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RESEARCH ARTICLE

The Compatibility of Autonomous Weapons with the Principles of International Humanitarian Law an Analytical Study

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ABSTRACT

This study seeks to demonstrate the concept and legitimacy of the use of autonomous weapons in the light of the principles of international humanitarian law, which has become one of the most important features of modern warfare. An increasing number of artificial intelligence-powered weapons are being used in military operations to identify, select and destroy targets without human interference, called the Self-Operated Weapons System (Self-armed Weapons), which is the latest in the genius of the human race in creating another race. "automatic" is on his behalf conducting combat operations, yet this is not left at all. Each party to the armed conflict must adhere to the principles of international humanitarian law in order to avoid the harmful effects of such weapons and, in particular, adherence to article 36 of Additional Protocol I of 1977, which obliges Contracting Parties to conduct a review of their weapons prior to their release in order to determine the prohibition and permissibility thereof, This restriction, as well as other limitations, are a legal means by which other States can rely to restrict the manufacture, development and acquisition of these modern weapons if it is contrary to international humanitarian law.

INTRODUCTION

Since its inception, human societies have known wars and conflicts that have left suffering and tragedies against humanity. This is due to man's instinct for control, possession and use of force without any rules and regulations governing him, whether legal or moral, and as a result of the tremendous evolution that the law of war has perpetuated the manifestation of international humanitarian law.

International humanitarian law addresses the permissible and prohibited practices of war, consisting of numerous international conventions and treaties governing the conduct of belligerents in war, and aims to curb war to the extent possible in order to reduce the harm and suffering caused. Two main legal sources of international humanitarian law are: The Hague Conventions of the Year (1907, 1899) and the four Geneva Conventions of 1949, while the Hague Conventions concern themselves with the rights of combatants and prohibited military practices, the Geneva Conventions place greater

emphasis on the rights and protection of non-combatants. Moreover, there are many other relevant international laws and treaties, which are based on four basic principles: The principle of necessity, the principle of proportionality, the principle of distinction and the principle of humanity, although clear, is sometimes in conflict with each other. The possibilities open to us are troubling, as these regimes raise questions of their nature, not only technical or military, but also moral, social, political and legal.

Reliance on AI technology in the military or so-called AI militarization encouraged the development of existing weapon systems or the production of new generations of AI-based weapons war ", which will change the future form of war and its expected impact may outweigh conventional wars without any high human or financial cost, It relies on lasers and robots mainly in its manufacture and operation s arms race between the major Powers, However, this development was not in States' accounts at the time of the four Geneva Conventions of 1949. Specific international treaties on the use and limitation of the proliferation of weapons have not been developed to apply to a system with these smart technologies.

The Study Importance:

Examining the compatibility of autonomous weapons with the principles of international humanitarian law is gaining increasing importance for several main reasons:

- Autonomous weapons supported by artificial intelligence, artificial intelligence robots, and artificial intelligence programs are being used in a wide range of applications in military operations.
- The spread of autonomous weapons will lead to an increase in crimes committed during armed conflicts.
- This type of weapon, supported by artificial intelligence, is a new challenge to applicable international rules in terms of adherence to and response to them.
- •The difficulty of determining the types of these weapons and their combat capabilities, which are witnessing rapid developments in short periods of time.
- Thinking about the possibility of imposing criminal penalties on these entities and defining and imposing rules has become an important and inevitable matter.

The Study Problem:

The increasing use of autonomous weapons presents us with a problem: to what extent do the principles of international humanitarian law apply to regulating and controlling this type of modern weapons? Based on this problem, the study seeks to answer several questions, including:

- What are autonomous weapons? What are its characteristics?
- Determine the legality of the use of autonomous weapons.
- To what extent are autonomous weapons compatible with the principles of international humanitarian law relating to the conduct of hostilities?
- Can autonomous weapons be subject to the legal review system for weapons systems in accordance with the provisions of Article 36 of the First Additional Protocol of 1977? Which obliges the contracting parties to conduct a review of their weapons before launching them to find out what is prohibited and what is permitted.

The Study Objective:

- Identification of the characteristics of autonomous weapons supported by artificial intelligence.
- To determine the legality of the use of autonomous weapons.
- Analysis of the compatibility of autonomous weapons with the principles of international humanitarian law.

- Addressing the possibility of subjecting self-operating weapons to a system of legal review of weapons systems in accordance with article 36 of Additional Protocol I of 1977.

