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Production and use of Smart Weapons in the Light of international Humanitarian Law Principles and Rules

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Abstract

In this research, an attempt has been made by deductive method or looking from above according to the opinions of thinkers and comparing their views with the results of the researcher on how to produce and use smart weapons within the principles and rules of international humanitarian law. Intelligent weapons, including military robots, drones, and all types of automatic and autonomous weapons, are one of the new equipment's of various types of weapons that are currently in the military of a number of developed countries and even third world governments. With the use of intelligent weapons in the military field and the introduction of artificial intelligence in the weapons of the conflict zone, there is a concern whether this type of automatic and autonomous equipment alone and without direct human presence on the battlefield can violate the principles of international humanitarian law. In distinguishing military goals from civilians based on the principle of separation and understanding the military necessity in observing the principle of proportionality along with the number of civilian casualties as well as human emotions and feelings Be friendly on the battlefield? Also, how can the issue of international criminal responsibility arising from international humanitarian law crimes be addressed in this area? And how can human control of intelligent systems be exercised in such a way as to adequately uphold both legal obligations and ethical principles? However, the researcher believes that the use of smart weapons, especially military robots and drone-capable drones, in terms of lack of accurate detection between Military and civilian targets in special circumstances and Lack of understanding of human feelings and the requirements of public conscience is not able to observe the principles of segregation, appropriateness, necessity, unnecessary suffering and caution, and on the other hand regarding the criminal responsibility of users of smart weapons on the battlefield It was its producers.

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Introduction

The main purpose of international humanitarian law is to protect civilians in the event of armed conflict, as well as to protect the military from unnecessary and unnecessary suffering, which imposes restrictions and prohibitions that ultimately reduce the effects and consequences of armed conflict, these rules apply to all weapons, including intelligent weapons. Intelligent weapons can fundamentally change the way humans decide during armed conflict, such weapons according to the ability Their selection and targeting after activation without the need for human intervention differ in many respects from other weapons, while this ability to give up its practical and military benefits has raised serious concerns in international humanitarian law. Is. In the current era, new technologies, especially artificial intelligence, are increasingly used to assist commanders in decision-making decisions. In fact, in modern warfare, the use of artificial intelligence is expanding and countries China, Russia, the United States, Britain and some Third World countries are seeking to boost production and use of these weapons. As of 2016, the Department of Defense spent $ 3 billion on drones, accounting for 40 percent of all US aircraft. More than 180,000 drones were registered in the first two weeks of the plan when the US Federal Aviation Administration introduced its national drone registration framework in late 2015. Also in March 2021, the AI National Security Commission, with the permission of the US Congress, issued a report emphasizing how AI technologies would infiltrate any level of warfare in the future. It also called on the US Department of Defense to transform Artificial intelligence to be ready by 2025 to integrate artificial intelligence in basic and important functions and existing systems.

Representatives from 125 countries met in Geneva on December 19, 2021, to discuss autonomous weapons systems that could be targeted and fired upon, but ultimately disagreed with and condemned the principles of humanitarian law. International weapons take precedence over all weapons systems, and humans are responsible in any situation. In addition to the major military powers, most countries oppose the use of such equipment, and UN Secretary-General Antonio Guterres and the Secretary-General of the International Committee of the Red Cross are staunch opponents of smart, autonomous weapons.

In general, intelligence means the use of technical and information tools and techniques to properly manage affairs, facilitate activities, upgrade and maximize the knowledge of the IT sector. Intelligence of weapons and military equipment is also a strategy that can play a role. Play an effective role in increasing combat power. In this approach, the weapons in the Armed Forces are used using new technologies and new methods such as automation or autonomy, intelligence, guidance, without crew, increasing the rate of bullets, increasing the power of destruction, etc., which may be from a military point of view and only with the aim of victory on the battlefield, it is considered a good thing, but its consideration can be considered in terms of international law. On the other hand, international humanitarian law is a developed and

strengthened form of traditional international law of war law in this context, most of the rules of war today include even those international armed conflicts that the parties to the conflict do not consider to be war. The term "international humanitarian law" refers to this development. In other words, these rules include the use of smart drones based on pre-emptive warfare to destroy part of a counterterrorism target in another country, even when war has not been formally declared between the parties. Its examples can be considered, therefore, regardless of the general rules that apply to all a Types of Wars Applicable Special rules apply to land, air, and naval rights. But the important thing is to ensure that the development and use of autonomous and intelligent weapons is accompanied by the support of civilians. But in general, new and more complex forms of peaceful conflict are now increasingly challenging international humanitarian law, making it difficult to achieve the goal of humanity, or international peace and security.

