تسليح الفضاء الخارجي من منظور القانون الدولي

Weaponization of outer space from the perspective of international law

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Abstract :

As a result of the tremendous technological progress, outer space has become the new arena for the arms race between many countries, in addition to its militarization, especially after the increasing role of space systems in the field of military operations. Therefore, through this research, we will try to clarify the role of international legal rules related to space or those related to war, Regarding the weaponization of space, and the suitability of these rules and principles for the arms race between countries with space activities, especially the principle of peaceful use and exploitation of outer space, and the principle of not using or threatening force against other countries, as well as the extent of the need for the international community to establish an international document that Keep up with technological development in the field of space weaponization.

Keywords: outer space; Space weaponization; space law; Law of war.

الملخص :

نتيجة للتقدم التكنولوجي الهائل , اصبح الفضاء الخارجي الساحة الجديدة لسباق التسلح بين العديد من الدول , فضلاً عن عسكرته , خاصة بعد تزايد دور الانظمة الفضائية في مجال العمليات الحربية , لذا سنحاول من خلال هذا البحث بيان دور القواعد القانونية الدولية المختصة بالفضاء او تلك المرتبطة بالحرب , فيما يتعلق بتسليح الفضاء , ومدى ملائمة هذه القواعد والمبادئ, للسباق التسلح بين الدول ذات الانشطة الفضائية , وبالأخص مبدأ سلمية استخدام واستغلال الفضاء

الخارجي , ومبدأ عدم استخدام او التهديد بالقوة ضد الدول الاخرى, فضلاً عن بيان مدى حاجة المجتمع الدولي الى سن وثيقة دولية تواكب هذا التطور التكنولوجي في مجال تسليح الفضاء.

الكلمات المفتاحية : الفضاء الخارجي ؛ تسليح الفضاء ؛ قانون الفضاء؛ قانون الحرب.

Introduction

المقدمة

The use of outer space for military purposes or the weaponization of outer space has become an important topic in international law, as many countries and commercial companies participate in space. Therefore, there must be a law that regulates outer space activities. For this reason, space law has witnessed continuous development keeping pace with modern developments in technology and the efforts of states in outer space, Through the formulation of principles of a legal nature and their embodiment in international treaties that seek to ensure that the use of outer space benefits all of humanity. One of the first of these treaties is the Outer Space Treaty of 1967, as well as other legal rules of international law that seek to curb states' efforts to weaponize outer space and use this space for non-peaceful purposes. Especially after the Soviet Union and the United States sent spacecraft and satellites into space since the 1950s, and thus space became part of the arms race between the major countries, and in the 1960s it began testing anti-satellite ballistic weapons until it reached the present time testing hyperbolic weapons. And laser-guided weapons against satellites. Although there are international legal rules that require the use of outer space to be for peaceful purposes, the problem began with how to define peaceful uses, especially since many spacecraft have dual uses (civilian and military), and we will endeavor through this research. To clarify the role of the international community and the extent of its response to the dangers of weaponizing space, and to explain the international legal rules that are applied in this field in light of the absence of an effective and real legal

treaty that keeps pace with the modern development of the activities of states in outer space.

Therefore, we divided this research into two topics. In the first topic, we explain the concept of space law and its sources in the first requirement, and defining the weaponization of space and distinguishing it from the militarization of space in the second requirement. As for the second topic, we discussed the provisions on the weaponization of space within international treaties related to space and the role of the United Nations within the first requirement. As for the second requirement, we discussed the provisions on the weaponization of outer space in international humanitarian law.

The first topic

Conceptual framework for the weaponization of outer space

المبحث الأول

الإطار المفاهيمي لتسليح الفضاء الخارجي

In this study, we will address the definition of space law and its sources in the first requirement, and the concept of weaponizing outer space and its distinction from the militarization of space in the second requirement.

The first requirement

The concept of space law and its sources

المطلب الاول

التعريف بقانون الفضاء ومصادره

Before discussing the concept of outer space law, it is necessary to clarify the concept of outer space. In fact, there is no precise definition of outer space in international law, and this is due to several reasons, the most important of which is the issue of distinguishing between outer space and airspace subject to state sovereignty, and this definition is not merely It is

a theoretical issue, but it entails a very important issue, as both areas (outer space and airspace subject to the sovereignty of the territorial state) have their own legal system that applies to the activities that take place in them. Outer space, in general, consists of countless galaxies and stars, and it is the place above the Earth's atmosphere. The reasons for not specifying its scope until now are due to political and economic reasons. This field is considered newly established. However, jurisprudence defined it as ((the field above... Aerospace for countries and regions outside the borders of national jurisdiction)), and it is also known as: "the body of activities subject to the system of space law that began to emerge in the sixties of the last century and is mainly related to the launch and rotation of satellites and the exploration and exploitation of the moon and other celestial bodies."[1]

After the Outer Space Treaty was concluded in 1967, this treaty defined space in its first article as ((everything above the Earth's airspace, including the moon and other celestial bodies))[2], which provided more precise details regarding space orbits used for military and non-military purposes. , by defining it as follows:

- Low Earth orbit, which extends from 250-2000 km, is used to deploy remote sensing satellites, military reconnaissance satellites, and weather monitoring.
- The medium Earth orbit, which extends from 10-12 thousand km and is used to deploy navigation satellites and early warning satellites.
- The geostationary orbit, which extends 36,000 km, and is used to deploy communications satellites at the strategic level and monitor the Earth.

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[1] Aadour Khaled, International Espionage in the Legal System of Air and Outer Space, unpublished master's thesis, (Faculty of Law, Mentouri Constantine University 01) 2019-2020, p. 84.

[2] Article 1 of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and other Celestial Bodies, done at London, Moscow and Washington January 27, 1967.

- The high orbit, which ranges in altitude from 1 to 40 thousand km, is the range within which ballistic missiles are launched.(1)

As for space law, it refers to a new branch of international law related to atmospheric activities, and its presence has become necessary in the present and will be more necessary in the future due to the development and growth of space activities. This branch is newly established and in the process of formation, so there are no strict rules that govern and regulate this field of International law, as its rules are still under experimentation,(2) and the phrase space law refers to the structuring and organization of space and its use, as other phrases have appeared for use in this field, including “the law of movement to the planets, and the cosmic law,” but the most commonly used phrase is the law of space, as The use of the phrase “transition between planets” and “cosmic law” seems illogical because humanity is still in its first steps in exploring and organizing the affairs of outer space near the Earth. How can it move forward in areas much farther from planet Earth? The first signs of space law began to appear in the late 1950s. After the former Soviet Union launched the Sputnik satellite in 1957, as for the Space law is defined as a body of rules that govern the legal relations resulting from the exploitation, exploration and use of outer space, including the moon and other celestial bodies, for peaceful purposes and for the benefit of the human race as a whole, It was also defined as the body of legal rules that regulate the exploration and use of outer space and celestial bodies, or the body of legal rules that apply to human activities that take place in

(1) Imad Jassim Muhammad, American militarization of space and the future of the international balance of power, **Journal of International Studies**, No. 82, (2020), p. p. 449-477.