PREVIOUS STUDIES:

The most important previous studies seen can be reviewed, as follows:

1. Study (Hosni Musa Mohamed Radwan, 2022), which concluded that in cases where modern weapons systems are used, including self-employed weapons, are not covered by international conventions, the civilian population and combatants remain under the protection and authority of the principles of international law derived from established customs, humanitarian principles and the dictates of the world's conscience.
2. A study (Da 'aa Kilal Hatem, 2020), aimed at highlighting self-operative weapons and international responsibility related to their use.
3. study (Abdelkader Mahmoud Mohamed Al-Aqra ', 2020), which concerned military robots in future wars and their subordination to the provisions of international humanitarian law.
4. A study (Ishaq Al-Ashash, 2018), which aimed at researching lethal autonomous weapons systems in international law and providing a legal approach to the problem of their international confinement.
5. A study (Mohammed Abdel Reza Nasir and Kazim Abdul Ali, 2018) aimed at identifying modern means of warfare in the light of the provisions of international humanitarian law.

THE STUDY METHODOLOGY:

The topic of the study required an analytical approach, which, on the basis of which we would present and analyse the principles of international humanitarian law and the texts of international instruments relevant to armed conflict, would be used to clarify the adequacy of the application of those texts in the case of the use of self-employed weapons during military operations.

2. What are autonomous weapons?

Self-employed weapons have emerged in the context of the enormous development of modern warfare technologies and strategic trends aimed at enhancing the role of smart machines in combat operations, in order to reduce the human casualties to which armies are usually subjected; Nevertheless, legal attention to this category of weapons has been somewhat delayed; The attention of the United Nations has begun; The United Nations has been paying attention to this issue since 2013, focusing on the legal and moral problems involved, since these weapons have many potential implications for human rights, especially the right to life and human dignity, this has made it one of today's most important human rights issues, and this calls for the identification of self-operative weapons and their characteristics.

2.1. Definition of autonomous weapons:

The use of artificial intelligence in military industries has led to the development of combat systems with an autonomous mechanized character of human intervention, often beyond the limited capabilities of human beings, from where they are used in the management of various battles and wars, the detection of threats, the use of diverse weapons, and the collection and analysis of information in the form that serves the military position (Yasmin Abdul Munim Abdul Hamid, 2020).

All terms and definitions that have been formulated for self-operated weapons include expressions such as: (automatic/automatic, independent, self-operated), and they are all expressions that refer to the essential characteristic defining the nature of self-operated weapons, which is special. The mechanism of independence, that is, the independence of the weapon system from human decision-making control (Decide) and the verb (Act), i.e. taken individually (Ishaq Al-Ashash, 2018).

It is noted that there is no international agreement on a specific name for weapons developed with artificial intelligence and autonomous technologies, so they have been given several names, including: lethal autonomous weapons, autonomous autonomous weapons or automatic weapons systems, unmanned and autonomous military systems, autonomous killer robots or Lethal robotic weapons, autonomous weapons.

Although there is no internationally agreed upon definition of autonomous weapons systems, what is common among the various definitions is the idea of a weapons system that can select targets and attack them independently of humans.

Autonomous weapons are defined as a weapons system that is characterized by a degree of independence in its critical functions of selecting and attacking targets. This includes existing weapons systems and those that are scheduled to be developed in the future. This system includes drones, missiles or autonomous weapons, and robots that are used in Operations Combat (Tim McFarland, 2018).

Autonomous weapons are also known as those weapons that are designed automatically and have the ability to make decisions on the battlefield, without human interference in their operation, which constitutes a violation of the rules of international humanitarian law. They include killer robots and automatic weapons systems. (Abdullah Ali Abdul Rahman Al-Olayan, 2022). In another definition, autonomous weapons are automated or robotic weapon systems that, once activated and operated, can select and hit targets without additional intervention from a human operator, and the main criterion in determining the nature of these weapons is that they have freedom to choose Sighting targets and making decisions to use lethal force (Human Rights Watch, 2018).

The International Committee of the Red Cross went on to say that the term "automatic weapons system" is a comprehensive term that would include any type of weapon system, whether on land, air or sea, with automaticity in its sensitive functions (International Committee of the Red Cross, 2015). This means a weapon that can choose (search, detect, and track) and attack (use force against the enemy or harm or destroy) any targets without human intervention (that is, after the initial operation, the weapon system itself, using sensors, programming, and power, carries out targeting operations and actions that usually It is controlled by humans (Ishaq Al-Ashash, p. 153).