This article first discusses the generalities and concept of smart weapons and their types, including robots and drones, and their relationship to international humanitarian law. Next, the capabilities of military robots and drones in distinguishing between military and civilian targets are discussed. Then, the feasibility of observing the principle of proportionality by intelligent weapons on the battlefield will be discussed. Will be examined.

The concept of smart weapons

An accurate and comprehensible assessment of intelligent weapons or unmanned systems or military robots will be possible only when a clear concept and definition has been obtained in this regard. It is very scattered and sometimes unprofessional, which has caused conflict and concerns in this regard in a way that has confused the audience. And study the effectiveness of humans in controlling and using these types of weapons.

First, the first question that comes to mind is what is a robot? Obviously, there is no consensus on the definition of a robot, even among robotologists themselves, but in short, a robot is a machine. Especially a machine that can be programmed by a computer that can perform complex tasks automatically. The robots may be controlled by an external control device or a control device may be placed inside them. Robots may be made to look like humans, but most robots are machines that are made to do something, and their appearance does not matter. Robots can be autonomous or semi-autonomous, and there are many different types, such as humanoid robots, drones such as drones.

Robots are designed and manufactured for various purposes, and in addition to its economic aspect, which is now part of the intelligent tools of the life of world societies, its military aspect is also favored by many advanced governments due to its military advantages on the battlefields has taken. Thus, military robots, also known as killer robots, are intelligent systems used today in land battles. Is used. This robot can use different weapons. There is also talk of giving the robot a degree of self-control in wartime.

Another type of smart weapon is the drone, are a type of drones or UAVs capable of carrying ammunition. These drones are capable of performing various missions such as air-to-ground combat. Drones are currently being designed and built that can Fly autonomously and choose their path and purpose and make most of the necessary decisions independently To adopt. As an example of this category of intelligent systems

can be drones The British-made BAE Taranis noted that it can fly over different continents without the need for a pilot, and uses new tools to prevent detection. The test drones of this military drone have started since 2011.

The level of autonomy in smart weapons is an effective and determining feature of the use and nature of such weapons. In the past, there were other conceptual reasons for limiting the use of such weapons and creating a basis for distinguishing between unmanned and manned weapons. The distance was between the fighter and the war zone, and a manned system was compared to its unmanned counterpart, but the same method and concept is accepted at a more modern level, but the distinction between them is examined on the basis of the degree of autonomy. The current criteria for smart weapons in terms of the level of autonomy can be divided into four groups:

A. Non-autonomous or remote operation: In this way, humans control all movements of the unmanned system and without the intervention of human agents, remote operating systems will not be able to operate effectively.

B. Supervisory autonomy: The human user determines the basic movements, situations or basic actions and then the system performs them. In this method, the user must constantly transfer inputs to the system and have continuous monitoring to perform operations successfully.

C. Task autonomy: In this type of level of autonomy, the human user specifies the overall task for the system and the platform processes a set of actions and performs it under its supervision. Usually, the operator has a tool to monitor the system, but This tool is not necessary for extended operations.

D. Full autonomy: A system that has full autonomy can create and perform its tasks without the need for any input from humans during the mission. In such systems, humans can only intervene when the decision is made. In the future, these systems can demonstrate capacities that mimic and copy the moral and emotional capacities of human beings.

In general, lethal autonomous weapons are of a hybrid nature and are a combination of underlying technologies for multiple purposes. In this regard, robots may help humans in the fight, but in the final analysis, it is the human resources that seal the battle.

History of using smart weapons

In general, it can be said that the evolution of weapons and ammunition has started from the most basic man-made weapon, namely the bow and arrow. Attempts to use weapons with higher destructive power, longer range and greater accuracy in hitting the target have gone through a process that has reached today, bombs and smart missiles. With the development of electronic sensors, guidance, targeting, tracking and propulsion systems, there has been a huge leap forward in the manufacture of weapons of war. Intelligent weapons have given another nature and meaning to war and battle scenes. Guided and precision bombs are one of the weapons innovations of the last century and have played a crucial role in many wars.