(2) Montazer Falah Marai, The Principle of the Peaceful Use of Outer Space**, Al-Muhaqqiq Al-Hilli Journal of Legal and Political Sciences**, First Issue, Fourteenth Year, 2022, pp. 278-325.

outer space,[1] as the jurist Markov defined it as ((the body of legal rules that regulate international relations related to space exploration)) As for the jurist Ivkov, he defined it as ((It is a set of international rules that regulate relations between states and international organizations, and which defines the legal system of outer space and celestial bodies in accordance with the general principles of public international law, with the necessity of harmony and adaptation to the technological progress defined by the techniques of manufacturing spacecraft and satellites)).[2]

Based on what was stated above, we can say that space law is a body of rules and regulations that regulate space activity and exploration of outer space. It includes international agreements that regulate the use and exploration of outer space, defining the responsibilities of countries and competent organizations participating in this field, ensuring the safety of space activities, and Preserving the space environment.

International space law is one of the branches of international law, and therefore its sources are the same as those of international law. In addition, the legal rules that govern it are the same as those that regulate international law in general. The most important of these sources are:

- **Convention sources (treaties):** Treaties have an important role in formulating space law, as they are its first sources, in terms of regulating space activities or general behavior between countries with regard to outer space, although some of these agreements were not intended when they were concluded to regulate outer space activities. However, it contains rules and principles that regulate this branch of international law, for example the conventions on the prevention of wars, and the Hague Conventions on the settlement of international disputes by peaceful

[1] Aadour Khaled, International Espionage in the Legal System of Air and Outer Space ,Op. cit, p. 107.

[2] Shikerin Dilmi, ((The Legal System of Outer Space)), Al Mieyar journal, Volume 13, Issue 2, (2022), p. p. 299-308.

means. The codification of treaties on the regulation of space activities came in the form of collective or bilateral treaties, The Treaty Banning Nuclear Tests in the Atmosphere, Space, and Underwater[1] was one of the first collective treaties in this field , After that, the most important treaty related to outer space was concluded, which is the Outer Space Treaty of 1967, It is considered the general law for everything related to space law, and from it emerged many treaties that came to explain its content or remove ambiguity from it. This treaty also came to explain and clarify the principles contained in the General Assembly Resolution No. 1962, regulating outer space affairs.[2]

In addition, there is no consistent pattern when developing legal instruments regulating outer space activities, and the reason for this is that the five treaties related to space law were adopted within only 12 years, and there is currently no draft text for a treaty on the agenda of the United Nations Committee on the Peaceful Uses of Outer Space ,Keeping up with modern technological developments, It should be noted that none of these treaties on outer space activities have been amended to keep pace with these modern developments, although the procedural rules for amending treaties were contained therein. The main reason is the lack of consensus in the Committee on the Peaceful Uses of Outer Space for the establishment of new binding rules. Therefore, the period from 1967 until 1979 was characterized by the fact that countries were able to reach a set of understandings or agreements regarding restrictions imposed on

[1] The Partial Nuclear Test Ban Treaty was signed on August 5, 1963, and was signed by the United States, the Soviet Union, and Britain in Moscow. It was attended by the Secretary-General of the United Nations. The treaty included five articles prohibiting the conduct of nuclear tests or explosions anywhere, whether on land, sea, or Even in outer space.

[2] Khaled Adour, The General Framework of International Outer Space Law, **Journal of Law and Human Sciences**, Volume 14, Issue 3 (2021), p. p. 42-61.

space activities in order to enhance their national security and maintain peace. The five space treaties,[1] still represent the core of international space law, and the Outer Space Treaty is one of the most important and most comprehensive of these treaties, and the obligations under the five space treaties are obligations with absolute authority towards all states. In the event of a breach of these obligations, any state party may submit international claims without having to prove damages, and Since 1979, no new international agreement has been concluded on the use of outer space, and the Moon Conference, which had very few ratifications, failed as a result of the lack of consensus among countries on issues of space activities due to modern technological innovations that opened new horizons for the use and exploitation of outer space, which was not taken into account when drafting the five main treaties.[2]

- **International custom:** Despite the role that custom plays in international law, the matter is different in the field of international space law. Treaties are earlier than custom in this field, because the practice of space activities did not exist before space exploration, Therefore, most of the custom in the field of space arose through the frequent stipulation of a ruling in treaties with the belief in its binding. Therefore, in the field of international space law, custom consists of two elements. The first element requires international behavior, which is represented by the

[1] ((1- Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies.
2- Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space.
3- Convention on International Liability for Damage Caused by Space Objects.
4-Convention on Registration of Objects Launched into Outer Space.
5- Agreement Governing the Activities of States on the Moon and Other Celestial Bodies.))

[2] Walid Hassan Fahmy, The Use of Outer Space for Non-Peaceful Purposes in accordance with the Rules of International Space Law, **Journal of Jurisprudential and Legal Research**, No. 38 (2022), pp. 1667-1766.

adoption of behavior on a specific approach in the field of outer space, and the second element. It is the belief that the customary rule is obligatory, By the first element of international custom, we mean the frequency of carrying out a certain practice in the field of space several times. These practices must be issued by countries or international organizations, and this practice is required to be continuous for a period. A specific period is not required to pass, but rather each case is considered separately, and the period is not required to be long,[1] and the International Court of Justice stated that ((Although the passage of only a short period of time is not necessarily, or of itself, a bar to the formation of a new rule of customa[2]ry international law on the basis of what bras originally a purely conventional rule, an indispensable requirement would be that within the period in question, short though it might be, State practice, including that of States whose interests are specially affected, should have been bot11 extensive and virtually uniform in the sense of the provision invoked;– and should moreover have occurred in such a way as to show a general recognition that a rule of law or legal obligation is involved)) .[3]

For example, in the years before and during World War I, custom developed rapidly with regard to state sovereignty over the layers of the atmosphere above it. Likewise, customary rules related to space and the continental shelf emerged from rapid practice. It is also required that the application of the custom be general among countries, and there is no specific number or percentage of countries. The focus is on the quality of

[1] Abdullah Yousef Ahmed Rashid, The Scope of the UAE's Obligations in International Space Law, **University of Sharjah Journal of Legal Sciences**, Volume 19, Issue 3 (2022), p. p. 56-86.

