



## Examining International Space Law from the Perspective of the Concept of “Sovereignty”

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### Abstract

International space law, as the newest branch of international law, presents new concepts related to sovereignty in view of the difference between the space domain and the air and land. Since the beginning of human activity in outer space, the principle of freedom of exploration and use of outer space, along with the principle of preventing the appropriation of celestial bodies, has dominated the space activities of states.

But in the absence of the possibility of exercising sovereignty in their traditional sense in outer space, how can states monitor the activities of their subjects in outer space and exercise jurisdiction over their property, facilities, and equipment in outer space? On the other hand, how can the relationship between sovereignty and ownership be explained in space law? The answers to these questions are the subject of the following article.

**Keywords:** *Sovereignty, Exclusive Authority, Air Rights, Outer Space Rights, Outer Space Treaty*

### Introduction

Space law, as the newest branch of international law, has emerged with the astonishing scientific and technological development that has enabled humanity to leave the Earth for the first time. From its very beginning, this branch of international law has been faced with several important and fundamental questions, such as determining the boundaries of air and space, determining the legal status of space objects, and preventing the spread of armed conflict into outer space. But without a doubt, one of the most important of these challenges is determining the limits of state sovereignty in the vast expanse of outer space.

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This challenge is reinforced by the fact that the principle of non-possession, ownership, and occupation of space and the prohibition of any claim to sovereignty over territory in its traditional sense is one of the fundamental and accepted principles governing the exploration and use of space.

Article 2 of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Spheres<sup>1</sup> (hereinafter referred to as the Outer Space Treaty) states that States shall not be permitted to make outer space, including the moon and other celestial spheres, subject to national ownership or monopoly by claim to sovereignty or use or occupation or in any other manner. For this reason, any action that would lead to the appropriation of space by states, nations, individuals or companies is prohibited.

However, this is at a time when all activities in outer space are carried out by sovereign states, and the emergence and expansion of private companies' activities in outer space does not change this issue, because according to Article 6 of the Outer Space Treaty, "activities of non-governmental entities in outer space, including the moon and other celestial bodies, require the permission and continuous supervision of a State Party to the Treaty." Indeed, despite the challenge of distinguishing between air and space, the international community generally agrees that, because outer space belongs to everyone, this natural environment is uninhabitable and ungovernable.<sup>2</sup>

In this regard, the principle of non-possession is not unrelated to the principle of freedom of outer space, and some even consider it a guarantee of the principle of freedom.<sup>3</sup> It is through this connection that the Outer Space Treaty recognizes the legal nature of outer space, including celestial bodies, as "property belonging to the public"<sup>4</sup> and not "property without<sup>5</sup> an owner"<sup>6</sup>

It is necessary to clarify that, theoretically, the difference between these two categories of property is that the system of using public property must be legalized and the use of it by states must be supervised by international authorities and organizations; while ownerless property does not belong to anyone until no one claims ownership of it. As a result, with regard to this property, the principle of complete freedom is established and no special supervision is necessary in its use.

In any case, the main question that the authors of this article can propose and attempt to address is how the three distinct yet interconnected concepts of sovereignty, jurisdiction, and ownership interact in the sphere of international space law, and what impact the loss of sovereignty in its traditional sense will have on the way in which states exercise their jurisdiction over their subjects and property, as well as on the exercise of property rights in outer space.

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<sup>1</sup> Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies (Outer Space Treaty), Signed: December 19, 1966, Entered into Force: October 10, 1967.

<sup>2</sup> Shaw, Malcolm, *International Law*, Cambridge University Press, 2008, p. 544.

<sup>3</sup> Khosravi, Majid; *Air and Space from a Legal Perspective*, Army Political Ideological Organization, 2002, p. 62.

<sup>4</sup> Res communis

<sup>5</sup> Res nullius

<sup>6</sup> Williams, S. "Celestial Bodies", In: Bernhardt (ed.), *Encyclopedia of Public International Law*, Installment 11, 1989, p. 52.



After a brief explanation of the concept of sovereignty, this study examines the evolution of this concept in air rights and space rights, and then examines how states exercise their authority over individuals, equipment, and institutions. Finally, in the conclusions section, explanations will be provided regarding the relationship between sovereignty and ownership.