In fact, the initial ideas for obtaining precision-guided weapons date back to World War I. Although it seemed more like a dream in terms of technology at the time, examples of these types of weapons were realized in World War II. German short - range missiles the V-2 showed London at the end of World War II that missiles posed

a serious threat to nations, especially if they had a longer range.

In the mid- 1950s, with the development of technology and the possibility of building long-range missiles equipped with precision-guided missile systems and nuclear warheads, the danger became so serious that efforts to build weapons to counter them intensified. Intelligent weapons using external guidance systems or Internal Program They have the advantage of increasing accuracy and spending less resources, thus reducing costs in battle scenes. Of course, it should be noted that the intelligence and accuracy of weapons is a relative issue, so that its capabilities match the time and the level of technology of the infrastructure of that time. In the summer of 1944, for example, there were 47 wars B-29 On top Yawata Japan It flew and only one of its planes managed to hit the target with only one of its bombs. In the fall of that year, this feature increased to 7%. A 108 bomber at the time B-17 He had to fire 648 bombs to hit the target with 96% confidence. While in the Persian Gulf War, a fighter aircraft, with only one or two pilots and two laser-guided bombs, created the same capability with 100% confidence. In general, weapon intelligence first began with guided bombs, with the Germans first launching precision-guided bombs. WWII Used. The first precision-guided bomb Fritz X It was named and weighed 1400 kg. This is a bomb to attack an Italian ship Used in 1943. This attack was successful.

Allied-led bombs in World War II it weighed 454 kg and was used in both Europe and the Pacific. In the 1960s, the electro-optical bomb, or camera bomb, was introduced. The bombs were equipped with television cameras, and what the eye of the bomber could see was the aircraft controlling it. Transferred. Then User This Bomb At Airplane It transmitted control signals to the bomb receivers. These bombs are widespread To the device United States Air Force In the last few years Vietnam War It was used because the political atmosphere was increasingly Ratio To Losses Other Military sensitive Was And From Lateral To the device This Difficult targets such as stairs could be eliminated in a mission. For example, Paul Tan Hua He was attacked several times with ordinary bombs, but these attacks were unsuccessful. But later it was destroyed by a precision-guided bomb attack.

In the case of military robots, the idea of using robots in military arenas is not new and dates back to World War II. The German forces destroyed the enemy machines and forces by presenting a small goliath remote-controlled mini-tank carrying explosives. On the other side, the Russians have a similar robot called tele tank Benefit from this method.

The history of drones needs to be explained. In 1849, Austria sent a balloon full of drones to attack Venice. UAV innovation began in 1900 and was originally focused on training military personnel. UAV development during world war I It continued until Dayton-Wright flew a drone that exploded at a predetermined time.

In 1959, the US Air Force became concerned about the loss of pilots in enemy territory, so it began planning to use drones. August 1964 Fighting in the Gulf of Tonkin between US Navy units and the North Vietnamese Navy initiates the deployment of US classified drones. To Vietnam War when the Chinese government an image of US drones showed through the World Wide Web.

The War of Erosion (1967-1970) is the most notable battle to introduce UAVs in the Middle East.

In 1973 Yom Kippur War Israel used drones as bait to provoke opposition forces to waste enemy missiles.

In 1973, the US military officially confirmed that it had used drones in Southeast Asia (Vietnam). More than 5,000 US Air Force personnel have been killed and more than 1,000 missing or captured. According to US Air Force Gen. George S. "The only reason we need (the drone) is that we do not want to be in the cockpit," said Brown, commander of the Air Force. Since 2012, the US Air Force has 7494 UAVs It uses about a third of the US Air Force aircraft, with at least 50 countries using drones in 2013, designed and built by China, Iran, Israel and others.

Regarding the history of production and use of UAVs in Iran, the Iranian UAV industry was supposed to start operating in 1981. After the revolution, the project was interrupted, but eventually led to its establishment Quds Air Industries In 1985 , the most important product was UAVs Immigrant 1 It was during the Iran-Iraq war. Quds Air Industries in the early1380s designed and built drones Immigrant 4 And 3 Which became the most successful reconnaissance drones in Iran. These drones were widely used in all units of the Iranian Armed Forces, from the army to the IRGC. After the end of the imposed war, the production and use of this smart weapon accelerated so much that in 2020, the Iranian army unveiled the Arash drone, which is the longest-range suicide drone in the world with a range of 2,000 kilometers, and now we can boldly say Iran is considered one of the most powerful deadly drone forces in the world.