The European Parliament says that autonomous weapons are autonomous weapons systems that can carry out killing operations without human intervention (European Parliament Report, 2018). While Human Rights Watch believes that the second generation of weapons in military arsenals may be (killer robots), "which are machines capable of selecting specific targets and destroying them without additional human intervention" (Russell Christian, 2018).

Based on the above, we can define self-launching weapons as a machine capable of selecting targets and engaging them, without human intervention, relying on the software that is previously inserted into these machines.

2.2. Characteristics of self-operated weapons:

A recent UNIDIR study indicates an increase in autonomous weapons systems In the absence of an internationally accepted definition of the self-operating weapons system, however, greater clarity was considered on the essential features of such weapons than other weapons systems known on the international scene, A way to better understand that system and determine whether it will pose potential challenges to international humanitarian law (UNDOC. CCW/MSP/2015/3), the most prominent characteristics of self-operating weapons include:

• **Autonomy:** Autonomous weapons have operational autonomy away from any control or human interference based on the programming on which they are based in the execution of their combat functions, they are able to select targets and conduct engagements automation ", which is called

automation in a technique that enables the machine to perform certain tasks through software commands, With automatic feedback control, to ensure operations are carried out properly, The system is capable of operating without any human interference (Da 'a Jalil Hatem, Mahmoud Khalil Jafar, op, cit. p, 290).

• **Complexity:** Autonomous weapons are characterized by a very complex technical nature, which makes it difficult to understand the path they take to interpret their outputs/behaviours (Output). It is also difficult to evaluate those outputs if they rely on deep levels of advanced artificial intelligence, and therefore they do not The error can be traced, and for this reason specialists see the possibility of developing explainable artificial intelligence, which raises a contradiction in concepts, especially with regard to interpreting and tracking the error, in a way that leads to responsibility for any violation that may occur, It is a responsibility based on the developer, programmer, designer, military commander, or other modern concepts of responsibility and accountability, or leaving the system like a black box (Abdel Qader Mahmoud, 2020).

• **Learning, adaptation, and adaptation:** In order for weapons to be completely independent and act without any human intervention, they necessarily need artificial intelligence, which makes the machine capable of perceiving and using complex information in order to achieve a specific task that requires decision-making, and scientists in the era Talking about providing some types of weapons with some very complex artificial intelligence systems that make them capable of performing tasks, and making increasingly independent decisions, which constitutes a type of learning, which is called deep machine learning (https://mostaqbal.ae/1-evergreen-making-sense-of-terms-deep learning-m).

Learning can take place "offline", where the system learns its task from a fixed data set that is provided to it, in which case the system will not be able to continue learning when it reaches a threshold set by the programmers. Systems can continue to learn, through learning “via the international information network”, where data inputs change constantly, and then these systems continue to constantly update and analyze their data so that they can adapt their capabilities and decisions to environmental inputs.

Recent studies indicate that there are weapons systems that have been equipped with artificial intelligence systems that make them capable of learning through simulation, direct experience, or a combination of both. This learning can be supervised by the human operator, who supplies the system with all the data, and the learning may be unsupervised. The system recognizes the underlying structure of the data itself without classifying it (The International Committee of the Red Cross, 2019).

• **Lethality:** The term “lethality” refers to the behavior of autonomous weapons in isolation from any human feelings, and to the fact that they operate without any considerations of human conscience in carrying out their tasks, so they do not decline in extreme humanitarian situations. This property of lethality is one of the most important characteristics that characterizes weapons. Autonomous, and even comes in second place after the independence feature. The higher the level of independence of these weapons, the more lethal and destructive they are, especially when they are designed to attack human targets, this is what raises the concern of experts in international law (Da 'a Jalil Hatem, Mahmoud Khalil Jafar, op, cit. p, 293)

3. Legality of the use of autonomous weapons:

Self-operating weapons are not regarded as weapons of mass destruction, namely, chemical weapons, biological weapons and nuclear weapons, which have been named as well, given their extreme, widespread and long-term destructive power. It is therefore prohibited to use as a public asset, and not as restricted as certain conventional weapons because it clearly violates the rules and

principles of international humanitarian law (Saaduddin Murad, 2017). What raises the question about the legality of self-operating weapons? Should they be banned or restricted only?