[3] North Sea Continental Shelf (Federal Republic of Germany/Netherlands) , Judgments , I.C.J , reports, par 74.

the participating countries, meaning the connection of these countries to space activities, not their number. Therefore, the major countries play a fundamental role in forming the custom because their space activities are many, and also Generality cannot be achieved, if the practice is opposed by a large number of countries.(1)

Judge Manfred Lachs mentioned that the machines sent by man into space by some countries and flew in outer space above other countries, and the countries launching these machines did not ask for permission, and the other countries did not protest. That is why the custom of free expansion into outer space arose and this custom was recognized as law. Within a very short period of time.(2)

Jurist Bin Cheng said that the United Nations General Assembly's resolution on the Declaration of Legal Principles, (3) which preceded the Outer Space Treaty, could immediately constitute an international custom. In addition, many of the principles contained in the outer space treaties could establish an international custom and thus be binding on all… States parties and non-parties alike,(4) and this was also confirmed by the resolution of the United Nations General Assembly in 1961.(5)

In addition, if national laws establish internationally acceptable and applicable rules in the international field of space activities, they can turn into customary rules.(6)

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(1) Abdullah Youssef Ahmed Rashid, Op. cit,,, p. 70.

(2) Jakhu, Ram S. and Freeland, Steven and Chen, David Kuan-Wei, The Sources of International Space Law: Revisited (March 17, 2021). Available at SSRN: https://ssrn.com/abstract=3806175 or http://dx.doi.org/10.2139/ssrn.3806175

(3) Declaration of Legal Principles Concerning the Activities of States in the Exploration and Use of Outer Space, GA Res 1962 (XVIII), UNGAOR, 18th Sess, UN Doc A/RES/18/1962 (1963) [Declaration of Legal Principles.

(4) Jakhu, Ram S. and Freeland, Steven and Chen, David Kuan-Wei,Op. cit, p 621.

(5) United Nations General Assembly Resolution of December 1961 A/RES/1721(XVI)A-E

(6) Al-Achaoui Ghazal, The Legal System for the Use of Outer Space, **Algerian Journal of Legal, Political and Economic Sciences**, Volume 57, Issue 4 (2020), p. p. 158-171.

- **General principles of law:** General principles of law are understood as the principles recognized by the legal systems in various nations because of their general character, and in general they are known as the basic principles that are recognized by the internal legal systems of member states of the international community, These principles can be arrived at through general extrapolation of the laws of states, including national space laws. The judiciary applies these principles in the absence of a legal rule or custom. General principles of law are stable principles rooted in the law and accepted by different nations there is nothing preventing their application to space if they are consistent with its nature, and these principles must be applicable in the field of space activities. Indeed, a number of these principles have been applied to this new branch of law (international space law) if they are consistent with the nature of space. and its activities such as the principle of sovereign equality between states, The peaceful resolution of disputes, international responsibility, the prohibition of the use of force in international relations, and the principles of justice and equity,[1] Which, even if it is not a source of law, it has a fundamental role in making a decision or ruling for the purpose of applying and interpreting texts in a manner that is more in line with the spirit of the law,[2] The principle of res judicata, and one of the basic principles of international space law, is that the exploration and use of outer space must be for the benefit of all humanity. Therefore, the activities of space states must be in accordance with the principle of good faith.[3]

[1] In accordance with Article 38/2 of the Statute of the International Court of Justice, cases may be decided in accordance with the principles of justice and equity, provided that the disputing states agree to this in advance.
[2] Abdullah Yusuf Ahmed, Op. cit, p. 77.
[3] Walid Hassan Fahmy, Op. cit, p. 1682.

These principles may also turn into customary rules if they are used repeatedly for a period of time with the belief that they are binding, or they may turn into convention rules.[1]

- **United Nations Resolutions:** The United Nations has succeeded in implementing Article 13 of its Charter, which is concerned with developing international cooperation and encouraging the steady progress of international law and its codification by adopting a set of international space principles and treaties, determining the legal status of space objects, And assisting astronauts, especially after the international community's increasing fears of using this international field for military purposes as a result of the technological and technical development that humanity has witnessed. Therefore, the United Nations, through the General Assembly or the Economic and Social Council, tried to regulate the use and exploration of outer space, and limit its use to peaceful purposes only, as it issued the first A resolution in this regard, Resolution No. 1148 dated October 14, 1957, to maintain international peace and security and prevent the transfer of the Cold War to this new international sphere,[2] In 1959, a report was drawn up by the General Assembly, which included a set of legal problems that may be raised by the exploitation and exploration of outer space, namely liability for damage that may be caused by spacecraft, the distribution of sound and electrical waves, and the dangers that may result from the conflict of the activity of space devices with Aircraft, registration and identification of spacecraft, coordination between launch operations and the return of spacecraft, and

[1] Following the ruling of the Permanent Court of International Justice in the Chorzo Factory Case (1927), the general principle that a party is entitled to compensation (reparation) for breach of a legal obligation became universally accepted as a principle of customary international law.

[2] Manal Bourkoro, The International Legal System of Outer Space, **Journal of Human Sciences**, Faculty of Law, University of Constantine, Volume 29, Issue 2 (2018), pp. 385-398.

the report was presented to the General Assembly at its fourteenth session. However, a group of countries refused to participate in the work of the Committee despite the important issues it included, which affected international cooperation in outer space. In general, and on the development of legal rules regulating space activities in particular.[1]

Two committees were also formed, namely, **the Committee for the Peaceful Uses of Outer Space (CUPEEA)**, as it was established by the United Nations General Assembly at its 13th session on December 13, 1958, pursuant to Resolution No. 1348, which consists of two subcommittees, namely the Technical Committee, which specializes in studying technical and scientific possibilities. For the use of outer space, it consists of representatives of UNESCO, the International Meteorological Organization, the International Telecommunication Union, and the Civil Aviation Organization. As for the Legal Committee, it is responsible for studying legal issues such as the freedom to use outer space, the central registration of spacecraft, the prevention of pollution of space and celestial bodies, and ensuring the application of relevant international agreements in addition to collision issues. between space objects and liability for damage caused by the latter. **And the Permanent Committee on the Peaceful Uses of Outer Space (COPUOS.),** This committee was formed in accordance with United Nations General Assembly Resolution No. 1472 of December 12, 1959. The latter also includes two subcommittees, namely the Scientific Subcommittee and the Legal Subcommittee. The latter made several proposals regarding several topics, such as providing assistance when accidents occur between Spacecraft In outer space, the

[1] Ikram Mahfouz, Muhammad Al-Amin Aswad, The contribution of the United Nations General Assembly to establishing international rules to regulate activities in outer space, **Journal of Studies and Research, Arab Journal of Humanities and Social Sciences**, Volume 12, Issue 3, (2022), p. p. 93-102.