As for the future, some experts have suggested that artificial intelligence be made more humane. That is, the advances that are currently being made in the field of artificial intelligence must include efforts in which artificial intelligence is inherently humane and humane. Measures have been taken in this regard, and countries such as Japan and South Korea, which use robots extensively, have begun to pass laws requiring robots to have safety systems and a set of laws similar to the three basic robotics rules adopted by Asimov was provided, does not. In this regard, an official report by Committee Politics Deposition Industry Robotic Government Japan at Published in 2009. Authorities And researchers Chinese Also Report publish Have That at Collection Rules Ethical the new And Collection Instructions Hi To name “Studies Legal robot" Proposal It is ten. Recently, there have been concerns about the ability of robots to lie in the face of various questions. Autonomous weapons have been around since the late 1990s. The first government to talk about autonomous weapons was the US Department of Defense Directive 3000.09 issued in November 2012. The directive describes an autonomous weapons system as "a system of weapons that, once activated, can select and engage targets without further human intervention." More than two decades ago, researchers at UCLA in California succeeded in building microscopic integrated circuits using single molecules as building blocks. To be designed. Its features include longer capacity and cheaper capacity than its predecessor hardware, ubiquitous cloud computing, and almost unlimited memory capacity on devices as small as insects. The automaticity of weapons, previously recognized in the 1980s as part of the framework for the "automatic battlefield", has long been part of US military calculations. Thus, the Secretary of Defense's 2016 Defense Innovation Initiative Hogel seeks to use defense innovation to overcome operational challenges. Civili-

zation in the 21st Century Unveils Autonomous War Systems Today, the use of autonomous weapons It has reached its peak and has influenced international law in the fields of armed conflict law and humanitarian law. In the recent war between Russia and Ukraine on February 24, 2022, each side involved in the use of modern smart weapons repeatedly used, so that Ukraine used Barakat TB2 drones sold by Turkey to Ukraine against equipment and Russia also used smart cruise missiles to destroy the country's targets, according to a spokesman for the UN Office of Human Rights on February 29, 2022, five days after the start of the war. They were children killed and 400 wounded, which, despite claims that the weapons used were smart, show that international humanitarian law, including the principle of segregation in the use of weapons used in the armed conflict, is not being observed.

Causes and motivations of users of smart weapons

Since the study of the humanitarian rules of smart weapons requires understanding the reasons and motivations of governments to use such weapons, so to accurately assess the ethical aspect of the use of smart weapons, we must first examine the military reasons and benefits of using them. Awareness of these factors will be effective in examining the opposing and agreeing views on the use of smart weapons. Therefore, before the legal analysis of the issue, in this section, the advantages of using unmanned or smart weapons from the point of view of the supporters of the users of such weapons will be examined:

Reducing human capital costs

Proponents of the usefulness of smart weapons theory believe that in traditional operations to send troops to remote areas, troops faced a variety of natural and environmental hazards that sometimes claimed their lives before reaching the target area. Among the threats mentioned are infectious diseases, extreme heat and cold, and impassable routes. For example, it is estimated that more than 40,000 soldiers were killed in the Austrian Alps during World War. These soldiers They did not lose their lives due to enemy bullets, but avalanches that hit the valleys intentionally or due to a wave caused by artillery fire, caused the death of soldiers. In addition to the said natural dangers, the dangers of using some modern weapons also reach humans in war. Such dangers are the greatest threat to the lives of soldiers in armed conflict that permanently affects the health of soldiers, the use of bombs, Mines, depleted nuclear munitions and uranium, chemical and biological bombs are examples of this. In addition to physical injuries, psychological injuries and their consequences, such as suicide, can be added to the dangers of soldiers in the field. One study in the United States concluded that two people All five soldiers who have returned to the country from the battlefields of the Middle East have suffered from severe psychological problems and have had many problems with forgetfulness and behavioral abnormalities resulting from the war in order to be able to reconnect with their civil society.

