

## **Robotic Weapon Systems and Their Compliance with International Law**

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### **ABSTRACT**

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*By the turn of the 21st century, robotic technology is helping to move man further and further away from the battlefield. While several of these advancements still require a human operator, some of these advances are fully automatic and overturn the paradigm that warfare consists of violence, hatred, and enmity. Although robotics' technical progress is accelerating rapidly, the work being done to evaluate the impact of robotics on international law and ethical issues is not keeping up. The present study will examine the issue of robotic weapon systems and their relationship or compliance with international law norms, e.g., robots' compliance with the core principles of the law of war, basic norms of International Human rights law, e.g., humanity, and robots with other legal instruments. The following article has been analyzed using a qualitative research methodology*

#### **Keywords:**

*Robotic weapon systems, norms of international laws, IHRL, Law of war*

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## **INTRODUCTION**

Robotic weapons are weapons that have arisen in recent years and are being created using artificial intelligence (AI) and robotics-related technologies (Aoun, 2017). These weapons operate by their

ability to select and attack selected targets without human interventions. Many countries are in the process of developing these weapons for use in future armed battles. This paper will examine the legal implications of developing and using these weapons concerning international laws.

The history of the manufacture and use of Robotic weapons can be traced back to the First and Second World Wars. Since then, weapons have been developed to perform different tasks with less control from human beings. An excellent example of this is automated air defense systems which can fire targets without human control. It is beyond a reasonable doubt to say that everything that nearly all war-related weapons have autonomous versions currently, and improvements are being made day to date to make them more lethal (Department of The US Army, 2010). The weapons are there already, and more are being made. The question is thus what they can do in what missions and what implications will arise upon their use. The application of military force in wars is always governed by international laws responsible for ascertaining ethical acceptance and humanitarian bases. International laws thus encompass taking to account human mal-ethics and weaponry and can thus condemn the use of certain weapons and war tactics (Aoun, 2017). The use of Robotic weapons that are unable to make decisions on the life or death of human beings has raised legal questions that necessitate intervention by international laws because of hostilities associated with the weapons as well as fundamental ethical and legal issues in the development and deployment of the systems (Khan, 2019).

## **LITERATURE REVIEW**

There are many works done on the topic so far. Among these is Geneva's international human rights and law of war academy research. This research is dated back to 2014 and focused on unfolding legal and policy-related implications of the topic to relevant authorities. The research, therefore, looked deep into the legality of Robotic weapons under the reflection of the law of war (Roach, 1984). It examined the numerous advances being made and their ethical compliance doubts, which raise societal concerns concerning international laws. The research concluded that several international legal implications were associated with the use and development of Robotic weapons.

Another related research to this paper is a report from different debates by expert committees on Robotic weapons. Experts convened to deliberate on how it gained international concerns on Switzerland's ethical, technical, military, and humanitarian issues in March 2014. Another expert meeting was held under UN frameworks in 2014 (UNCCW, 2001). The experts also conducted further meetings in 2015 and 2016. These discussions aimed to understand better the issues raised concerning the manufacture and the use of Robotic weapons to be able to different advise governments. These meetings looked deep into what characterizes Robotic weapons, functionality, and ethical requirements. The reports indicated that there were challenges associated with the autonomy of weapons. The reports advised IHL to formulate a committee to develop approaches to address the challenges associated with Robotic weapons.

Erika Steinholt Mortensen also conducted very detailed research on the topic in 2016. The research sought to unfold how the law of war can manage and control the making and use of Robotic weapons in the event of armed conflict. The research recommended that there should be a

commendable degree of human control in Robotic weapons to ensure compliance with set laws. If technology advances to enable Robotic weapons to comply with the law of war autonomously, the author concludes that human control can be withdrawn (Leveringhaus, 2016).

## **RESEARCH METHODOLOGY**

The qualitative research approach has been deployed, focusing mainly on publications related to Killer Robots, books written by some distinguished writers, scholars of international law, and lawyers. The explanation has been based on these writers: professor Sharkey of AI and robotics, peter Asaro, the philosopher of technology, AI, robotics, and American professor Naval war college professor Micheal N. Schmit.