In fact, international humanitarian law prohibits certain weapons and completely deprives them of their use because of their great ability to violate their norms, while authorizing the use of other types of weapons and restricting them by a number of restrictions, namely respect for the general principles of international humanitarian law enshrined in international instruments and norms. If you go beyond these principles and rules, you go to the state of prohibition (Jamal al-Ayba, 2021). These restrictions can also be considered as criteria for assessing the functioning of such weapons and measuring their legitimacy under international treaty and customary norms. Consequently, they are prohibited and prevented internationally if they are not subject to those standards.

These limitations and criteria, which can be applied to the prohibition of modern weapons in the light of international humanitarian law, are reflected in:

- The criterion of excessive harm or unjustified pain (Mohammed Abd al-Riza Nasir, Haider Kazim Abd Ali, 2014): Over time, subjective weapons may turn out to be more distinct and precise in terms of attack and defence than human beings, but yet the prospect of Salih remains an allowance justified not on the basis of autonomy but on the basis of spontaneity (Da 'a Jalil Hatem, Mahmoud Khalil Jafar, 2020).
- Indiscriminate effect criterion: difficulty arises in using Salih itself. It may be used in an indiscriminate manner that violates its natural uses. This would constitute a violation of international humanitarian law.
- The standard of damage is large-scale aluminum-tall environment.
- Arms review obligation: There are currently no special rules governing these types of weapons, but article 20 of Additional Protocol I obliges States when developing or acquiring a new weapon to conduct studies and experiments on such weapons. International law ", while Ra is prohibited by or in some of the rules of international humanitarian law, and its observance of customary rules binding on all that prohibit and restrict the use of weapons.

It is noteworthy that the obligation to review the legality of modern weapons and means of warfare in war is an obligation in the face of all States, whether restricted or not, to ratify Additional Protocol I. It is a logical consequence of the third prohibition on all weapons that prohibits States from using all illegal weapons or illegitimate weapons and unlawful means of combat (Mohammed Abdul Haq Sharbal, 2012). Therefore, all States, whether developed or possessed modern weapons using technology, must take the text of the former article 20 as a starting point to ensure respect for the law of war. This idea reflects the view of the relationship between law and arms. Arguably, the law guides military technology, i.e., war law-oriented technology (Schmitt, Michael N. 2006).

It remains the duty of States to respect and ensure respect for the Geneva Conventions in accordance with common article I of these Conventions by preparing qualified personnel for the use of these weapons and by providing legal advisers to their operators. It can also be said that it is understood through the preamble to 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 that they have opened the way for banning any weapon that could be developed in the future, such as weapons based on artificial intelligence, There is harm to other States and their citizens as they fall within the scope of application of this Convention, where the General Assembly, the United Nations and the United Nations Disarmament Commission can decide to examine the question of extending the prohibitions. (preamble to the 1980 Convention on Prohibitions and Restrictions on the Use of Certain Conventional Weapons) contained in this Convention and its five Protocols thereto.

In addition, the future development and use of weapons systems must take into account respect for the principles of international humanitarian law as legitimate, as emphasized by States parties to the

Convention on Certain Conventional Weapons through the provision of 11 guidelines. "These principles affirm that international humanitarian law applies to all weapons systems and that the use of such systems must always depend on human responsibility. The Principles refer to the need for man-machine interaction, which should determine the nature and extent of such interaction, in order to ensure respect for international humanitarian law in the use of such weapons. The Principles also recall that States must verify the legality of new weapons they develop pursuant to the provisions of Additional Protocol I. " (See Guidelines adopted by the Group of Governmental Experts on Emerging Technologies in the Field of Autonomous Lethal Weapons Systems, Geneva, 25 March 2019)

The prohibition of a new weapon may also occur not only against the general rules of the law of war, but also against another weapon whose use is prohibited, based on the Greek and German Mixed Arbitration Court's decisions (Mohamed Abdelhak Sharpal, Op, Cit. p. 41).