Reduction of financial expenses

Proponents of the use of smart weapons, such as US military commanders, believe that in addition to having serious consequences and casualties, the war also has costly and staggering financial costs. US military statistics show that the largest cost factor in all operating costs is related to

troop transport systems, which accounts for one-third of the cost, and today's unmanned systems have a large capacity to reduce such costs. Users in traditional weapons may not be much different from smart ones, but in smart weapons it allows users to focus on more systems at the same time and do not interfere with each other and have fewer working hours and use fewer military benefits to reduce overall operating costs. Training costs on how to use smart weapons are also reduced in some cases. Keep yourself moist Indies or pilots of spy planes sometimes fly up to 100 sorties to achieve their goals, while with intelligent and unmanned systems, costs are reduced by creating simulation environments and non-flying and technical classes. Also, many newer intelligent technologies cost less to build than conventional weapons, for example, building a drone is estimated to be about five times cheaper than anF-22 fighter. So, proponents of these weapons argue that using this the type of smart equipment is more justified in terms of financial cost.

Reducing energy consumption costs and environmental impact

In addition to human and financial costs, energy costs and the destructive effects of using this type of resources should also be increased to the use of non-intelligent weapons and equipment. In addition to being unjustifiable, its high consumption will also have devastating environmental effects if the use of smart weapons using renewable energy such as light, wind and vibrational energy play an effective role in reducing energy and living costs. They also play an environment. In order to use traditional equipment, human beings have to provide infrastructure such as roads, bridges, etc., which in addition to increasing financial costs and human costs, also causes the destruction of the environment.

Justification for increasing the military capability of intelligent systems

Believers in the theory of the use of intelligent weapons, in addition to the above advantages in their views, state that unmanned systems in the above cases will improve military power and military superiority capabilities over the enemy. This type of equipment, which has more maneuverability than other weapons, can be used in places that will be less dangerous and can be used for longer missions and operations, for example, in manned aircraft flights. We have a limit on the number of flights and the number of hours per flight in terms of physiological limitations and technical facilities, if these problems in drones have been completely eliminated and this type of intelligent systems are able to provide extensive information in the shortest possible time. Communicate and make available to the targets through communication systems, which is a significant feature of military superiority over the enemy, or the use of smart bombs and missiles or female point to achieve more effective military objectives. Compared to other weapons.

Investigating the production and use of smart weapons in the light of international humanitarian law

Intelligence of weapons systems does not mean a complete replacement of human decision-making, but changes the method of human decision-making in war in a way that can be said to be autonomous. Complete systems, human from the scope of my decision Crying at the scene of the attack Weapons come out and these systems they can As

Independent court attack to do or not to act on specific goals and with this process, robots will replace humans and soldiers in the arena of war. So given that these robots lack any friendly emotions and human perceptions, it is definitely a challenge. Will lay the groundwork for humanitarian law. According to Martens (as explained at the 1907 Hague Peace Conference), in cases where combatants and civilians under international humanitarian law are not considered treaty or customary, they will continue to be protected by the "principles of humanity and the requirements of public conscience." Given the need, will intelligent and autonomous weapons be eligible for the principles mentioned in armed conflict? Therefore, the mentioned issue is important and discussed from different aspects First with iodine Check the legal status of using this system According to the principle of proportionality and necessity, and that IA Use these weapons, especially drones, when attacking in accordance with the principle of separation. Military and civilians Will it be or not?

As stated in the section on the history of the use of smart weapons, the process of formation of such systems was stated. It should be noted that balloons were the first flying devices that humans used to attack their enemies, later planes and helicopters were used for this purpose. The progress of civilization in the present century is unveiling another form of military flying weapons That Autonomous war systems They are a clear example. Systems that have been used extensively for reconnaissance and research purposes are becoming military devices that have reached their peak today in armed conflict, expanding the use of these systems worldwide. The rules of international law have undergone fundamental changes.

Although some thinkers have predicted that full autonomy of war systems for their use in armed conflict will not be possible until the coming years, there are many issues and debates about the legality or non-existence of these autonomous systems at present. Legal review.

In November 2012, Human Rights Watch collaborated with the Harvard Law School Human Rights Clinic in a report entitled" The full autonomy of these war systems cannot be in accordance with the indisputable principles of armed conflict," the human rights group Losing Humanity reported. Armed conflicts will increase, so defend and support international treaties prohibiting the production, development and use of these autonomous warfare systems. Therefore, in order to study the legal nature of the use of smart or autonomous weapons, how to use them with the principles and rules of humanitarian law is investigated as follows:

Intelligent weapons in the light of the principle of separation Distinction principle