committee also addressed the issue of the boundary between airspace and outer space.[1]

The second requirement

The concept of weaponizing outer space and its distinction from the militarization of space

المطلب الثاني

مفهوم تسليح الفضاء الخارجي وتميزه عن عسكرة الفضاء

Space-related technology was found on a large military scale for the first time by Nazi Germany during World War II. The V2 missile, which was launched in 1942 and killed thousands of people in European countries, was considered the first successful missile launch that was able to leave the atmosphere despite its reliance on The primitive mechanisms were able, for a short period, to leave the Earth's atmosphere and then fall on their target, but they did not achieve their desired goal or the goal for which they were developed , After the end of hostilities in World War II, the United States of America and the former Soviet Union, through captured German scientists, were able to develop missiles now known as ballistic missiles, which are currently considered one of the most important tools for maintaining national security against attacks from other countries,[2] The development of missiles was not limited to conventional weapons or nuclear weapons, as technological progress, such as the launch of the Sputnik satellite, led to the realization of the idea that there was another way to use this technology,[3] Such as satellites to facilitate and increase military activities, monitor troop movements, collect

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[1] Manal Bourkoro, Op. cit, p. 389.

[2] Regina Hagen, Juergen Scheffran, International Space Law and Space Security – Expectations and Criteria for a Sustainable and Peaceful Use of Outer Space , **Eleven International Publishing**, Volume 2, (2005), p.p.273-310.

[3] Kubo Mačák , Applicability of the Jus in Bello to Military Space Operations, **International Law Studies 1,** vol 94 , (2018), p.p. 1-37.

intelligence information, and develop warning systems designed to detect the launch of nuclear missiles,[1] Therefore, modern and advanced uses of the outer shell have emerged, usually associated with military activity. For example, the United States of America has developed ground-based anti-missile defense systems aimed at protecting it from nuclear threats or taking other measures to nullify the advantages of satellites in orbit.[2] The Soviet Union also developed a weapon that approaches its target and then explodes in the vicinity of the target, The United States of America also developed weapons that rely on kinetic energy that travels at enormous speeds and can destroy space objects. In the Gulf War in 1991, satellite capabilities were used to manage military operations, as This technology has been used to direct military activity as well as direct precision missiles.[3] These types of weapons were also used by NATO during its campaign in the former Yugoslavia. In addition, China and India recently tested weapons aimed at Destroying satellites in space.[4] Same Although the legal rules for outer space stipulate the use of outer space for peaceful purposes and for the benefit of all humanity, at the same time space has always been a military environment, especially in recent years, as it seems that the weaponization of space has already begun, so that if things continue like this, it will become... Space is an arena for a new battle, as many countries possess anti-satellite weapons, and these

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[1] Columba Peoples , Assuming the Inevitable? Overcoming the Inevitability of Outer Space Weaponization and Conflict , **Contemporary Security Policy,** Volume 29,Issue 3,(2008), p.p. 502-520.

[2] Steven A. Mirmina, The Ballistic Missile Defense System and Its Effects on the Outer Space Environment, **Journal of Space Law,** vol 31,(2005), p.p287.291.

[3] Maogoto, Jackson Nyamuya and Freeland, Steven, The Final Frontier: The Laws of Armed Conflict and Space Warfare,. Available at
SSRN: https://ssrn.com/abstract=1079376

[4] William Broad & David Sanger, China Tests Anti-Satellite Weapon, Unnerving US, N.Y. TIMES (Jan. 18,(2007).

weapons are being tested on the large amount of space debris, that is, space waste orbiting around the Earth. In 2019, former President Trump launched the Space Force, and France and many other countries followed the same approach.(1)

As for the concept of weaponizing outer space, the concept of weaponizing outer space appeared for the first time in the early 1980s within the Strategic Defense Initiative (SDI), also known as the United States' Star Wars program. This initiative included placing a large number of satellites in orbit that would detect the launch of missiles of the enemy and then shoot them down, but it was not imagined that this defense would be an alternative to ground defense, but rather it is an important part of the multi-layered defense concept, which also includes sea interceptor missiles that are carried on board ships for the purpose of defending high-altitude areas on land. Like any other air defense system, the space system included sensors to detect and track enemy missiles from the moment they were launched and then shoot them down, in addition to destroying the command and control elements associated with them. Therefore, sensors and satellites were developed for surveillance using space laser weapons and interceptor missiles for tracking enemy missiles. Then it supports this device with land and sea weapons as a last resort if space weapons miss their targets.(2) Therefore, the weaponization of outer space means the permanent deployment in peacetime of space weapons that have destructive capabilities by directing strikes in outer space or on Earth.(3)

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(1) radboud repository of the radboud university Nijmegen, publisher's version, Available at : https://adoc.pub/pdf-hosted-at-the-radboud-repository-of-the-radboud-universi5093a4398aa0b6938fa3ffd4f1d2b47b93908.html

(2) PN Tripathi , Weaponisation and Militarisation of Space , **CLAWS Journal – Center For Land Warfare Studies (CLAWS),** vol none , (2013) , p.p.188.200

(3) Walid Hassan Fahmy, Op. cit, p. 1733.

As for the distinction between the weaponization of space and the militarization of space there are two interpretations in this regard. According to the first opinion, space weaponization refers to placing space mechanisms with destructive capabilities in orbit, taking into account that according to this view, ground systems designed for space attacks also constitute space weapons. Although they do not exist in outer space, weapons that travel through space in order to reach their targets, such as hypersonic missiles,(1) also contribute to the weaponization of space, and many elements of the missile defense system are also considered space weapons, as many of them possess Dual-use(2) properties allow it to destroy space objects, as is the case with ballistic missiles, While the militarization of space refers to the use of space to support land, sea and air military operations, which includes developing space assets while supporting ground infrastructure for military and intelligence uses such as early warning, communications, command and control, surveillance and remote sensing, which helps improve command, control, communications and surveillance operations in Battlefields. It should be noted that the concept of space weaponization, although difficult to define, because of the many things that can be used as weapons in space,(3) satellites can

(1) Muhammad Al-Arabi, Weaponizing the Sky, Geopolitics of Outer Space, **Special Studies Journal**, a series of studies issued non-periodically from Abu Dhabi, United Arab Emirates, Issue 18, December (2018), p. 16.

(2) Fortea Colomé, Helena; Soriano Gatica, Juan Pablo, dir. The militarization of outer space : an analysis of the current international dynamics at play. 2020. 38 pag. (Màster Universitari en Relacions Internacionals, Seguretat i Desenvolupament).