4. Applicability of the principles of international humanitarian law to autonomous weapons:

States' choice of methods and means of hostilities is not absolute. By its nature, a weapon may be prohibited or may constitute a violation of international humanitarian law, and is thus bound by key principles enshrined in international humanitarian law.
While there is no international convention governing the use of weapons based on modern techniques, as well as the need for international rules governing these modern acts, it can be said that they may be subject to the general principles of international humanitarian law. We will try to clarify the applicability of the principles of international humanitarian law to autonomous weapons as follows:

• First: Autonomous weapons and the rule prohibiting weapons that cause excessive injury or unjustified suffering:

The prohibition of means and methods of combat that cause superfluous injury or unjustified suffering is stipulated in Article (33/e) of the Hague Conventions of 1899 and 1907 regarding land warfare. The First Additional Protocol affirmed this principle by stipulating that “the right of the parties to any armed conflict to Choosing methods and means of combat is not a right without restrictions.” (Additional Protocol I, Article 35/1), It is undoubtedly considered a rule of customary international law that is binding on all countries, whether they are a party to these international conventions or not. (Burrus M. Carnahan, 1996), as described by the Nuremberg Tribunal, are among the rules that have been recognized by all civilized nations as among the laws and customs of war, and they are among the rules that must be applied in international and non-international conflicts.

The International Court of Justice also affirmed this principle in its advisory opinion issued in 1996, in which it considered it one of the basic principles of international humanitarian law, considering that damage may only be inflicted to the extent that it achieves the necessary legitimate military objectives.

This principle, which restricts the use of weapons in general, must be used to restrict autonomous weapons. Indeed, restricting this type of weapons is a fortiori because the problem with them is the fear of the extent of their randomness and unintentional targeting of civilian targets protected under international law General.

• Second: Autonomous weapons and the principle of military necessity:

This principle is an important principle of international humanitarian law. ", basically based on budgeting, establishes the requirements of military necessity and humanitarian considerations, this necessity requires the use of available military force to achieve military superiority or advantage. And humanitarian considerations require limiting the use of such force to achieve the military advantage desired by the least loss of life and objects and by humanitarian means and methods of combat. The importance of this principle can be defined as: Such measures, which are indispensable

to the achievement of the objectives of war, must be lawful in accordance with the norms and laws of war and, in other words, military necessity is the last resort justifying all indispensable measures to ensure progress against the enemy, provided that they are not contrary to the law of armed conflict.

to ensure progress against the enemy, provided that it is not contrary to the law of armed conflict.

In the absence of an explicit organization that determines the type and degree of force allowed for use in direct attacks against legitimate military objectives, the type and degree of force must be determined on the basis of the principles of military necessity and humanity (Ali Mohamed Kazim al-Mousavi, 2017).

This principle is enshrined in several international instruments, including the St. Petersburg Declaration of 1868, which states: "The imperatives of war must be subject to humanitarian requirements." The Hague Convention on Land Warfare of 1907 further stipulates that: "It is forbidden... to administer or seize enemy property, unless such destruction is necessitated by the necessities of war" (article 2 (3)/g) of the Hague Convention on Land Warfare of 1907). "Attacks are limited to military objectives only, and military objectives are limited to those which make an active contribution to military action, whether by their nature, location, purpose or use, and whose total or partial destruction, seizure or disruption, in the circumstances then prevailing, has a definite military advantage" (Article (2/52/) of Additional Protocol I of 1977).

Through these texts, the importance of this principle is demonstrated by its application in the case of conventional attacks. As for the cyberattacks, "Rex Hoggis" said (cyberattacks create a challenge to the application of the principle of military necessity. Therefore, the efforts of international law experts and e-industry engineers to determine what might be described as a military objective...) (Fatlawi, Ahmed, 2016), the failure to define or establish regulated standards for the use of information technology for military purposes means that the use of information technology can be resorted to by military necessity. This means that the Spirani attack can be responded to by a physical attack on the State in which it is based, for example, that the principle of military necessity is present in cybercrime (Fatlawi, Ahmed, op, cit. p635).

It is understood that the armies are fighting according to thoughtful plans and approved by the higher military commanders, but in some emergency circumstances during the armed conflict, the commander is forced to make a direct and timely decision and may face military necessity influenced by his decision. Those are military imperatives that may be dictated by the circumstances of the fighting and the requirements for the fulfilment of the Commander's mission. Is he or she reluctant to implement his or her decision? The Geneva Conventions have recognized the existence of such war imperatives as may be dictated by the circumstances of hostilities and have made them justifiable for certain violations of their provisions. Articles 50, 51 and 17 of the First, Second and Third Conventions, respectively, stipulate that the destruction or widespread seizure of property constitutes a grave violation of these Conventions unless justified by war imperatives. (Geneva Conventions, 1949).