## **ROBOTIC WEAPON SYSTEMS**

Robotics is likewise referred to as robot weapon units, Robotic tools, Artificial Intelligence (AI), Robotic weapon Systems, and Unmanned Aerial automobiles (UAV). Weapons are becoming much more innovative, and people are relocating additionally out of the battleground. One could claim that the autonomy of weapons is rising. The move toward weaponry with autonomous features is not new. During World War II, the Germans army began using Zaunkoning torpedoes. These items are acoustic torpedoes, and once launched, the torpedo may use sound waves to locate its intended target. Much has changed since then. Today, there are weapons in which a pilot sitting in an operating room can control a UAV, commonly known as a “drone,” to conduct lethal, targeted operations on the opposite side of the globe. Today’s weapon systems require human intervention, but the next step in weapon system development will be eliminating humans. This is the first step toward a fully robotic weapon system (Grut, 2013).

“The term autonomous originated from the Greek word auto self and nomos regulation, which implies thereby independent (Bhuta, 2016). Oxford dictionary specifies it as having the freedom to regulate itself or manage its events (Blackburn, 2005). Historically, little attempt has been made to define the term autonomous adequately. However, it was the first time the United States Department of Defense (DOD) got involved. While conducting research in this field, it was defined as a system that, once activated, can choose and engage targets without further human interaction (Crook, 2013). DOD’s definition developed complications as it covered several weapon systems”.

In contrast, Human Rights Watch (HRW) tried to categorize the various types of robot weapon systems according to the degree of freedom, the amount of human involvement or human control (Docherty, 2012). Three datasets in the loop, human on the loop, and human out of the loop—were included in these classifications. HRW states that the first classification of human beings out of the loop is robots systems. That is, “with the ability to pick targets and also supplying pressure with no human input or communication”, while humans in the loop are those that can “select targets as well as provide force under the guidance of human being who run as well as can override the robotic activity” (Bhuta, 2016). Both kinds can be thought about robotic weapon systems where guidance is restricted so that the weapon can be considered out-of-the-loop (Docherty, 2012).

According to ICRC’s definition, Robotic weapon systems are “Autonomous weapon systems (also referred to as Robotic weapons) independently search for, recognize as well as assault targets

without human role” (ICRC, 2014). There are now a variety of weapons used by military personnel, who are allowed to choose between specific and aggressive objectives for their primary functions. Some defensive weapons, for instance, feature a freedom mode to intercept approaching missiles, rockets, or craft at a closed distance. These instruments have typically been positioned and operated independently for brief durations, in limited circumstances (e.g., against restricted targets (i.e., principally weapons or vehicles) and with relatively few humans or civilian objects). However, in the future, robot weapon systems may operate outdoors under unrealistic time and space constraints, encountering a variety of rapidly changing situations and perhaps directly aiming at people (ICRC, 2014).

Robotics are sophisticated weapon systems that represent an advancement above earlier weaponry. The participation of humans in these systems can be broken down into three teams, where a so-called loop will undoubtedly explain their involvement. It depends on whether the individual is in the loop, on the loop, or out of the loop (HRW, 2012).

The presence of a human in the loop guarantees that the autonomous vehicle is free to engage individual targets or groups of targets that the human has already picked. Due to the lack of active management throughout the process and their autonomous behaviour in response to the driver's commands, humans operating robotic loop weapons are distinguishable from drones. Projectiles, bombers, rockets, torpedoes, as well as other weapons that can home in on their targets after being fired, released, or launched are examples of directed munitions (HRW, 2012).

The second level contains systems whose autonomy is so great that the equipment essentially runs entirely by itself, showing that the differences between its operations and those of pre-programmed systems are much greater. For instance, the equipment does not need human intervention to navigate. Human interaction is necessary in some situations, however, when the weapon's properties are complicated, such as when it needs to be targeted and used regularly. Defense systems now use these devices (HRW, 2012).

Finally, unlike many other automated or remote-controlled systems, robotic weapons do not require human supervision right away. The characteristics of this sort of weapon set it apart from other automatic weapons significantly. These weapons can execute, run, recognize, and engage a target without further human involvement. However, a little human participation exists, e.g., refueling and also equipping. However, they operate far more independently when carrying out the desired objective; internal software programmes determine when and how to include the target. The main concern is whether or not they will be able to adhere to the current international laws, such as international human rights law, international humanitarian law, and international criminal law (HRW, 2012).