(3) Mutschler, Max M. "Front Matter." *Keeping Space Safe: Towards a Long-Term Strategy to Arms Control in Space*. **Peace Research Institute Frankfurt**, (2010).

also be considered as weapons in space, as 95% of satellites are used for both military and civilian purposes. (1)

Therefore, the weaponization of space is a sub-part of space militarization, and the difference between the two is very thin , as space systems used for civilian purposes, through satellites that support ground military operations, can be viewed as an integral part of ground weapons systems or the weapons themselves that are deployed in space so that The weaponization of space includes the deployment of a full range of weapons, including anti-ballistic missile defense systems and anti-satellite space systems, with the aim of protecting the state's orbital assets and the assets of friendly countries, while at the same time attacking the enemy's assets and preventing its access to space by destroying its satellites and depriving it of its advantages. Also, attacking ground targets using space weapons reduces the time available for the opponent to respond and increases his losses if attacking his strategic targets. Therefore, the state's possession of this type of weapon would make the enemy think twice before attacking any of its assets.(2)

According to the second opinion, it sees the possibility of distinguishing between both concepts (weaponization and militarization). Although these two terms are often used interchangeably, there is a distinction between them and this depends on the fact that there are not many weapons already spread in outer space, which negates the latter. The characteristic of armament, in contrast to the characteristic of militarization inherent in outer space, given the multiplicity of satellites that can be employed for military purposes that may result in the disruption or destruction of space assets of other countries, for example, the Global Positioning System

(1) Raghda Mahmoud Al-Bahi, The Militarization of Outer Space: An Analytical Vision, **Journal of the College of Politics and Economics**, No. 16, (2022), p. p. 446-480.

(2) PN Tripathi , Op. cit, p. 195.

(GPS), the US Army developed this system for navigational purposes and was used in Many military tasks, such as land, sea and air navigation, planning military missions, and directing precision munitions. Such uses of satellites can be said to be within the framework of militarizing space and not weaponizing it, because these systems are not considered weapons in themselves, but are used to strengthen ground military systems. Therefore, it can be said that the weaponization of space refers to the deployment of space weapons, or the militarization of space, which refers to the development of military technology in Earth's orbit, such as ballistic missiles and hypersonic aircraft, which are used for multiple purposes, whether civilian or military. Therefore, they cannot be considered space weapons, as space weapons are used to practice Force directly against the enemy or to hinder his ability to conduct military operations in space.[1]

As for the researcher's opinion, we agree with the opinion that says that the weaponization of space is part of its militarization, and the legal rules that apply to the militarization of space can be applied to the weaponization of space.

The second topic

provisions on the weaponization of space in international law

المبحث الثاني

احكام تسليح الفضاء في القانون الدولي

In this section, we will discuss the provisions on the weaponization of outer space in accordance with international treaties related to space in the first requirement. In the second requirement, we will discuss the weaponization of space and international humanitarian law.

[1] Raghda Mahmoud Al-Bahi, Op. cit, pp. 449 to 450.

The first requirement

Provisions on the weaponization of outer space within space treaties and the role of the United Nations

المطلب الاول

احكام تسليح الفضاء الخارجي ضمن معاهدات الفضاء ودور منظمة الامم المتحدة

After the United States of America and China conducted tests to launch anti-satellite missiles, the international community at the time denounced these experiments, but at the present time, after more than a decade has passed, countries have begun to practice these experiments somewhat freely.[1] (The Russian Federation) as well as India have done so. By conducting these experiments as well, in addition to that, the United States of America is working to establish an independent space station affiliated with it, and China as well, so the dilemma facing many countries working in space is, should they act independently in this regard? Or should they trust the international community and the competent international organizations to prevent the space arms race that is taking place at the present time.[2] In fact, the weaponization of space constitutes a major threat, especially from the environmental aspect of outer space. Anti-satellite weapons experiments have led to the creation of large amounts of space debris and the difficulty of conducting operations near Earth has increased. As the pace of weaponization of space accelerates, space may become dangerous and inaccessible to other countries.

Therefore, we will explain the role of international treaties and the weaponization of space:

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[1] Jim Wolf, U.S. shot raises tensions and worries over satellites, Reuters, February 22, 2008, last visit in 27/9/2023 : https://www.reuters.com/article/us-satellite-intercept-vulnerability-idUSN2144210520080222

[2] Laura Grego , There Are Much Better Options than a Space Force, **Union of Concerned Scientists,** Published Feb 19, 2019 last visit in 27/9/2023 : https://www.ucsusa.org/about/news/better-options

- **Partial Nuclear Test Ban Treaty:**

This treaty prohibited the conduct of experiments on nuclear weapon explosions and any other nuclear explosions in the atmosphere, , outer space, under water, or in environments outside the territorial borders of the state responsible for the explosion.[1] It seems at first glance that this treaty only prohibits nuclear weapons tests through its title, but according to Article 1, the scope of this matter has been expanded to any nuclear weapon or any other nuclear explosion, regardless of its peaceful or non-peaceful purposes. And unlike the Outer Space Treaty, this treaty It is not limited to weapons, but rather focuses on disarmament and eliminating the testing and manufacture of all types of weapons, including nuclear weapons.[2] However, this treaty does not prohibit the use of nuclear weapons in the event of war, whether on Earth or in space, especially if there is a direct threat to the state or in the case of self-defense, and this is what the International Court of Justice confirmed in its advisory opinion of 1996 regarding the legality of the threat with nuclear weapons or Use it.[3]

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[1] Article 1 of the Partial Nuclear Test Ban Treaty 1963 ((Each of the Parties to this Treaty undertakes to prohibit, to prevent, and not to carry out any nuclear weapon test explosion, or any other nuclear explosion, at any place under its jurisdiction or control: (a) in the atmosphere; beyond its limits, including outer space; or under water, including territorial waters or high seas; or (b) in any other environment if such explosion causes radioactive debris to be present outside the territorial limits of the State under whose jurisdiction or control such explosion is conducted. It is understood in this connection that the provisions of this subparagraph are without prejudice to the conclusion of a Treaty resulting in the permanent banning of all nuclear test explosions, including all such explosions underground, the conclusion of which, as the Parties have stated in the Preamble to this Treaty, they seek to achieve)) .

[2] Preamble of the Partial Nuclear Test Ban Treaty 1963.