Although this principle is one of the principles of international humanitarian law, many commentators caution against its abuse of the resulting scourge and crimes, and some commentators therefore stress that: "The laws of war, despite their existence, have lost their effectiveness because of the use of the exaggerated state of necessity by the warring parties" (Isra, Yasri, 2018).

According to the foregoing, it is understood that the principle of military necessity allows military objectives to be attacked as a necessary first-place option, but this does not preclude as a necessity the attacking of civilian objects if they directly contribute to the achievement of a definite military advantage. Failure to establish structured standards for the use of information technology for

offensive military purposes will mean the possibility of using it for military necessity, which we find evident in exchanges between the United States and Russia.

With regard to the principle of military necessity, the Tallinn Guide noted that in cases where a choice between several military objectives is possible to obtain a similar military advantage, the target chosen for a cyberattack is that which is expected to cause the least danger to civilians and civilian objects (Schmitt, Michael, N, 2002).

The standard of necessity requires the use of weapons to achieve military rather than civilian objectives, and if necessity deviates from this standard and extends to civilian objectives, this is considered a departure from this principle according to international humanitarian law. Accordingly, the nature of weapons based on modern technologies may hit civilian targets under the pretext of a misdirection, and this is considered a departure from the requirements of this principle.

• Third: Autonomous weapons and the principle of discrimination:

The principle of discrimination requires the commitment of the parties to the armed dispute to differentiate between civilian goals and military goals, and the first additional protocol of 1977 referred to it, as it stipulates that it is obligatory to "work the frameworks of the dispute over the distinction between the civilians and fighters and between civilian notables and the military goals, and then he crowned its operations against its operations against its operations against its operations against its operations. The military alone, this is in order to ensure respect and protection of the civilian population and civilian objects (Additional Protocol I, Article 48).

The principle of distinction is the cornerstone, especially in contemporary armed conflicts that take place in areas populated mostly by civilians, and it is difficult to verify the status of those concerned with legal protection or confirm the membership of individuals belonging to the armed forces or armed groups, regular or irregular, or even contracted with the private sector, The difficulty of this is due to those criteria that are mostly incommensurable, such as direct participation in hostilities, and over the period of time of participation in this role, or distinguishing fighters who have become unable to fight due to wounds or surrender (Ishaq Al-Ashash, 2020,).

The International Court of Justice stipulated this principle in its advisory opinion, where it emphasized that states must never make civilians the target of attack, and accordingly states must not use weapons that cannot distinguish between civilian and military targets (International Court of Justice 1966).

Applying the principle of distinction to the use of weapons based on modern technologies is extremely complex, as the person directing these weapons may be thousands of kilometers away from this weapon, which makes it difficult for him to achieve this principle, for example in cases of the use of unmanned aircraft (drones). Therefore, it is important to establish legal rules regulating the use of this type of weapon (Azhar Al-Fatlawi, 2018).

• Fourth: Autonomous weapons and the principle of proportionality:

Any use of force against military targets and targeting them must be subject to the principles governing the use of force and striking targets. The most important of these principles is the principle of proportionality, which means taking into account proportionality between the harm that may be caused to the opponent and the military advantages that can be achieved as a result of the use of force during the course of operations. Military, and the principle of proportionality seeks to establish a balance between two conflicting interests: humanity and military necessity.

There is no doubt that the weapons used when launching an attack play a major role in the issue of proportionality. The great development that has occurred in the weapons industry in recent years has given the military the advantage of hitting targets accurately, but such development costs

countries huge sums, so we find some countries refusing to oblige them to use such These weapons are used in all wars, for example,

The United States goes on to say that "the rule of proportionality does not oblige developed countries such as the United States of America to use advanced, high-cost weapons in order to adhere to the principle of proportionality (Rashid Hamad Al-Enezi, 2007).