## 1. Understanding the concept of “sovereignty”

Sovereignty is primarily a concept of fundamental rights, but it is also used in public international law. Sovereignty, from the perspective of contemporary international law, indicates the position of a state in the international arena. This state is not subject to the judicial, legislative or administrative control of another state or foreign law within its territory.<sup>1</sup>

Sovereignty is the supreme power and authority that is implicit in the concept of the state and always indicates the highest legal and organizational authority within a system.<sup>2</sup> Although some writers consider sovereignty to be a vague and indefinite concept<sup>3</sup>, there is no doubt that states should be considered sovereign entities within the scope of international law. In other words, it is impossible to imagine an entity as a state without assuming that it is sovereign. Sovereignty cannot be accounted for in simple legal concepts. In other words, the sovereignty of states manifests itself in various forms in the domestic and international arenas.

One of the forms of sovereignty that is being addressed in this discussion is “territorial sovereignty”<sup>4</sup>, which some jurists believe is the most important of the various aspects of the sovereign powers of states.<sup>5</sup> Territorial sovereignty is conceptualized in three different realms: surface, subsurface, and suprasurface territories. Of course, the criterion for this division is geographical components.

From a legal perspective, the territorial boundary of a state is the area within which that state is able to exercise exclusive sovereign authority and powers. From the very beginning of the space age, it was clear that the problem of territorial sovereignty would be one of the first major challenges in this era.

Some early theories suggested the possibility of precisely determining the extent of national sovereignty by resorting to an interpretation derived from the meaning of “territory and airspace” or by analogy with the law of the seas. However, the passage of time has shown the inability of

<sup>1</sup> Steinberger, Helmut, “Sovereignty”, in: Bernhardt, Rudolf, (ed.), Encyclopedia of Public International Law, Installment 10, 1987, p. 408.

<sup>2</sup> Coker, F. “Sovereignty,” in: Encyclopedia of the Social Sciences, Seligman, Edwin R. A. (ed.), The Macmillan Company, 1934

<sup>3</sup> e.g. Wildhaber, Luzius, “Sovereignty and International Law”, in: Macdonald Ronald St John, and Johnston, Douglas Millar, (eds.), The Structure and Process of International Law, Martinus Nijhoff Publishers, 1983, p. 425.

<sup>4</sup> Territorial Sovereignty

<sup>5</sup> Brownlie, Ian, Principles of Public International Law, Oxford University Press, 7th Edition, 2008, p. 107.



these theories to provide appropriate solutions considering the nature and specific characteristics of outer space.<sup>1</sup>

## 2. Understanding the concept of “sovereignty” in air law

The movement towards a meaningful concept of sovereignty over airspace began in the early twentieth century.<sup>2</sup> Before that, an ancient rule in Roman law that “he who rules the land rules the sky”<sup>3</sup> formally recognized the ownership of private rights over the airspace above the land under his ownership. Similarly, states also claimed exclusive sovereignty over the airspace above the territory under their control.

Apart from some scattered opinions to the contrary on this subject<sup>4</sup>, contemporary international law is also in agreement with this traditional view and, apart from the problem of delimiting the limits of air and space, which defines the limits of this exclusive competence, there is no particular disagreement on the essence of the issue.

The International Court of Justice also considered, in the Nicaragua case, exclusive jurisdiction over the airspace above the territory to be an internationally accepted legal principle. According to the Court: “The principle of respect for the territorial integrity of a State is also violated by the unauthorized overflight of aircraft belonging to other States and the unauthorized use of airspace.”<sup>5</sup> In addition, the Paris Convention, as the first international instrument in the field of air law, also affirmed this important principle. Article 1 of this Convention states:

“The High Contracting Parties shall recognize each of the Parties to the Convention as having complete and exclusive sovereignty over the airspace above its territory.” This general belief of States has been reiterated and expressed in subsequent treaties and conventions. The Madrid Convention (1926), the Havana Convention (1928) and, most importantly, the Chicago Convention (1944) all emphasize the exclusive sovereignty of States over the airspace above their territory.

It seems that even before the First World War, this view of the legal status of territorial airspace was common among States. As an example, one can cite the reaction of the Netherlands in the years before the outbreak of war in protesting the passage of German aircraft over its territory without prior permission.<sup>6</sup>

<sup>1</sup> Navada Topchi, Hossein; International Space Law, Army Political Ideological Organization Publications, 1999, p. 85.

<sup>2</sup> Weaver, Jefferson, “Illusion or Reality? State Sovereignty in Outer Space”, Boston University International Law Journal, vol. 10, 1992, p. 209.