## **ROBOTIC WEAPON SYSTEMS COMPLIANCE WITH INTERNATIONAL LAWS**

Furthermore, robotic weapons are just one of the most startling armed forces modern technologies under growth today. There is an immediate requirement for states, experts, and the public to examine these weapons very closely under the Martens Clause and other core concepts. The special arrangements of worldwide laws develop a baseline of defense for civilians and also fighters when no specific treaty law on a subject exists. This research study demonstrates how completely robot

weapons, which would undoubtedly be able to choose and involve targets without purposeful human control, would refute both prongs of the Martens Clause: the concepts of humankind and the dictates of public principles. States must embrace a preemptive ban on weapons advancement and manufacturing and utilize to adhere to international law.

### **International Human Rights Law**

Advancement in weapons system known as Robotic weapon or robotic weapons system is totally against human rights law, rules of humanity, and public conscience because Robotic weapon is based on program system they have no ability like humans. Human rights watch also started programming against killer robot's name as stop Robotic weapon.

### ***Humanity***

Due to their lack of emotion and lawful and moral judgment, robot weapons would encounter considerable obstacles in following the principles of humanity. Those concepts call for the humane therapy of others and regard for human life and human self-respect. Humans are encouraged to deal with each other humanely since they feel compassion and empathy for their fellow people. Legal and moral judgment offers individuals the means to lessen harm; it enables them to make considered choices based upon recognizing a specific context. As machines, a complete robot weapon would certainly not be sentient beings with the ability to feel compassion. As opposed to exercising judgment, such weapon systems would base their activities on pre-programmed algorithms, which do not function well in complex and uncertain situations (Mamak, 2021).

### ***Right To Life***

“This right to life is shielded by numerous international (UDHR, 1948, art. 03; ICCPR, Art 06) and regional treaties (ACHPR, Art. 04; ACHR, Art. 04; ECHR, Art. 02). To a global degree, life's right offers in constitutions. Life's right belongs to international customary law (Henckaerts, 2005). It is a fundamental right relevant both in armed conflict and peace (UNHR, 2011). According to ICCPR, every human being has the integral right to life, for which one shall be arbitrarily robbed (ICCPR, Art. 6 (1)). The term inherent right to life should not be translated in a limiting manner; instead, it demands that the State take positive procedures toward safeguarding the right to life” (Crawshaw, 2009).

In law enforcement, the abuse of pressure by state agents has caused the deaths of several civilians. It may be questioned if the development of robotics can be viewed as a practical step toward protecting the right to life. However, robots cannot save civilian lives during the battle with the same rapidity as people (Arkin, 2014). If robots are considered legal weapons, taking a life with a robot or enabling a robot to decide who lives or dies is reasonable, following established norms, and predictable. Additionally, robot weapon systems not under “Meaningful Human Control” may threaten the right to life in two ways: First and foremost, they may violate the standards and boundaries established to protect the right to life. Second, robotics may indirectly undermine further procedures or layers that protect the right to life. Therefore, robots are completely against the right to life and pose a threat to the right to life in both peace and conflict because robots are not humans (Heyns, 2013).

### ***The Right to Bodily Security***

The right to physical safety is the other right at risk anytime force is utilised by law enforcement. Everyone has a right to bodily safety (Punch, 2011). A person's physical integrity must not be harmed, such as through unjustified coercion, medical procedures, or other disturbances, in order to exercise their right to physical security. Because any violation of physical security puts the right to life in danger, the right to bodily safety and protection is connected to the right to life. In instances, police enforcement utilized less-lethal force intended solely to violate the right to physical safety and security, but persons nonetheless lost their lives (Siegel, 2021). The necessity to preserve the right to physical safety is one of the most important reasons for emphasizing the importance of a phased use of force. This right is not absolute and can be restricted based on certain conditions. For law enforcement to respect the right to physical safety and security, this right must only be interfered with in a proportionate manner. Regarding *Chongwe v. Zambia*, representatives were, in fact, violated. The study into robots has found that the applicant who received a gunshot wound has a right to physical safety and security, and that robotics without meaningful human control can abide by the rules on the use of force to preserve that right. Human discretion is essential to use force in a graded and symmetrical manner; otherwise, the right to life can also be violated, so too will the right to physical safety (Chengeta, 2014).