Of the principles governing war in the contemporary system of international law is the principle of segregation. According to Articles 48, 51 (4, 2) and 52 (2) of the First Protocol to the Geneva Conventions, attacks can only be carried out against combatants and must not target civilians. These documents are in a way a reflection of customary international law, and therefore all countries, even if non-member, are bound by this customary rule of non-segregation. According to Article 48 of the First Additional Protocol, the parties involved are obliged at any time between the civilian and military population, the

civilian property and the military system. To believe. Ex former h Original Separation at Rights the West to the eighteenth century is open He says. In 1772, Rousseau, as a result of his " social contract, " considered war a rift between states and the enmity of the citizens of hostile countries. He defended the title of defender and concluded that if the aim of the war was to destroy the hostile government, the other side only had the right to destroy it by the armed forces, but as soon as they put down their weapons. And they surrendered, they are human beings from then on, and no one has the right to take their lives

It should be noted, as long as human factors are the final decision makers regarding the operation of these war systems and as long as it is possible to store or send sufficient accurate and valid information to these systems to ensure that a target is a military target. It can no longer be said that these systems are inherently lacking in segregation power. One of the principles that an autonomous warfare system must consider in order for its operation to be legal is the principle of customary international law of "segregation." The purpose of this distinction is to reduce the damage to the civilians and their property, as well as to prevent indiscriminate attacks by commanders in order to achieve these goals. Have been before the attack order to consider.

Therefore, one of the obvious principles of international humanitarian law is the principle of segregation, a principle rooted in customary law. Observance of this principle guarantees the implementation of humanitarian rights, this principle stipulates that "a distinction must be made between civilians and combatants, as well as for military and civilian purposes," a rule set out in Article 48 of the First Additional Protocol, in conjunction with Articles 51 and 52, which seeks to protect the civilian population is directed against military targets only by directing military operations.

Another important point is that the environment and context in which these war systems operate will play an important role in this study, so there are conditions and situations in which these systems can put this rule well on their agenda, for example in the event of intense hostilities. Or conflicts that occur in remote areas such as deserts and underwater due to strong sensors installed in them, but in other situations such as internal riots or in densely populated urban areas or when these systems are equipped with fully robotic equipment. They can hardly consider this principle. In general, Existing weapon sensors may be able to detect an object as a human being, but at present they cannot discriminate between individuals according to the principle of law. In general, if these weapons are to be used in civil war, they must be able to distinguish between military and civilian targets correctly between different buildings that have been covered and their field of vision is more limited. Recognize that although these factors limit the effectiveness of smart weapons, for example, the pilot of an intelligent system and drone must fire the missile from a certain distance in order to be effective if the urban coverage of its field of vision restricts it, and it is in this case that the principle of distinction in the theory of fair war may be violated.

The large number of civilian casualties in Afghanistan and Pakistan as a result of US drone strikes confirms this. US drone strikes in Afghanistan after 9/11Several people have been targeted simply because they look like bin Laden. According to articles pub-

lished in the United States in 2011, less than 30 civilians have been killed in Pakistan over the past two years by US drones. According to another study, out of the total number of US drone strikes in Pakistan in March 2016, there were 286 attacks in North Waziristan and 92 attacks in South Waziristan. As a result of the attacks on North Waziristan, 2269 people were killed and 994 were killed in attacks on South Waziristan. There were 320 wounded, some of whom were civilians and children in the above-mentioned sections.

An important issue currently being discussed in respect of the principle of segregation through intelligent systems is that a clear definition of civilians is not designed for such systems, so it is difficult to correctly distinguish military targets from civilians. A clear example of the application of the principle of segregation of "targeted attacks" is that drones target targeted attacks against people on the battlefield without personally identifying them, but that their targeting is based solely on lifestyle patterns. According to reports from the attacks, it is enough for the targeted individuals to be from a group of "adult military men" living in the area of terrorist operations, and their behavior is similar enough to the terrorists to be shown to be dead. Also in another example, can a carp distinguish between a child holding a toy gun and a soldier holding a real weapon? A robot can easily be a sniper lying on the ground and a wounded fighter being wounded by law. Is the international community immune to discrimination? Can a smart weapon identify a fighter who wants to surrender-? Therefore, it is not enough to simply say that the autonomous weapon should be programmed to the moral limit of "do not shoot at civilians" and that it should first be completely clear to the system, the civilian, who the civilian is. Experts in the field of robots believe that the existing intelligent systems can only understand the difference between a human and a car, and may not be able to distinguish between a human and an animal standing on two legs. Accordingly, despite the efforts of the face Taken in order to show the weakness of autonomous system robots in providing the principle of distinction, The position of the reporter in particular, it is cautious in this regard, as stated in paragraph 66: Kind O sure, " On the other side of the conflict and irregularities, it was decided that its use would be non - violent ".