Among the most advanced weapons at the present time are autonomous weapons, and therefore entering into an analysis of the principle of proportionality with regard to their use requires combatants to determine the collateral and potential damage to civilians and civilian objects in any attack on a military target. If there are no civilians or civilian objects, then there is no There is a need to analyze the principle of proportionality, and this is called (the reasonable commander standard or the reasonableness of the military commander),meaning that one must look at the situation as the commander saw it in light of all known circumstances (Benjamin Kastan, 2013), and proportionality poses the problem of how to program an autonomous weapon to comply with the principle of proportionality. In theory, an autonomous weapon can be programmed to comply with this principle by programming Weapon algorithms, on their own, analyze the principle of proportionality, but in practice, if humans themselves are sometimes unable to assess whether an attack is proportional or not,

how programmers can create autonomous weapons that automatically evaluate the principle of proportionality (Kelly Cass, 2015).

With the use of autonomous weapons, it is difficult to implement this principle in a way that guarantees human rights, because the randomness of these weapons and the possibility of errors in guidance, control and supervision may make proportionality distant, and this is what worries many researchers and calls them to demand the international community to find new regulatory rules at the international level.

Therefore, international humanitarian law requires, when implementing the principle of proportionality, that the desired military advantage be expected, tangible, and direct, not contingent or probable. Otherwise, the existence of this principle is non-existent, and is considered a violation of the rules of international humanitarian law.

If the use of weapons based on modern technologies will lead to extensive damage that is disproportionate to military necessity, then this is considered a prohibited indiscriminate attack, which is expected to cause losses in civilian lives that exceed the tangible and direct military advantage that is expected to result from that attack (the Protocol First Additional Article 51).

Therefore, the nature of autonomous weapons must be highly accurate in hitting military targets and distinguishing between them and civilians, and avoiding indiscriminate attacks that hit military targets and civilians without discrimination, in implementation of the principle of proportionality that allows achieving the desired military advantage while adhering to the rules of international humanitarian law in protecting civilians.

CONCLUSION AND RECOMMENDATIONS:

The study of the compatibility of self-operating weapons with the principles of international humanitarian law highlighted this type of modern weapon and its potential for subordination to international humanitarian law, and I make the following recommendations to strengthen this:

- The term "autonomous weapons" should be defined specifically and its degree of autonomy determined.
- Urge States to assess their weapons and means of warfare prior to their use, in line with article 36 of Additional Protocol I of 1977.

- The use of an autonomous weapons system must be subject to international humanitarian law and its requirements and principles.
- The challenges posed by self-employed weapons should be taken seriously, so that their consequences are not disastrous for human rights.
- The proliferation of autonomous weapons supported by artificial intelligence must be controlled in order not to threaten international peace and security, especially in the event of loss of control or malfunction in one of its systems.
- Conclude a special international treaty to regulate the use and mandatory limitations of self-operating weapons and prohibit those that cannot be subject to the rules of humanitarian law. in the sense of implementing the obligation to review weapons systems developed in accordance with article 36 of Additional Protocol I.
- The United Nations should play its role in regulating modern technology-based weapons through the convening of international conferences, in order to find radical solutions that help reduce the threat of the use of self-employed weapons to international humanitarian law.

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REFERENCES

Abdullah Ali Abdul Rahman Al-Olayan, (2022). The Role of International Humanitarian Law in Preventing and Restricting Autonomous Weapons, Journal of the College of Sharia and Law, Dakahlia, Issue No. 24, Part One, p. 399.

Abdul Qadir Mahmoud Muhammad Al-Aqra', (2020), Military robots in future wars and the extent to which they are subject to the provisions of international humanitarian law, The Legal Journal, Volume (8), Issue 3, 912.

Al-Fatlawi, Ahmed Abbis Nimah (2016), Cyber Attacks, Concept and International Responsibility Arising from Them in Light of Contemporary International Organization, Journal of Investigator Al-Hali for Legal and Political Sciences, University of Babylon, Faculty of Law No. 4, year 8, p. 635

Ali Mohammed Kazim al-Mousawi (2017), Direct Participation in Cyber Attacks, Master's Thesis, Faculty of Law, Nahrin University, Baghdad, Iraq, p. 126.

Azhar Al-Fatlawi, (2018). Hostile Operations According to the Rules of International Humanitarian Law, Arab Center for Publishing and Distribution, Cairo, Egypt, p. 119.

Benjamin Kastan, (2013), Autonomous Weapons Systems: A Coming Legal "Singularity"?, Journal Of Law, Technology & Policy, P55.

Binjamin Kastan, (2013). "Autonomous Weapons Systems- A Coming Legal Singularity", Journal of Law- Technology and Policy, University of Illinois, College of Law, Vol.46, Pennsylvania, P.10.