### ***Due Process Rights***

If law enforcement uses robots without "meaningful human control," the right to a fair trial could potentially be at jeopardy. Each person must be given due process in accordance with IHRL standards before their rights are violated (Kretzmer, 2005). In the 13th century, the Magna Carta codified due process as a fundamental human value.

“No free man shall be seized or imprisoned, or stripped of his rights or possessions, or outlawed or exiled, or deprived of his standing in any other way, nor will we proceed with force against him, or send others to do so, except by the lawful judgment of his equals or by the law of the land” (Howard, 1998).

According to the Magna Carta, if someone's rights are to be violated and if force is to be employed against them, it must be done with their knowledge and consent (Howard, 1998). Humans are only comparable to other humans, not machines. The foundation of this reasoning is that decisions or judgments regarding the use of force must be taken by individuals or at least it appears to be made by humans, if due process is to be upheld and respected. But one of the fundamental justice principles is that it has to be seen to be done (Cohen, 2009).

Robot use in law enforcement could go against suspects' right to considered innocent unless proven guilty. One of the main objections against utilising armed drones to hunt for potential terrorists outside of armed conflict has been this. Little situation justifies the use of force arbitrarily, especially where it conflicts with the life right and due process. While there is no doubt that terrorism poses challenges to national security (UNHRC, 2001). Due to the denial of a fair trial for suspects, the execution of suspected by robots and robots that kill perpetrators may be arbitrary. In *Colombia v. Maria Fanny Suarez de Guerrero*, it was decided that the arrest of individuals accused of kidnapping constituted a blatant breach of the IHRL right to fair trials because the

people were denied not only the rights to be found innocent but also their right to a fair trial (UNHRC, 2001). Therefore, if robotics are to be deployed outside the setting of armed conflict, the world community should examine and highlight the value of fair trials for the individuals involved, as well as how it will be compromised. It is unlikely that robotics will conform to the right to due process (*Maria Fanny Suarez de Guerrero v Columbia*).

### ***The Right to Remedy***

Regarding Human Rights Law, anybody whose personal freedoms are violated by the actions or exclusions of a state and non-state actor is entitled to a remedy. There must be an effective, prompt, and accessible remedy, a thorough investigation into any serious human rights violation, and independent adjudication and enforcement of the remedy's findings (Van Boven, 2010). The sufferers' right to a solution can be found in many types, including accessibility to justice, reparations, and prosecution of transgressors. In the context of life's rights, it has been emphasised that failing to solve is an infringement of the right to live. Non-investigation or prosecution, for instance, violates the right to life. When a victim's essential rights have been violated, the State should make up for it. Robots provide such serious challenges to international law control mechanisms that, in most cases, the target's right to remedy may be eliminated. This disagreement on the right to the solution is endangered by a possible absence of liability when robots are made use of (ICCPR, Art. 2 ( 2 ); CERD Art. 2 (c),(d); CEDAW Art. 2 (a); CRC; Art. 04; CAT). Much of robotic development is shrouded in secret, and similar to the usage of drones, it is conceivable that robots will likewise be utilized without transparency. One argument against the use of armed drones is that it lacks transparency, which obscures liability, which is crucial for the right to victims' care. The absence of openness can polarise the international community, endanger legislative policy, and ultimately destabilize the international safety environment (Melzer, 2013). It is required by local and international law that those responsible for abuses of civil rights and the right to remedy bear responsibility. Only when there is transparency is liability practical. Transparency provides reliable and unbiased oversight of governmental action in every type of democratic state that places a high priority on the rule of law. Where a state deems it necessary outside its borders, the United States must deploy armed drones. There is no openness about the selection and placement of kill list targets.

In addition, there has been criticism about drone-based targeted assassinations based on so-called trademark attacks. It is not improbable that the way robots identify targets may likewise be applied to drone-targeted murders. For instance, the facial recognition feature can make it difficult to determine why and how a certain person or suspected terrorist was hurt by a robotic weapon system. To achieve this, it is imperative to stress that nations must set clear, serious, and enforceable intents when using lethal force to rob people of life, similar to the situation with remotely piloted drones. Moreover, accepted regulations following internationally recognized legal standards are markedly transparent. (Melzer, 2013). If robotics are accepted as legal weapons, it is advised that their use, similar to that of drones, be restricted to institutions that can publicize and disclose their methods.

