of the value of maintaining human agency – and associated purpose – in decisions to use force, especially decisions to murder, harm, and destroy. In other words, many people believe that "machines do not make life-or-death choices" and that "machines should not be delegated responsibility for these decisions."

Some argue that it is most useful to agree on the general principle that a certain level of human control is required to retain human agency in these decisions, and then consider how and where humans must inject themselves into the decision-making process to ensure this control is sufficient – for example, by human supervision and the ability to intervene.

The decision and responsibility to use force cannot be moved to a machine or a computer program. There are human obligations – both legal and ethical – that necessitate human agency in decision-making. One approach to addressing this issue is to delegate authority to the operator or commander who authorizes the activation of the autonomous weapon system (or programmers and manufacturers, in case of malfunction). To some degree, this tackles the question of moral liability by implementing a mechanism for keeping a person responsible for the repercussions of their acts.

Responsibility is a legal as well as a spiritual principle. Some contend that for a commander or operator to maintain moral integrity in deciding to trigger an autonomous weapon system, their purpose must be closely related to the outcome of the resulting attack. To summarize, excluding the individual purpose from a single assault weakens moral obligation by preventing considerations of humanity.

IV. The Timeline

1495 - Leonardo da Vinci designs a “mechanical knight” capable of mimicking a range of human motions, including raising its arms, sitting up, and opening and closing its jaw.

1898 - Nikola Tesla unveils the first wireless remote-controlled vehicle, a small iron-hulled boat, before a skeptical crowd in New York's Madison Square Garden.

1914 - World War I brings a series of advances in robotic warfare, including the U.S.-made Kettering "Bug" (a gyroscope-guided winged bomb) and the German FL-7 wire-guided motorboat, loaded with hundreds of pounds of explosives.

1943 - Two German-made FX-1400, or "Fritz X," bombs slam into the Italian battleship, Roma. Radio-controlled drones.

1950 - British mathematician Alan Turing, arguably the godfather of artificial intelligence, writes, "I propose to consider the question, 'Can machines think?'" In Turing's mind, it's less a matter of whether machines can reason like humans than how well they can imitate them.

1953 - The USS Mississippi test-fires one of the earliest computer-guided missiles

1963 - Concerned that the Soviet Union might technologically outdo the United States, the Pentagon's Defense Advanced Research Projects Agency gives the Massachusetts Institute of Technology \$2 million to explore "machine-aided cognition."

1978 - The U.S. Defense Department launches the first Navstar satellite, a major development in modern global positioning technology. The system reaches full operational capacity in 1995

July 3, 1988 - The Aegis air-defense system aboard the USS Vincennes, stationed in the Persian Gulf during the Iran-Iraq War, detects a hostile aircraft. The plane is an Iranian commercial airliner, but the system, then in semiautomatic mode, shoots down the jetliner, killing all 290 people aboard.

January 1994 - The U.S. government awards General Atomics a contract to build the RQ-1 Predator drone, which will transmit video footage in real-time over a satellite link, guided by ground-based controllers who can be thousands of miles away. A new era of killer drones

September 2006 - South Korea announces plans to install Samsung Techwin SGR-A1 sentry robots along the Demilitarized Zone with North Korea. Armed with machine guns, they are capable of fully autonomous tracking.

May 18, 2009 - The U.S. Air Force releases a planning document that charts a long-term path to "fully autonomous capability" for aircraft.

November 21, 2012 - The U.S. Defense Department issues a directive designed to "minimize the probability and consequences of failures in autonomous and semi-autonomous weapon systems." Although the directive allows for the development of fully autonomous nonlethal systems, it requires, for the time being at least, that "appropriate levels of human judgment" be exercised over robots that use deadly force.

April 2013 - Seizing on the public's distaste for drones, a coalition of NGOs, including Human Rights Watch, launches the Campaign to Stop Killer Robots.

July 2013 - The Northrop Grumman X-47B unmanned combat air vehicle lands successfully on the deck of the USS George H.W. Bush, becoming the first unmanned autonomous vehicle to land on an aircraft carrier.

November 15, 2013 - The 117 governments party to the U.N. Convention on Certain Conventional Weapons agree to take up the issue of lethal autonomy in 2014

2013 - Human Rights Watch and other non-governmental organizations launched the Campaign to Stop Killer Robots

2018 - The United Nations Secretary-General António Guterres has repeatedly urged states to prohibit weapons systems that could, by themselves, target and attack human beings, calling them “morally repugnant and politically unacceptable.”

August 2018 - HRW published a report in conjunction with Harvard Law School’s International Human Rights Clinic (IHRC) entitled, “Heed the Call: A Moral and Legal Imperative to Ban Killer Robots.”