[3] Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion of the International Court of Justice 1996, ((It follows from the above-mentioned requirements that the threat or use of nuclear weapons would generally be contrary to the rules of international law applicable in armed conflict,

- **Outer Space Treaty**

One of the most important principles governing activities in outer space is stipulated in Articles (1,2,3) of the Outer Space Treaty, as Article One stipulates that activities in outer space, including the moon and other celestial bodies, must be for the benefit of all states.[1] Outer space is part of the common heritage of humanity, and freedom of scientific exploration in outer space, as well as international cooperation in these explorations. Article Two stipulates that nations cannot claim sovereignty over any part of outer space, while Article Three of this treaty stipulates , States Parties are obligated to carry out their activities in space in accordance with international law and the United Nations Charter for the sake of global peace and security, as well as cooperation and understanding.[2]

And in accordance with Article 4 of this treaty, , no objects carrying any nuclear weapons or any other type of weapons of mass destruction must be placed in Earth's orbit or in any other celestial bodies or in outer space as well. The use of the moon and other celestial bodies must be exclusively for peaceful purposes[3], and the establishment of any Military bases must be prohibited. Military facilities or fortifications, as well as conducting weapons experiments or any military maneuvers. The use of military personnel for the purposes of scientific research is not

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and in particular the principles and rules of humanitarian law; However, in view of the current state of international law, and of the elements of fact at its disposal, the Court cannot conclude definitively whether the threat or use of nuclear weapons would be lawful or unlawful in an extreme circumstance of self-defence, in whichthe very survival of a State would be at stake))

[1] UNIDIR Outer Space and Global Security ,p72. last visit in 27/9/2023: https://unidir.org/publication/outer-space-and-global-security

[2] Articles (1,2,3) of the 1967 Outer Space Treaty.

[3] David C. DeFrieze , Defining and Regulating the Weaponization of Space , National Defense University Press The premier professional military and academic publishing house , Joint Force Quarterly 74 (3rd Quarterly, July 2014) last visit in 27/9/2023 . https://ndupress.ndu.edu/JFQ/Joint-Force-Quarterly-74/

prohibited.[1] , Here we make a note regarding Article Four above, as it does not prevent all weapons from reaching Earth's orbit, celestial bodies, or outer space, as the prohibition is limited to military uses of nuclear weapons.[2] Therefore, it is possible to send weapons that do not carry nuclear warheads, It also did not prevent military espionage and reconnaissance operations.[3] In addition, The article stipulates the orbits in which weapons may be placed without including all of outer space. Therefore, it is possible that this paragraph creates loopholes that allow the use of nuclear weapons or weapons of mass destruction within undeclared limits Without violating the treaty.[4] In addition, the position of countries differed regarding the term "peaceful use" mentioned in the treaty. Some countries interpreted it to include all military actions, while

[1] Article IV of the 1967 Outer Space Convention((States Parties to the Treaty undertake not to place in orbit around the Earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction, install such weapons on celestial bodies, or station such weapons in outer space in any other manner. The Moon and other celestial bodies shall be used by all States Parties to the Treaty exclusively for peaceful purposes. The establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military maneuvers on celestial bodies shall be forbidden. The use of military personnel for scientific research or for any other peaceful purposes shall not be prohibited. The use of any equipment or facility necessary for peaceful exploration of the Moon and other celestial bodies shall also not be prohibited)).

[2] Wulf von Kries, Legal Aspects of the Growing Military Uses of Outer Space, Eleven International Publishing , Space Law: Current Problems and Perspectives for Future Regulation., Edited by MARIETTA BENKÖ and KAI-UWE SCHROGL , First edition,2005, p 141.

[3] Menad Fatiha, The extent of the legitimacy of military reconnaissance and espionage from outer space using satellites - a legal study -, Journal of Algerian Public and Comparative Law, Volume 4, Issue 2, (2018), p. p. 154- 171.

[4] Paweł Bernat , The Inevitability of Militarization of Outer Space , **Scientific and Technical Journal** , vol 5 , (2019) , p.p. 49-54.

others interpreted it to mean that the prohibition includes only aggressive actions.[1]

- **The Moon Agreement (1979)[2]**

According to this treaty, the moon must be used for peaceful purposes only, and it is prohibited to place nuclear weapons or any other type of weapons of mass destruction in the orbit or path of the moon. It is also prohibited to establish military bases, facilities, and other military fortifications, as well as test weapons or any military maneuvers on the moon, but this agreement It permits the use of military personnel for scientific and peaceful purposes but prohibits the threat or use of force or any other hostile action on the Moon.[3]

The Moon Treaty attempted to expand on the topics and provisions of the Outer Space Treaty by restricting the power of states to seize outer space and celestial bodies. However, its goals were very high, and therefore it was not ratified by the states truly active in the field of outer space, despite the fact that this treaty is in force. At present it is only binding on its signatories so it is not considered part of space law.[4]

- **Weaponizing space and the United Nations.**

The United Nations Charter of 1945 introduced a new concept to the international community, which is the general prohibition of states resorting to unilateral force, by stipulating this principle in the fourth paragraph of Article II of the United Nations Charter, which emphasizes that all members must refrain from the threat or use of force against the territorial integrity or political independence of any state in any other manner

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(1) Iskandari Ahmed, Rules Governing the Common Heritage of Humanity in Outer Space, **Algerian Journal of Legal and Political Sciences**, Volume 39, Issue 3, (2002), pp. 5-75.

(2) Moon Agreement, opened for signature 18 December 1979,(entered into force 11 July 1984.

(3) Article Three of the 1979 Moon Agreement.

(4) Adam G. Quinn , The New Age of Space Law: The Outer Space Treaty and the Weaponization of Space Adam G. Quinn , **Minnesota Journal of International Law** , vol 17 ,(2008) ,p.p.475-502.

inconsistent with the purposes of the United Nations,[1] Therefore, resorting to force is prohibited according to the Charter except in the case of self-defense or according to the procedures of Chapter Seven of the Charter. This ban is absolute and therefore includes any use of military force on land, air, sea, or even in outer space.[2]

In addition, the General Assembly issued many special recommendations regarding space activities, as soon as the first satellite was launched into space, as the main goal of these recommendations was to protect space from military use, disarmament, and establish a monitoring system aimed at knowing that any satellite is launched into space, It must be in order to achieve peaceful purposes. The United Nations has also made great efforts to establish legal rules for the activities of states in space and limit them to peaceful use and for the benefit of the international community. It called for keeping space away from the Cold War and the arms race in accordance with the necessities of international cooperation between various nations in order to support International peace and security.[3] The Committee on the Peaceful Uses of Space of the General Assembly also made several recommendations to countries participating in the World Summit on Sustainable Development,[4] thus, at the conclusion of the Summit, these countries recommended that the use of outer space be limited to peaceful purposes and that any placement or transfer of weapons into outer space opposes its peaceful use, and that they try to establish a coordination mechanism to prevent the occurrence of an arms race in space, as well as concluding a general and collective agreement