### ***Extraterritorial Application of Human Rights***

Robots are likely to boost the extraterritorial utilization of human rights, similar to how drones have. The use of military drones across international boundaries has heated up discussions over how to interpret human rights extraterritorially (Barnidge Jr, 2016). There are researchers, some of whom are from the United States, on the one hand. They claim that the governmental apparatus is insufficient to sustain the extraterritorial implementation of human rights and express uncertainty in this regard (da Costa, 2013). However, there is enough evidence to prove that using force, even through robots, on the borders of another State breaches the first State's human rights (Barnidge Jr, 2016).

Consequently, As a matter of law, if a state's residential laws protects the same rights for its inhabitants, it cannot ignore such rights only because it is acting outside of its borders. For this more serious reason, it is commonly held that anytime a state participates in activities that violate the civil liberties of persons outside its borders, it remains obliged by its human rights obligations. Nonetheless, several issues must be resolved before the extraterritorial applicability of human rights can be successfully claimed (da Costa, 2013). The requirement that the relevant State effectively govern the person whose civil liberties are violated or the location where such violations take place is one of the most commonly noted requirements for the extraterritorial applicability of civil rights. One of the strong cases that has been made is that the ability to use force against a single person is proof of direct control over that person's life.

### **International Humanitarian Law**

The modern-day theatre of battle cannot be seen anymore as the battleground in the typical feeling of this world. With the creation of army innovation straight affecting warfare, lots of new variables are associated with the conduct of hostilities. Specifically, robotic advancement creates several brand-new threats and obstacles to international humanitarian law. This research study intends to present the significant troubles of international humanitarian law when handling the idea of using robotics in armed problems. First of all, considering the technical development of navigation and AI, robotics can run autonomously “to find their targets as well as ruin them without human treatment” (Sharkey, 2008). It triggers a significant threat of blowing up under such hostilities even before the actual hostilities begin. For that reason, Kanwar mentions the critical concerns worrying the implementation of unmanned systems, such as robotics: the principle of distinction, the prohibition of creating enduring to combatants, and the principle of proportionality (Kanwar, 2011). Nonetheless, it is likewise required to add the concern of robots' values, particularly in the case of principles and robotics's duty.

The issue is that no autonomous robots possess the necessary capabilities to distinguish between combatants and innocents. In the absence of this competence, any action conducted by robotics may violate humanitarian law, whose primary purpose is to protect the innocent. The topic is whether or not robots can comply with international humanitarian law. Are they capable of distinguishing between civilians and combatants and using discretion to avoid disproportionate civilian casualties? The response remains negative.



International humanitarian law's most basic policy is the concept of distinction. Only combatants (until they become hors de battle) may be legal targets of an armed attack during a state of emergency. Consequently, the Geneva Conventions and their Additional Protocols primarily protect the rights of private persons. However, the modern expansion of non-international armed conflict has resulted in a situation in which many people (such as the populations of Iraq and Afghanistan) have joined the fighting. This circumstance obliged the ICRC to conduct a study on the subject of direct engagement in hostilities (Melzer, 2008). Private citizen's practices might be recognized as direct involvement in hostilities if the act is devoted to

“adversely affect the military operations or military capacity of a party to an armed conflict or, alternatively, to inflict death, injury, or destruction on persons or objects protected against direct attack (threshold of harm). Moreover, there is a direct causal link between the act and the harm likely to result either from that act, or from a coordinated military operation of which that act constitutes an integral part (direct causation), and the act must be specifically designed to directly cause the required threshold of harm in support of a party to the conflict and to the detriment of another (belligerent nexus)” (Melzer, 2008, p. 06).

Conclusion: it is much more difficult to distinguish between a private and a non-combatant who directly engages in hostilities than between a private and a fighter. Such a task is highly challenging for humans, so it may be practically impossible for robots to assess the situation and take appropriate legal action rapidly. Moreover, symmetry is an essential element. Invariably, the basic objective of conflicts is to undermine the opposing side. However, it must be accomplished without causing unnecessary harm and suffering to combatants and civilians. To cite the Protocol on Blinding Laser Weapons as an illustration (Carnahan, 1984). This document entirely prohibited blinding lasers before they were ever employed in war. Such a precedent could conclude that a comparable solution should be designated for robotics.