Intelligent weapons in the light of the principle of proportionality proportionality principle

The basis of the principle of proportionality should be considered Article (22) of the provisions of the Annex to the Convention No. 4 of The Hague 1907, which states: "The right of the parties to the conflict to use the means to harm the enemy is not unlimited." The First Additional Protocol to the Geneva Convention of 1977 refers in proportion to two articles: Paragraph B of Part 5 of Article 51 states Attack Which is expected to accidentally cause civilian casualties, injuries, damage to civilian property or property "And exceeds the specified and direct military advantage predicted ... " D Part 2 of Article 57 also states: " If it becomes clear that the intention was not to attack a military or The attack is expected to result in the loss of civilian lives, injuries, damage to property or a set of items that exceed the actual and direct military benefits anticipated. The attack must be canceled or suspended. "Come on." On the other hand, the criminal court the former international Yugoslavia also accepted this principle as a rule

of customary law during the trials of Kuberski and others.

Of proportionality means that the damage done to civilians is not excessive in relation to the military advantage and privilege that results from attacking military targets. Gets Come on.

Regarding smart weapons, the important point is that many of the concerns in the field of international humanitarian law regarding smart systems were whether these systems could comply with the principle of proportionality.

To comply with this principle, autonomous systems must be able to estimate the predictable side effects of attacks that may be inflicted on civilians. Or, if collateral damage has been inflicted, should be able to measure the amount of collateral damage with the value of the military advantage gained from the attacks, although these issues themselves may lead to challenges in this regard, for example this military advantage in conflict. The specific is largely dependent on the evidence and its value can change based on the development of the battlefield. For example, imagine an enemy weapons factory that employs about 100 civilians and workers, so the issue of military necessity for destruction. The weapons factory in the face of the killing of civilian workers is not something that can be accurately analyzed by a drone.

The use of intelligent systems makes it easier for military leaders to launch an unwanted war, which violates the principle of fairness and proportionality. They decide, but it is the soldiers who are at the forefront of the front, subject to moral or humanitarian restrictions and the observance of the rules of a fair war. Helps and accidentally helps the civilian population as well, so here it is if we take the soldiers out of the battlefield and train them to fight through an intelligent system. Separation of combatants from the battlefield Separate them from the humanitarian ethics of battle and reduce them from adhering to the just principles of war and proportionality. Therefore, the use of unmanned weapons in combat is associated with immoral decisions or the reduction of obstacles to killing and endangering humanitarian principles in war. In general, there is a psychologically reasonable connection that whatever the distance of the soldier to the battlefield should be more, because in terms of human instinct, he does not see the destruction of his kind. It is easier to kill and shoot bullets from a distance, and vice versa. The bullets fired by the artillery soldiers from behind the front were more than the number of bullets fired by the soldiers on the front line. As long as mass killing is done by an unmanned system like a drone.

The relationship between physical and emotional distance, ease of attack, and entry into war is by no means new, and this relationship has been a cause for concern for anthropologists, philosophers, and psychologists Soldiers with the front have considered the following aspects:

A. Empathy: This means that the shorter the distance between the soldiers of the two sides of the conflict, the more empathy there may be in terms of humanitarian rights.

B. The difficulty of murder and massacre: Proportion of closeness is quite evident in this aspect.

C. Psychological injuries caused by the killing: Considering that the mental and psychological suffering caused by the killing itself is one of the deterrents to the violation of humanitari-

an rights on the battlefield. If the distance between the battle scene and the soldier increases, this deterrent will definitely decrease.

Therefore, unmanned and intelligent systems, due to the large distance between targets and soldiers as users, reduce and weaken the moral deterrents in a way that affects the principle of proportionality and the principle of fairness in war and conscientious, humane and humanitarian understanding. In wars to kill soldiers and civilians.

Also, with regard to the observance of the principle of military necessity, as the principle of military necessity implies, the attack must be systemically necessary, that is, in the practice of the system carried out by the hostile party, or it must be attempted. Be self-defense or b in order to ensure its own security in the future, in fact, this principle requires that each party to the conflict create human concerns arising from the conflict and the needs of the balance system. Force, in the situation the specific circumstances of each case should not go beyond what is practically necessary for the use of certain types of handguns for the purpose of a legitimate system.