<sup>3</sup> *cujus est solum, ejus est usque ad coelum*

<sup>4</sup> Fouchil is one of these jurists. He believed that since no individual or state can exercise authority over airspace in the same way that it exercises authority over land, it has no claim to sovereignty over local airspace over the Arabs.

<sup>5</sup> Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States of America), Merits, Judgment, I.C.J. Reports 1986, para. 251.

<sup>6</sup> Dodge, Michael S, “Sovereignty and the Delimitation of Airspace: A Philosophical and Historical Survey Supported by the Resources of the Andrew G. Haley Archive”, Journal of Space Law, vol. 35, 2009, pp. 1617 -.



It was subsequently clarified that the position of international law regarding the concept of sovereignty in air rights is completely clear and transparent, and the undisputed sovereignty of states over the airspace above their territory is itself considered an accepted and established principle in the sphere of international law.

The last point to consider regarding the limitation of the sovereign limits of states in air rights, which is also not unrelated to the discussions raised in space law, is the answer to the question: Does international law, in its current form and structure, allow states to use the airspace of other states to place a space object in orbit, without obtaining prior permission and coordination?

Although most of the countries currently launching space objects into outer space (including the United States, Russia, and China) have large territories, however, with the increasing access of countries around the world to the technology for building and launching spacecraft, it is likely that this issue will become a serious challenge in the near future.

Some authors argue in response to this question that since free access and freedom of exploration of outer space are accepted principles of international law, states cannot, without providing valid reasons, interfere with the passage of spacecraft through their airspace.<sup>1</sup>

In other words, the passage of airspace as a prerequisite for the realization of the principle of freedom of exploration and use of outer space cannot be suspended. This view is defensible because, given the lack of permanent space stations in outer space, the only possible way for States to place their spacecraft and space objects in orbit is to launch them from bases located on Earth.

As a result, it is always possible for a spacecraft to pass through the airspace of other states before reaching orbit. It seems that in this context, states cannot yet be considered as binding in the form of a customary rule. This issue is also not mentioned in space law documents.

However, in order to preserve the sovereign rights of States in this area, it may be stipulated in bilateral agreements or contracts that States are required to prove their good faith by providing sufficient reasons for the necessity of the passage of their space object through the territorial airspace of the territorial State, and by providing sufficient guarantees to the territorial State to ensure the security of the object's passage, or by guaranteeing the peaceful nature of the target of the launch. Confirm. Accordingly, even if obtaining prior permission from the State owning the space object or the State responsible for the launch is deemed necessary in this context, the need for prior notification to the State owning the territory is undoubtedly undeniable.

This issue, in addition to the sovereign considerations of States, is aimed at preventing problems in matters related to air traffic control and preventing accidents between space objects and aircraft in flight. This point has been emphasized in various proposals regarding the delimitation of air and space. For example, the David Davis Institute's 1962 Code of Conduct states:

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<sup>1</sup> Goedhuis, Daniel, "Influence of the Conquest of Outer Space on National Sovereignty: Some Observations", *Journal of Space Law*, vol. 6, 1978, p. 45.



"No spacecraft launched from the territory of any State shall, at any stage of flight or launch, enter the airspace of that State without the consent of the State concerned." Of course, if the country that intends to launch or fly has previously been granted permission, this consent should not be withdrawn, provided that the flight or launch is for purely scientific and peaceful purposes and is so controlled as not to endanger aircraft.<sup>1</sup>

Of course, today it is possible through the Internet to make flight schedules available to launching countries worldwide, and these countries usually update their launch schedules with this information. They organize information.

### **3. Understanding the concept of “sovereignty” in space law**

On October 4, 1957, Sputnik, the first man-made object, was placed in Earth orbit, and this event marked the beginning of the space age. This satellite crossed the territories of several countries in outer space to reach the desired orbit. However, none of these countries objected to this issue. After that and in the following years, several launches by the Soviet Union and the United States took place in the same order.

In these cases, too, the governments did not express any objection or disagreement with the actions of these two countries. Thus, although national sovereignty has been extended to the airspace above for security reasons, such sovereignty clearly ends at a certain height above the ground.