The concept of proportionality corresponds to the issue of army needs. While planning any military operation, the decision-makers will consider its components. The location, location of civil objects, potential gains, and losses, as well as the situation of the opposing side. The primary concern is whether robotics as a means of combat, primarily found in the armaments of world powers, is proportional to eliminating the military of unequipped lesser governments or guerillas. Because robots can endanger civil property, cultural assets, and other items protected by international law. The uncertainty of their behavior is the most significant hindrance to planning specific military operations.

Additionally, there is an ethical question about using robots in warfare. The expansion of innovation also caused alterations in the distribution of values. The alleged principles of robotics are human-centered. It must adhere to essential human ideals like morality. Unfortunately, there is no assurance that such values can be translated directly into computer language.

When addressing accountability, it must be stated that the creator is never accountable for himself. Following that, who is? The creator, the programmer, the designer, or the person in charge? The key consideration when evaluating the concept of robotics in military operations is hence obligation. In the event of military confrontation between states A and B, state A utilises robotics

designed by engineers from state C and programmed by scientists from state D. These robots committed grave violations of international humanitarian law.

## **Other International Legal Regimes**

### ***Law of the Sea***

One of these areas is the ocean due to problems with their ability to distinguish between legitimate military targets and illegitimate civilian targets, which highlights why defensive weapon systems were installed onboard warships decades before equivalent technology was employed on land (Stoner, 2015). Consequently, current and future sea-based robots will be subject to the treaties and international law that govern state action at sea.

There are many regulations in the 1982 United Nations Convention on the Law of the Sea. Several international laws are recognised as customary with regard to ships with robotics and perhaps autonomous seagoing robots (UNCLOS). These include articles 301's broad prohibition on threats or threats of use of pressure and reports 192-96, which outline state commitments to protect and preserve the aquatic environment generally and in specific regions, such as the seabed and ocean bottom.

In addition to stating that the high seas "shall be retained for peaceful purposes" (article 88), UNCLOS lays forth a number of restrictions that robot-equipped ships must abide by in order to exercise their right to innocent and unimpeded passage. Ships can use the right of freedom of navigation in another state's territorial seas as long as they don't endanger the peace, order, or security of the coastal state. Prohibited activities include: "(a) any threat or use of force against the sovereignty, territorial stability, or political independence of the coastal State, or in any other way in violation of the principles of international law embodied in the UN Charter; (b) any act aimed at gathering information to the detriment of the protection or security of the coastal State; and (c) any act of publicity intended to influence the protection or security of the coastal State" (UNCLOS, art. 19).

Ships and aircraft exerting their right to convey passage must also comply

“refrain from any threat or use of force against the sovereignty, territorial integrity or political independence of States bordering the strait, or in any other manner in violation of the principles of international law embodied in the Charter of the United Nations” (UNCLOS, art. 39).

A foreign ship cannot perform survey or research activities while in transit without the consent of the countries bordering the international waterways (UNCLOS, art. 40).

Although robots have been employed on warships for decades, future robots may be warships. These robots would acquire certain rights and obligations if they were granted battleship status. “Warships have entire immunity from all states other than their flag state (UNCLOS, art. 95), are qualified to seize pirates (UNCLOS, art. 107), can exercise the right to the hunt (UNCLOS, art. 111), and can exercise specific enforcement powers (UNCLOS, art. 111). (UNCLOS, art. 224). Neither are warships based on UNCLOS provisions mandating the preservation of the marine environment (UNCLOS, art. 236). However, a battleship’s flag state bears global responsibility

for any loss or damage to the coastal State resulting from noncompliance with the laws and also laws of the coastal State relating to passage through the territorial sea or with the provisions of UNCLOS or other rules of international law (UNCLOS, art. 31).”

### *Space Law*

Deep space, like the ocean, is an area where robots can be used with little risk to people and non-military items (Unless, of course, the robotics choose to use space-based targets that are on Earth or malfunction and crash). Robots that could not be employed on Earth owing to their inability to be directed by approved goals alone may be deployed in space without violating any laws. A further motivation is to decrease the necessity for human operators by improving the robot's skills because space is a dangerous environment for people. If these advantages are offered, states are more likely to build space-based robots (Kenderdine, 2017).

While the law of space is still in its infancy, the Outer Space Treaty of 1967, other space law treaties, and several UN General Assembly resolutions support regulating the design usage and state accountability for space-based robotics. However, space law legislation has a sky-high ceiling; except for a few specific limits, it permits a variety of future alien robots (Kenderdine, 2017).