Burrus M. Carnahan, (1996). Unnecessary Suffering, the Red Cross and Tactical Laser Weapons, Loyola of Los Angeles International and Comparative Law Review, VOL18, P711.

Da 'a Jalil Hatem, Mahmoud Khalil Jafar, (2020), Self-Employed Weapons in Light of Principles of International Humanitarian Law, Journal of Legal Sciences, Faculty of Law, Baghdad university, P. 292.

European Parliament Report, (2018). European Parliament calls for a global ban on the use of "killer robots" and autonomous weapons, p. 1.

Human Rights Watch, (2018). Mind the Gap: The Lack of Accountability for Killer Robots, Human Rights Watch, New York, p6.

https://mostaqbal.ae/1-evergreen-making-sense-of-terms-deep learning-m

ICRC (1977b). Additional protocol 2 to the Geneva Convention. International Committee of the Red Cross, Geneva, Switzerland. Available online at: https://www.icrc.org/ar/doc/resources/documents/misc/5n tce2.htm

International Court of Justice, (1966). Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons.

Ishaq Al-Ashash, (2020). Excluding humanity from future wars... The authority of the Geneva Conventions over autonomous weapons, p. 3, available at the following link:
https://blogs.icrc.org/alinsani/2020/05/05/3727/

Ishaq Al-Ashash, (2018). International Law's Lethal Autonomous Weapons Systems, Legal Approach to the Problem of International Siege, Tripoli-Lebanon, Issue (30), Mayo, Giel Magazine for Human Rights, Tripoli, Lebanon, p.157.

Isra Yasri, (2018). International Organization of Protected Areas, Study in the light of international humanitarian law, Arab Centre for Dissemination and Distribution, Cairo, Egypt, p. 275.

Jamal Al-Ayeb, (2021). "Methods and means of war in international humanitarian law between theory and practice," doctoral dissertation, Faculty of Law, Badji Mokhtar University, Annaba, p. 80.

Kelly Cass, (2015). "Autonomous Weapons and Accountability :Seeking Solutions in the Law Of War", Loyola Marymount University and Loyola Law School Digital Commons at Loyola Marymount University and Loyola Law School, Vol.48, iss3, P. 16.

Mohamed Abdelhak Sharbal (2012), Modern Weapons and International Humanitarian Law ", Master's thesis, Faculty of Law, University of Algeria, Ben Youssef bin Kheda, p. 43.

Mohammad Abdul Redha Nasser and Kazem Abdul Ali, (2018), Modern means of combat, a study in light of the provisions of international humanitarian law, Journal of the Islamic University College, Iraq, Issue (45), p. 204.

Mohammed Abdul Radha Nasser, (2014), Haider Kazim Abd Ali: Modern Means of Warfare Study in Light of International Humanitarian Law, Islamic College Journal, No. 45, p. 201.

Rashid Hamad Al-Anzi, (2007), Legitimate Military Objectives in International Law, Journal of Law, Kuwait University, third issue, Kuwait, pp. 52-53.

Russell Christian, (2018). The Accountability Gap for Killer Robots, Human Rights Watch, Geneva, p. 1.

The International Committee of the Red Cross (ICRC), (2019). Autonomy, artificial intelligence and robotics: Technical aspects of human control, Geneva, August, P15.

The International Committee of the Red Cross (ICRC), (2019). Report on International Humanitarian Law and the Challenges of Contemporary Armed Conflicts (The Power of Humanity), Thirty-Second International Conference of the Red Cross and Red Crescent, Geneva, p. 62.

Saaduddin, Murad, (2017). Prohibition and Restrictions on Modern Weapons under International Humanitarian Law, Journal of Comparative Legal Studies, No. 5, December, p. 182.

Schmitt, Michael, N, (2006). War, Technology and the Law of Armed Conflict",in ILS, USNWC, Vol82,p.241.

Schmitt, Michael, N. (2002). Wired warfare: Computer network attack and jus in bello, International Review of the Red Cross, vol. 84 No 846, P. 397.

UN. DOC. CCW/MSP/2015/3, P. 13

Yasmin Abdul Munim Abdul Hamid, (2020). "International Legal Challenges to the Regulation of Artificial Intelligence - Status of 2 Autonomous Automatic Weapons", Law Journal, vol. 8, No. 9, p. 3139.