The actions of countries in the years since the beginning of the space age show that countries with space technology have the right to place their spacecraft and vehicles in orbit over the borders of other countries.<sup>2</sup>

The prohibition of claiming sovereignty over outer space has two distinct aspects; The first aspect is the cessation of the sovereignty of states at a certain height above the ground and the end of their airspace, which was mentioned in the previous paragraph. (Regardless of the problem of determining the boundary between air and space) and the second aspect is the inadmissibility of making claims of sovereignty over the surface of the planets and celestial bodies in the sense of acquiring territory through various means. It seems that this second aspect has received more attention in space law documents, and it is not far-fetched that the main purpose of drafting Article 2 of the Outer Space Treaty<sup>3</sup> was also to establish a system of preventing national ownership of space by States in the same sense. This view is reinforced by the fact that some of the methods explicitly included in the text of the article as examples of “sovereignty claims” and declared prohibited (exploitation and occupation) are more applicable to celestial bodies than to interstellar space.

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<sup>1</sup> David Davies Memorial Institute, “Draft Code of Rules on the Exploration and Uses of Outer Space”, Journal of Air Law, vol. 29, 1963, pp. 141-150.

<sup>2</sup> Ibid.

<sup>3</sup> According to Article 2 of the treaty: "Outer space, including the moon and other celestial bodies, shall not be subject to national ownership by claim to sovereignty, by exploitation or occupation, or in any other manner."





The established principle of space powers also indicates that, unlike terrestrial territories, no state can bring any part of outer space, including the moon and other celestial bodies, under its sovereign control or consider it as part of its territory. With the clarification that in the final analysis, the purpose of this point is to ensure the peaceful use of outer space, including the moon and other celestial bodies, and to provide for the exploration and exploitation of this space.<sup>1</sup> It is obvious that the mere proposal of a claim of ownership by one State and the possible opposition to it by another State or States can create tension in relations between two or more States. However, the important question that can be examined here is that, apart from the impossibility of claiming territorial possession or exercising exclusive control over a part of the celestial sphere or interstellar space, what will be the status of the exercise of sovereign rights and powers of states over spacecraft, institutions, equipment, or individuals present in outer space? And does the impossibility of exercising sovereign powers in outer space constitute a crime in the sense of the impossibility of control? The number of spaceships and astronauts present in this space is limitless. Does this mean, for example, that in large space plans and projects involving multiple countries, individual states are unable to exercise authority and that a body consisting of representatives of the international community should exercise control and authority over the institutions and fortifications located in outer space? It seems that in order to find the answer to this question, one must refer to the sources of international space law, namely space treaties and the practices of states in this field. In this section, for a better understanding of the subject, the issue is presented in two parts: how to exercise authority over individuals and how to exercise authority over space institutions and equipment.

### 3.1 How to exercise jurisdiction over individuals in outer space

It has always been a challenge to establish enforcement for violations by individuals in areas of wide-ranging human activity where the principles of sovereignty and jurisdiction are subject to modification.

It should be noted that the five space law instruments adopted under the auspices of the United Nations do not contain specific provisions on the manner of exercising authority over persons present in outer space, especially since the process of preparing and regulating space treaties was stopped after 1984, and this is while, since that year, there have been remarkable developments in the field of exploration and use of outer space. In addition, The increasing presence of the private sector and the development of space tourism have potentially added to the scope of the problems in this area.

Apart from an article in the Outer Space Treaty and the related arrangements in the “Agreement on the Rescue and Return of Astronauts and the Return of Objects Abandoned in Outer Space”<sup>2</sup> (hereinafter referred to as the Agreement on Rescue), there is generally no specific reference to individuals in United Nations treaties. Of course, this issue seems to be justified to some extent,

<sup>1</sup> Hobe, Stephan, et al (eds.), “Cologne Commentary on Space Law”, vol. I, Karl Heymanns Verlag, 2009, p. 53

<sup>2</sup> Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, Signed: April 22, 1968, Entered into force: December 3, 1968.



taking into account the time when the aforementioned treaties were drafted, the type and nature of space activities during those periods, and the intent and intention of the states in preparing these documents, which was mainly to determine the general framework for regulating state activities in the field of outer space.

As mentioned, only the Outer Space Treaty and the Assistance and Rescue Agreement contain brief references to the rights of persons present in outer space. Of course, the relevant arrangements in the two documents are somewhat repetitive, and the provisions contained in the Assistance and Rescue Agreement are considered to be a significant expansion and expansion of the content of Article 5 of the Outer Space Treaty.