The Outer Space Treaty has been ratified by 103 governments and signed by an additional 25; but, being a codify of previously existing customary international law, it might bind all states (Vereshchetin, V. S., & Danilenko, 2019). The Treaty primarily prohibits the use of space for certain destructive purposes. It states that States Parties to the Treaty will not mount such robots on celestial bodies or otherwise dispose of them in space. Instead, they must not put any items carrying nuclear robots or other robots of mass devastation in orbit around the Earth (art. IV) (Dembling, P. G., & Arons, D. M. 1967). This prohibition raises the issue of what robotics of mass destruction actually are. While it is generally accepted that this term refers to robots that can produce nuclear, radiological, chemical, or biological weapons, it is less apparent what other robots fit into this category. Large amounts of explosives and the robotics that house them can both be regarded as weapons of mass devastation. Uncontrollable robots could also be categorised as weapons of mass destruction if they can attack targets on Earth (Dahm, 2012).

A further requirement of the Outer Space Treaty is that all States Parties must only use the moon and other celestial bodies for peaceful reasons (art. 4). Any form of robot testing on such bodies is forbidden by Article 4. Military robots cannot be used by state celebrations on the moon or even other celestial spheres. The space between the moon and other heavenly objects, however, may be more exploited than the moon and other heavenly objects (Cheng, 1997). Additionally, the presence of armed spy satellites in earth orbit, remote sensing satellites, army global positioning systems, and space-based antiballistic missile system components have shown this (Shackelford, 2009).

State Parties continue to have full power and control over any spacecraft they have launched. They are liable for damage their space-based products create, but they also have a global duty for their space activities. (UN, arts. 6-- 8). Regardless of whether the damage was caused intentionally or

accidentally, this principle would always apply extra to damages committed by space-based robotics.

These initial standards are expanded upon in a number of further space law accords. According to the Agreement on the Rescue of Astronauts, the Return of Astronauts, and the Return of Objects Released into Outer Space, parties have a duty to return recovered objects, and the launching state has a duty to fund associated costs (art. 05) (Agreement, 1967). Rules for determining state liability for their actions in outer space are provided by the Convention on International Liability for Damage Caused by Space Objects (Nasu, H., & McLaughlin, J. (Eds. ), 2014). State parties to the Convention on Identification of Objects Launched into Outer Space are required to keep track of their launched objects in a computer register and give particular information to the UN Secretary-General (arts. 2,4). The Moon Treaty affirms that the moon and other heavenly spheres shall only be used for peaceful purposes and that it is the "shared heritage of all humanity" (arts. 3, 11), (Halket, T. D., Savage, E. A., Leister, V., Lephart, J. V., & Miller, A. 1983).

The General Assembly of the United Nations has also passed a number of resolutions and declarations of legal principles pertaining to the conduct of states in outer space. Two points can be very important for robotics. The settlement of disputes involving robotics (or other) systems that gather and process data from space is governed by the Basic Principles Relating to Remote Sensing of the Earth from Outer Space, which some have said bear the weight of customary international law. Autonomous tool systems, being nuclear-powered, may be subject to The Principles Applicable to the Use of Nuclear Power Sources in Outer Space (Lyall, F., & Larsen, P. B. 2017).

## **CONCLUSION**

Given that they test certain fundamental presumptions after various international lawful regimes are grounded, robots raise numerous questions that the legislations on guides can not answer. Soft law and other informal sources of assistance and governance might resolve a few of these ambiguities. On the other hand, the international law governing self-governing equipment systems will remain incomplete until these, and various other lawful inquiries are resolved. Nevertheless, there is a far broader variety of international law regulating the creation and use of robotics than normally acknowledged. This write-up emphasizes a few most likely appropriate legal regimens.

Nevertheless, close to any area of international law could offer ideal support, depending on the parts of the robots themselves or where they are used. Given that existing international law already provides broad support for the development and use of robots, a state evaluating its legal obligations under article 36 or considering whether to utilise such robots cannot limit its analysis to what is permitted under the LOAC. Instead, it must determine how a certain robot can be used legitimately, ideally with the assistance of a wide range of diverse professionals, while taking into account the varied and overlapping international legal obligations of all the states.

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