2019 – 2020 – no other resolutions have been presented there are many sides that can be taken here.

V. Major parties involved

a) United Kingdom

According to the speakers, the UK approach is focused on a distinction between automatic weapon systems and "fully autonomous weapon systems." An automated or robotic machine, according to UK definitions, is "...programmed to logically obey a pre-defined series of rules with predetermined results," while an autonomous system is "...capable of understanding higher-level purpose and path." An AW will be capable of knowing and perceiving its surroundings, as well as choosing a course of action from a set of options without the need for human supervision and supervision. The UK believes that while the general operation of such a scheme would be consistent, human activities will not.

b) United States of America

A controlled autonomous weapon system (see Section 2.3 for the US definition) is considered suitable for lethal operations against vehicle and materiel targets, but only in local defense operations, according to the regulation. Ship defense systems and land-based air and missile defense systems are current examples. The creation of an aggressive supervised autonomous weapon system, or one used defensively to attack humans, will necessitate further analysis and approval before development, and again before deployment.

c) People’s republic of China

As the Chinese People’s Liberation Army (PLA) seeks to become a “world-class military,” its progress in advanced weapons systems continues to provoke intense concern from its neighbors and competitors Chinese military initiatives in AI are motivated by an acute awareness of global trends in military technology and operations; concerns about falling behind the U.S. military, which is perceived and often characterized as the “powerful adversary”.

VI. Previous solutions

a) Ban on Autonomous Weapons

The ICRC is an international committee of experts in robotics science, robot ethics, foreign politics, international security, weapons control, international humanitarian law, human rights

law, and public initiatives concerned with the pressing threats that armed robots pose to peace and international security, as well as to civilians in war. The group was successful in gathering over 270 signatures from computer experts, 227 of whom came from 37 foreign countries, supporting a resolution that calls for "a ban on the production and deployment of military systems that allow the decision to apply violent force autonomously, without any human influence.

A critical concern in enacting a ban on autonomous weapons is which tool to use. While a new international treaty could prohibit the use of autonomous weapons, "international treaties... are only binding on states that have signed them." As a result, the new diplomatic moratorium will only apply to the states that wanted to be bound by it. A possible option would be to change the original Rome Statute to expressly identify the use of automated weapons as a war crime. The Rome Statute, which has 122 signatories, is deemed null.

The same case can be made about autonomous weapons. Since autonomous weapons are incapable of distinguishing between combatants and noncombatants, the Rome Statute effectively bans their use against human targets. As a result, while the new Rome Statute arguably prohibits the use of nuclear missiles, it arguably merely prohibits the use of autonomous weapons.

b) Regulations Limiting the Use of Autonomous Weapons

Instead of a total ban, states will be able to use laws to restrict the conditions in which autonomous weapons may be used. As opposed to a full ban, regulations restricting usage have the advantage of encouraging technology to advance and the advantages of technology to be recognized. To avoid unnecessary pain, the St. Petersburg Declaration of 1868, for example, banned the use of exploded bullets. The outright ban, however, was later softened by the state-by-state procedure.

Regulations prohibiting the use of autonomous weapons, on the other hand, have the power to prohibit their use from breaking the Law of War. The primary academic controversy about the use of autonomous weapons centers on lethal decisions taken by weapons that are unable to differentiate between combatants and noncombatants.

A treaty that limits the power imposed by autonomous arms to structures rather than humans could theoretically settle the problem. Instead of distinguishing between humans, autonomous weapons will simply need to differentiate between objects—a function they already have. Established treaties and laws, especially the Rome Statute, can already be understood to restrict the use of autonomous weapons.

VII. Conclusion

The controversy about the acceptability of autonomous weapon systems is centered on ethics, humanity, and the dictates of the popular conscience. According to the ICRC, ethics, in addition to legal judgments and technological requirements, offers another avenue for determining the appropriate form and degree of human influence that must be maintained over weapon systems and the use of force, as well as elucidating where States must impose limitations on autonomy in weapon systems.

Considerations of humanity and good conscience offer ethical guidelines for deliberations, and the Martens Clause – a safety net for humanity – requires them to be linked to legal judgments.

One of the key ethical reasons for restrictions on autonomy in weapon systems is the importance of keeping human agency – and purpose – in these decisions. Many people believe that killing, injuring, and destroying must not be entrusted to robots and that humans must be involved in this decision-making process to maintain a clear connection between the purpose and the actual execution. It is insufficient to merely state that "humans invented, deployed, and triggered the weapon system." The human reasoning for activating an automated weapon device in the relevant situations must be directly linked to the effects of the resulting attack. The question I show close should the two be?

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