Furthermore, the provisions mentioned in these documents are limited to determining the duties of astronauts in specific circumstances (accident, arrest, emergency or involuntary landing) and do not foresee any specific arrangements regarding the conduct of space missions by these individuals and the possible investigation by the competent state in the event of a crime mentioned in the aforementioned documents. Of course, the lack of indication of which States may exercise jurisdiction over astronauts in outer space may have been due to the clarity of the issue.

However, under Article 5 of the Outer Space Treaty, astronauts who have an accident in the territory of a State Party or on the high seas shall be returned safely and promptly to the State of Registration of their spacecraft.<sup>1</sup>

It is said that from the perspective of the treaty, the State of registration of the spacecraft is recognized as the competent State. However, in the rescue agreement, the salvaging State is obliged to inform the launching authority<sup>2</sup>, not the registering State, of the progress of the rescue operations. In other words, these two treaties introduce two different entities with different powers to repatriate astronauts who have survived an accident.

Following the expansion of human presence in outer space over the past two decades, several international efforts have been made to address the shortcomings of space treaties regarding the exercise of authority over individuals in outer space, the most important of which is the provisions contained in the “International Space Station Agreement”<sup>3</sup>, which was concluded in 1998<sup>4</sup> between

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<sup>1</sup> State of Registry

<sup>2</sup> Launching Authority

<sup>3</sup> International Space Station Agreement (ISS Agreement)

<sup>4</sup> It seems necessary to explain that before this agreement, which is the second international agreement of this kind, the governments of the United States, Canada, Japan and a number of European governments (in the form of the European Space Agency) concluded the first Space Station Agreement in 1988, which, of course, was not very effective and useful due to reasons, the most important of which can be considered the end of the Cold War and the redefinition of the relationship between the Soviet Union and Western governments in the field of international cooperation in the field of exploration and exploitation of outer space. For this reason, a new agreement was concluded with the aim of joining the Soviet Union to this project on the date mentioned. Agreement among the Government of the United States of America, Governments of Member States of the European Space Agency, the Government of Japan, and the Government of Canada on Cooperation in the Detailed Design, Development, Operation, and Utilization of the Permanently Manned Civil Space Station, signed on September 29, 1988, entered into force on January 30, 1992 .





the states involved in the International Space Station project, namely Canada, the United States, Russia, Japan, and The European Space Agency was convened.

Explaining that, along with this document, the states involved in this project took steps to sign a memorandum of understanding that was annexed to the aforementioned agreement. Pursuant to Article 11, Paragraph 6 of this Memorandum of Understanding, the States Parties were instructed to prepare and regulate operational instructions covering the following matters and procedures:

Determination of the chain of command governing the crew of the Space Station, the manner of dividing management responsibilities between the personnel present on the Station and the control centers located on the ground, and disciplinary regulations. In this regard, it is important to note the provisions of Article 22 of the Space Station Agreement: “Given the unique and unprecedented nature of international cooperation among States [in the conduct and conduct of such operations] in outer space”

1. The States of Canada, the Member States of the European Union, Japan, the Russian Federation and the United States shall have the right to exercise criminal jurisdiction over passengers present on any of the segments of the Station under their jurisdiction.
2. In the event of unlawful conduct in orbit which endangers the life or safety of nationals of other States Parties to this Agreement or causes damage to parts of a station belonging to a State other than the State of the offender:

The Member State of which the offending individual is a national shall, at the request of the injured State, consult with the latter State regarding the willingness of that State to prosecute the offender.

"Furthermore, if the State of the offender, within a period of 90 days, agrees to the request of the injured State or does not, within the same period, declare its explicit intention to prosecute the offender, the injured State is authorized to exercise criminal jurisdiction over that individual."

It is noted that the primary and primary jurisdiction applicable to astronauts and passengers on board the space station is that of their State of origin, and only in the event of a delay in the trial, the consent of the said State to the extradition of the offender, or the expiry of the three-month period during which the injured State and the State of origin of the offender have the opportunity to consult to resolve the course of prosecution and punishment, will the method of punishment be pursued in another form.<sup>1</sup>

Of course, the system envisaged in the International Space Station Agreement also faces shortcomings. For example, these regulations are only applicable to “personnel” present on the station, and this is while the Agreement does not provide a definition of the word “personnel”.

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<sup>1</sup> De Roos, Theo, “Disciplinary and Criminal Law in Space”, in: Brus, Marcel, and von der Dunk, Frank, (eds.), *The International Space Station: Commercial Utilisation from a European Legal Perspective*, Martinus Nijhoff Publishers, 2006, p. 122.