Examining the principle of commitment to take precautionary measures in attacks with smart weaponsTake feasible precautions in the attack

This principle is stated in Article 57 And 58 of the First Additional Protocol, poses challenges to autonomous warfare systems, one of which is the need to take possible precautionary measures to prove that the intended target is a military target, and the other is the requirement to take any action. It is possible to choose the means of attack to minimize or avoid the entry of a hundred side mats to civilians.

This is the principle in many of the Mahayat airstrikes Unmanned aerial vehicles (UAVs), especially US drones in the war on terror Not considered the principle of precaution according to Article 57 of the protocol mentioned in the attacks should be based on the announcement and prior notice in order to keep the civilians away from the effects of the attacks. One of the main reasons Critics of the use of drones are unreasonable in the possibility of informing these types of drones because the nature of their use requires their surprise attacks. Therefore, if a country intends to resort to these autonomous systems on the battlefield, it must ensure that these systems can adequately take these precautions.

Intelligent weapons in the light of the principle of vain suffering prohibition

The principle of prohibition of unnecessary suffering is stated in paragraph (2) of Article 35 of the First Additional Protocol. Explosive because such weapons cause unnecessary damage and are therefore illegal, so this customary rule of law will create problems for autonomous warfare systems when they are equipped with such weapons such as shotguns, blinding laser weapons, poisons, nuclear weapons. And to be equipped, in which case they will violate this rule, so these systems should only be equipped with weapons and ammunition that is in accordance with the above rule and does not violate it.

Liability for war crimes committed by humanitarian robots

Regarding the responsibilities arising from the violation of the humanitarian law of robots and intelligent weapons in armed conflict, it is necessary to explain that based on the international responsibility of governments using military robots, according to the International Re-

sponsibility Plan of States (2001) and Article 91 Protocol No. 1 to the Geneva Conventions, the hostile State is liable for acts committed by persons belonging to its military forces. Although military robots are not part of the military and manpower of the user government, such systems can be attributed. To the user government.

In addition to the international responsibility of governments legal responsibility, criminal liability for robots is conceivable for its users, but the ambiguity in this regard is that if a military robot or smart weapon violates the rules of humanitarian law, who is criminally responsible? Is it international? Are Robot programmers and designers responsible, or is the user and user responsible for knowing how to use it? Or are battlefield commanders responsible for deciding to use such systems?

According to the rule of Tasbib, it can be said that each of the mentioned persons is criminally responsible according to the level of knowledge and awareness of the use of military robots in violation and the impossibility of segregation and non-observance of other principles of humanitarian law. In some cases, the responsibility of some people is well established, for example, a programmer who consciously designs a program based on which the robot obtains permission to attack civilians. Here, the criminal responsibility of the programmer is quite obvious and provable the case in which the warlord, despite being aware of this issue, orders its use against civilians. Therefore, based on the same cases, Ronald Arkin has designed a software called "Responsibility Advisor" which Specifically determines whether a military robot has behaved unexpectedly, in which case the programmer is responsible, or whether the military commander has used it in violation of the law of war. But in general, according to the consensus reached in 2019 by the signatories of the Convention on Special Weapons in Geneva, it was emphasized that man must take responsibility for his operations in all circumstances.

Conclusion

Given the above, what is important is that smart weapons of any kind (robots, drones, etc.) are considered weapons of war, and all the rules of international and non-international humanitarian law Protocols I and II annexed to Geneva Convention (1949) is also necessary in terms of observance of the principles of segregation, necessity, proportionality, prohibition of vain suffering and caution regarding them, and non-observance of it is considered a violation of the rules of humanitarian law. On the other hand, after studying this study, it was found that smart weapons, which give up their military benefits, are not able to comply with the five principles of international humanitarianism. In order for international humanitarian law to be effective and efficient in regulating the use of emerging and intelligent weapons, it is necessary to specify certain provisions in international law instruments or to establish more effective customary procedures. On the other hand, it seems that at present, the effects of the misuse of such weapons are not justified and the same judicial procedure is used to fulfill the responsibilities of the perpetrators. Therefore, in order to prevent impunity, some responsibilities arising from the use of emerging weapons and humanitarian crimes Consequently, the verdicts related to the offenses that were not conceivable in the past but are now probable and can be committed or can occur in the future should be explained.

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