[1] Paragraph 4 of Article 2 of the 1945 United Nations Charter.
[2] Walid Hussein Fahmy, Op. cit, p. 1748.
[3] Adour Khaled, International Espionage in the Legal System of Air and Outer Space, Op. cit, p. 214.
[4] World Summit on Sustainable Development, held from August 26 to September 4, 2002, Johannesburg, South Africa.

under the supervision of the United Nations related to Space law establishes peaceful use and also works to encourage international cooperation and preserve assets and equipment in space, which would maintain the peaceful situation in outer space.(1) Every year, the General Assembly adopts a number of resolutions, although they are non-binding, but they are widely accepted by the international community. These resolutions seek to prevent an arms race in outer space, build confidence in space activities, and international cooperation in the peaceful uses of outer space, and in In 2017, a group of governmental experts was established to consider and implement the recommendations issued by the General Assembly, thus making it possible to develop a binding international agreement on preventing an arms race in outer space, as well as the deployment of weapons in it.(2)

The second requirement

Provisions on the weaponization of space in international humanitarian law

المطلب الثاني

احكام تسليح الفضاء في القانون الدولي الانساني

The relative absence of written international law does not mean that states are free to act as they wish. On this basis, when states engage in new activities and in a new field, this does not mean that this field is outside the law, Rather, the applicable rules of international law,(3) are applied to this field and to these activities, and this matter also applies in the field of activities in outer space, and the process of arming and militarizing outer

(1) Adour Khaled, International Espionage in the Legal System of Air and Outer Space, Op. cit, p. 215.
(2) Fortea Colomé, Helena; Soriano Gatica, Juan Pablo, Op. cit, p. 24.
(3) Javier Guisandez Gomez, The Law of Air Warfare , **International Review of the Red Cross** , No 323 , (1998) , p.p 347-363.

space. If the international law specialized in the field of outer space is somewhat deficient, then the international law of armed conflict applies to this field. When setting the rules for armed conflicts, these rules were intended to apply to all conflicts and to all weapons existing at the time, as well as weapons that will be created in the future, weapons already known, and weapons that have not yet been invented, whether on Earth or in outer space.[1]

It should be noted that there are some jurists who believe that the laws relating to armed conflicts cannot be applied to hostilities in outer space because these rules are not specific enough and are not appropriate for military action in outer space, and that there is no traditional international treaty regulating military activities in outer space.[2] However, this is the most likely opinion, according to most jurists, which is that the law of armed conflict applies in all circumstances, whether to conflicts on land, sea, air, or even outer space, since the Geneva Conventions stipulate the need for states to adhere to the provisions of the convention in all circumstances,[3] In addition, the advisory opinion of the International Court of Justice affirmed that the law of armed conflict applies to all forms of war and to all types of weapons.[4] Also, Article Three of the Outer Space Convention affirmed that all activities related to outer space must

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[1] international court of justice reports of judgments, advisory opinions and orders legal consequences of the construction of a wall in the occupied Palestinian territory advisory opinion of 9 July 2004, note .89, p. 172 .

[2] McLaughlin, R., Nasu, H. (2014). Introduction: Conundrum of New Technologies in the Law of Armed Conflict. In: Nasu, H., McLaughlin, R. (eds) New Technologies and the Law of Armed Conflict, Publisher , T.M.C. Asser Press, The Hague ,(2013),p.p. 1-17.

[3] Ryan Esparza, Event Horizon: Examining Military and Weaponization Issues in Space by Utilizing the Outer Space Treaty and the Law of Armed Conflict , **Journal of Air Law and Commerce** , vol 83, Iss 2 ,(2018),p.p. 333-357.

[4] Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion of the International Court of Justice 1996, note 86, 226.

be in accordance with the provisions of international law. In the same context, the resolution[1] issued by the United Nations General Assembly also affirmed that military activities whose occurrence is linked to outer space must be conducted in accordance with International law, and international humanitarian law is an integral part of international law, and the application of this law to conflicts and armament in outer space is inevitable, In general, the international humanitarian law, means,((also known as the law of armed conflict or jus in bello, which establishes limits on the right of belligerents to choose means and methods of warfare and rules on the conduct of hostilities to protect civilian populations, civilians and civilian objects from the danger arising from military operations. 11 It includes prohibitions and restrictions on the use of specific weapons, means and methods of warfare.))[2]

Based on the definition above, international humanitarian law places restrictions on any military operations conducted in the context of an armed conflict, whether in outer space or those whose effects extend to outer space. This law also imposes restrictions on the use of weapons and means of war in any armed conflict, whether the weapons are modern. Or old, as the four Geneva Conventions of 1949 and the First Additional Protocol of 1977 apply to all cases of declared war or any other armed clash between two or more parties to this treaty, and these agreements must be respected in all circumstances.[3]

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[1] Resolution adopted by the General Assembly on 24 December 2021 , Seventy-sixth session Agenda item 98 (d) Prevention of an arms race in outer space: reducing space threats through norms, rules and principles of responsible behaviors, A/RES/76/231 .

[2] Constraints under International Law on Military Operations in, or in Relation to, Outer Space during Armed Conflicts Working paper submitted by the International Committee of the Red Cross to the open-ended working group on reducing space threats through norms, rules and principles of responsible behaviors, as convened under United Nations General Assembly Resolution 76/231, and to the Secretary-General of the United Nations in reply to General Assembly Resolution 76/230 on “Further practical measures for the prevention of an arms race in outer space” 3 May 2022

[3] Article 35 of the First Additional Protocol of 1977 .

In addition, Article 48 of Additional Protocol I stipulates the necessity of distinguishing between the civilian population and combatants and between civilian objects and military objectives, and that military operations must be directed against military objectives only by the parties to the conflict. This rule is a basic rule that does not only apply within the scope of land, air, or sea operations, but also within the scope of outer space, because the text is general and can be applied in all cases.[1] And this rule can also be found in Articles (51, 52, and 54) of the First Additional Protocol.

It is possible that the potential effects of military and hostile actions taking place in outer space may extend to the civilian population and civilian objects, whether intentional or unintentional. An example of this is the problem of orbital debris or any military operations in outer space, which may have effects on the civilian population.[2]

In a report prepared by the International Committee of the Red Cross in 2022, to the United Nations General Assembly and to the Secretary-General of the United Nations in response to General Assembly Resolution No. 76/230, entitled Practical Measures to Prevent an Arms Race in Outer Space, it stipulated the special rules of international humanitarian law, which Restricting the use of weapons and the conduct of military operations in outer space, or those related to it, during armed conflicts. The most important of these rules are as follows:

[1] Article 48 of the First Additional Protocol of 1977.
[2] Gemmo Bautista Fernandez , Where No War Has Gone Before: Outer Space and the Adequacy of the Current Law of Armed Conflict , **Journal of Space Law** , vol 43 , number 2,(2019), p.p.245-279.