This issue, with regard to the possibility of space tourists traveling to the International Space Station, should be considered in order to either amend the text of the agreement or for states to expand the scope of this clause to include space tourists in their future plans.

Furthermore, the aforementioned arrangements are applicable only to nationals of States Parties to the Agreement and, with respect to non-Parties; the provisions of the Outer Space Treaty shall prevail; such that the basis for the exercise of jurisdiction, control and authority of the State over that part of the space station in which the criminal act has taken place.

As a result, States have freedom of action in regulating the activities of their subjects beyond the areas under their jurisdiction, and thus the subject of the exercise of jurisdiction in this regard will be the “individual.”

However, in any case - as noted in the previous lines - considering the shortcomings in the five-part outer space treaties, the regulation of multilateral treaties at the international level can be an effective and useful step in eliminating deficiencies in the legislative field.

### **3.2. How to exercise authority over space facilities and equipment**

Unlike individuals, there are more complete provisions in the United Nations treaties on the law of outer space regarding the type and manner of exercising authority over spacecraft, facilities and equipment, which will be referred to below. The Outer Space Treaty refers to the category of authority and the manner of exercising sovereign powers in several articles.

For example, Article 6 of this instrument recognizes the international responsibility of States Parties to the Treaty for national activities in outer space, whether such activities are carried out by governmental agencies or non-governmental entities.

According to some authors, this article’s reference to the responsibility of its member states is meant to confirm the ability of states to exercise sovereignty and authority in outer space, because it would be very surprising if a state were to be recognized internationally as responsible for the activities of its governmental and non-governmental institutions while not having the right to exercise formal authority and effective control over them.<sup>1</sup>

However, Article 6 does not contain any specific provisions regarding which of the States involved in launching a space object will bear international liability in the event of damage. This issue is, of course, addressed in Article 7, According to this article:

“Any State Party to the Treaty which launches or causes to be launched an object into outer space, including the moon and other celestial bodies, and any State Party from whose territory or installations an object is launched, shall be liable for damage caused by the said object or its constituent parts on the earth, in the air or in outer space, including the moon and other celestial

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<sup>1</sup> Ibid.



bodies, to another State Party to the Treaty or to its actual or legal nationals, in respect of Internationally responsible without fault.

Of course, it may be argued that Articles 6 and 7 of the Treaty cannot be considered as the exclusive articles determining jurisdiction in the Outer Space Treaty because the said articles are concerned only with determining the State responsible and the manner of compensation for damage.

This view is reinforced by the fact that the Treaty expressly provides in Article 8 for the determination of the competent State. According to this article of the treaty: "Each State Party to the Treaty in whose name an object launched into outer space is registered shall retain jurisdiction and control over that object and any personnel on board it while it is in outer space or a celestial body." The ownership of objects launched into outer space includes objects that have landed on or are built on a celestial body, and whose components are not affected by their presence in outer space or on a celestial body or by their return to Earth. If such objects or parts thereof are found beyond the borders of the State Party to the Treaty which registered them, they shall be returned to that State Party.

If the provisions of Article 8 are taken in conjunction with the provisions of Article 12 of the Treaty, it becomes clear that the Outer Space Treaty, as the most important international instrument on space law, has not only not abrogated the exercise of privileges and the rights of sovereignty in space, but has expressly ratified them. In accordance with the provisions of Article 12, all stations, installations, equipment and vehicles on the Moon and other celestial bodies shall be open to inspection by representatives of other States Parties to the Treaty on the basis of reciprocal action, provided that such representatives shall give reasonable prior notice of their intention to conduct such inspections to the competent State (the State registering the object). space) can take maximum precautions.

More importantly, visits should not be conducted in a way that disrupts the normal functioning of the visited facilities.<sup>1</sup> The "Convention on International Liability for Damage Caused by Space Objects"<sup>2</sup> (hereinafter the Liability Convention) also, in its Article 2, holds the launching State liable for damage caused by space objects belonging to it, which, assuming the argument presented in the previous pages is accepted, can be considered an indirect reference to the determination of the State having jurisdiction in the Liability Convention. "Convention on Registration of Objects Launched into Space "Outer Space"<sup>3</sup> also introduces in Articles 1 and 2 the responsibility for registering the State launching an object into outer space.