- Indiscriminate weapons that are likely to cause unnecessary injury or pain are prohibited. This prohibition is not limited to Earth, but also in outer space.[1]
- It is prohibited to direct attacks against civilians or civilian objects, including space objects. It is not permissible to attack any space object or any element of this space object unless they are military targets and have this status on a permanent basis.[2]
- It is prohibited to use environmental modification techniques that would alter or affect natural processes and the formation of the Earth or outer space, and that have long-term or widespread effects, for military or other hostile purposes.[3]
- disproportionate attacks is Prohibits ((attacks that are expected to cause loss of civilian life, incidental injury to civilians, or damage that may befall civilian objects in outer space or on Earth, whether directly or indirectly)).[4]
- It is prohibited to attack objects necessary for the survival of the civilian population, whether by destruction, removal or neutralization, by military operations relating to outer space.[5]

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[1] Rule 84 of ICRC Customary IHL Study, The Protection of Civilians and Civilian Objects from the Effects of Incendiary Weapons.
https://ihl-databases.icrc.org/en/customary-ihl/v1/rule84

[2] Rule 10 of ICRC Customary IHL Study, Civilian Objects' Loss of Protection from Attack.
https://ihl-databases.icrc.org/en/customary-ihl/v1/rule10

[3] Article 1 of the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (ENMOD) ((Each State Party to this Convention undertakes not to engage in military or any other hostile use of environmental modification techniques having widespread, longlasting or severe effects as the means of destruction, damage or injury to any other State Party)).and article 2 of same Convention((As used in article I, the term "environmental modification techniques" refers to any technique for changing - through the deliberate manipulation of natural processes - the dynamics, composition or structure of the Earth, including its biota, lithosphere, hydrosphere and atmosphere, or of outer space)).

[4] Article 48 of the First Additional Protocol of 1977.

[5] Rule 54 of ICRC Customary IHL Study ((Attacks against Objects Indispensable to the Survival of the Civilian Population)), Article 54 of the First Additional Protocol of 1977.

- Persons and objects under special protection, such as medical services, must be respected and protected, including in situations where military operations related to outer space are conducted.(1)
- Exerting the necessary efforts during military operations related to outer space in order to avoid harm to the civilian population, persons and civilian objects, and taking all necessary precautions, including choosing means and methods of warfare, to avoid causing accidental losses among civilians and objects and reduce them to the minimum possible extent, whether in outer space or on the earth.(2)

However, there are several legal challenges related to the application of the basic principles of international humanitarian law to the weaponization of space and military operations in outer space. With regard to the principle of distinction between civilian populations and combatants, and the distinction between civilian objects and military targets, in this regard, although the Outer Space Treaty has considered that Astronauts are envoys from humanity to outer space. However, if astronauts operate military spacecraft in outer space wars, they can be legally targeted. In a traditional conflict situation on Earth, the distinction between combatants and civilians is made through military uniforms. However, The difficulty appears in outer space, as the spacecraft are tightly closed and move at high speed, and the fighters inside the vehicle cannot be seen directly, and therefore knowing the uniforms they are wearing is very difficult. Therefore, the criterion for military targets is the character of the

(1) Article 18 of the Geneva Convention (IV) relative to the Protection of Civilian Persons in Time of War. Geneva, 12 August 1949.
(2) Rule 15 of ICRC Customary IHL Study((In the conduct of military operations, constant care must be taken to spare the civilian population, civilians and civilian objects. All feasible precautions must be taken to avoid, and in any event to minimize, incidental loss of civilian life, injury to civilians and damage to civilian objects)). https://ihl-databases.icrc.org/en/customary-ihl/v1/rule15

spacecraft. If it is military, it becomes legitimate to attack it. In reality, the spacecraft are Satellite space can have a dual use, civilian and military use, so it is difficult for the army to clarify the nature of the vehicle,[1] especially since according to Article 52 of Additional Protocol I, which defines military objectives as those objects that, by their nature, location, purpose, or use, make an effective contribution to military action, and therefore Destroying or seizing it provides a clear military advantage.[2] In traditional conflicts, if one side occupies an area of the field that provides the enemy with a military advantage, this area can be attacked as a legal target. For the same reason, in outer space, if it is possible for an enemy to use a specific orbit in outer space to monitor military actions or transmit military information, a party to the conflict has the right to prevent hostile parties from accessing the orbit. As for the principle of proportionality, which aims to avoid or reduce collateral damage when attacking military targets. In conflicts in outer space, soft or hard means of warfare can be used. The satellite can be destroyed by a guided missile, and thus space debris can be generated that affects civilians, civilian objects, or the natural environment. The satellite can also be disabled by jamming it with wave interference. Both methods serve the same purpose, but according to international humanitarian law, The second method must be chosen. However, the matter is not easy. It may happen that a country jams a satellite or missile devices of a hostile country. However, the equipment and vehicles of a neutral country are affected by this, and here the real challenge appears, which is determining which method is the most appropriate.[3]

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[1] Liang JIE , How does IHL apply in outer space and which challenges exist for applying existing rules in outer space?, 2nd ROUND TABLE ON CURRENT ISSUES OF INTERNATIONAL HUMANITARIAN LAW ON THE 70th ANNIVERSARY OF THE GENEVA CONVENTIONS, p 3.

[2] Article 52 par 2 of the First Additional Protocol of 1977.

Conclusion الخاتمة

At the conclusion of this research, we reached a number of results and suggestions, which we list below:

- **The results**.

1- It is not possible to establish a precise definition and legal rules for space law without a final definition of outer space.

2- The absence of an international mechanism or oversight body for the peaceful and military uses of outer space.

3-Outer space is not subject to the sovereignty of any state, as it is not permissible to claim ownership, seize control.

4- The weaponization and militarization of outer space and the competition between countries over outer space would lead to a threat to international peace and security.

5- There is a real legal deficit that defines standards for the use of outer space and restricts the deployment of weapons in space, especially since outer space treaties do not keep pace with modern technological developments.

6- The possibility of applying the rules of international humanitarian law to conflicts in space

- **Recommendations**

1- It is necessary to establish and define a precise definition of outer space and international space law in order to avoid conflicts regarding the application of space law.

2- Reconsidering the Outer Space Treaty of 1967 and amending it so that all countries, whether developing or developed, participate in it Reformulating the main principles for establishing protection mechanisms against the negative effects of the use and exploration of outer space.

3- Uniting the efforts of countries and international organizations to confront the dangers that could be transformed outer space has become an arena for international disputes.

4- Concluding a separate international treaty on the principle of peaceful use of outer space, which is binding on all states.

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