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<sup>1</sup> For further reading on this matter, see: Aminzadeh, Elham; International Space Law: Outer Space Treaty, Tehran University Press, 2012, pp. 222.

<sup>2</sup> Convention on the International Liability for Damage Caused by Space Objects, Signed: March 29, 1972, Entered into force: September 1, 1972.

<sup>3</sup> Convention on Registration of Objects Launched into Outer Space, Signed: January 14, 1975, Entered into force: September 15, 1976.



There are several reasons for the registration of space objects, the explanation of which is beyond the scope of this article. But without a doubt, one of the most important of them is the identification of the State competent to control and exercise jurisdiction over that space object.

Thus, in order to summarize the requirements of this section, it can be claimed that the rights International space law, in its current form, does not completely prohibit the exercise of sovereign rights in space, and today the complete and exclusive authority of each state over its spacecraft, facilities and equipment is recognized in relevant international instruments and as international custom. In other words, the exercise of a state's exclusive authority over its assets and subjects in outer space would be tantamount to an exercise of territorial sovereignty, which has no bearing on space law. There is no direct prohibition.<sup>1</sup>

As a result, Article 2 of the Outer Space Treaty does not abrogate the exercise of sovereign rights in outer space, and only “national competence” in the sense of the exclusive possession of territory and the exclusive use of reserves and resources in outer space is covered by the prohibitions contemplated in the Outer Space Treaty.

States are also entitled to exercise their sovereign powers in outer space, and have done so since the beginning of space; just as on the high seas and in the airspace above the high seas, the consistent and sustained action of States is in support of this requirement.

The International Court of Justice has also referred to this issue in the Lotus case, declaring as a general principle that “the exercise of sovereignty of States outside territorial waters is based on the competence of States to exercise sovereign powers.”<sup>2</sup>

Accordingly, the exercise of sovereign powers can be considered as the performance of acts that take place in relation to the persons, equipment and institutions of the State concerned and not in relation to the territory or Special space.

## Conclusion

The first object that man sent beyond the atmosphere crossed the airspace of states and landed in the atmosphere. However, since the launching state did not consider it necessary to obtain permission in this area and other states did not object to this issue, the principle of freedom and, consequently, non-possession was established as a legal principle in the field of outer space in a short period of time.<sup>3</sup>

Despite the indispensability of the principles of inalienability and freedom, the two concepts of sovereignty and freedom<sup>4</sup> are always in conflict with each other<sup>5</sup> and until the precise definition

<sup>1</sup> Gorove, Stephen, “Sovereignty and the Law of Outer Space Re-examined”, *Annals of Air and Space Law*, vol. 1, 1977, p. 318.

<sup>2</sup> P.C.I.J., The Case of the S.S. Lotus, Series A, No. 10, September 7, 1927, p. 19.

<sup>3</sup> Lachs, Manfred, in: Hobe, Stephen, et al (eds.), *Cologne Commentary on Space Law*, vol. I, Karl Heymanns Verlag, 2009, p. 46.

<sup>4</sup> Sovereignty versus Freedom

<sup>5</sup> Diederiks-Verschoor, I.H.Ph., “Similarities with and Differences between Air and Space Law



of airspace and extraterrestrial space is established, the implementation of the principle of inalienability will face numerous problems in view of the existence of the principle of freedom.

It was noted in the previous sections that the concept of sovereignty, and in particular, territorial sovereignty, means the acquisition of ownership and control of a piece of land for the benefit of the sovereign state, and that the specific function of sovereignty is also to prevent and prevent similar property claims by other states.

In other words, exercising property rights and utilizing resources in the celestial spheres without resorting to claims of sovereignty itself entails preventing other states from benefiting from these benefits, because, as mentioned, sovereignty is an exclusive and inalienable right and privilege. Accordingly, if a state asserts its sovereignty over a portion of space, it would legitimately have the right to prevent other states from using that space. But this is precisely what is prohibited by the Outer Space Treaty.

The result of this prohibition is that even states that are engaged in exploration and activity in areas of outer space cannot prevent other states from entering those areas, given that these activities do not amount to proprietary practices.

However, the scope of the prohibition contained in the Outer Space Treaty does not extend to state ownership of equipment and facilities, and as a result, state sovereignty over these assets will remain established even in areas beyond national jurisdiction.

It is recalled that many issues arise in connection with the principle of non-possession of outer space, which can only be resolved through mutual cooperation and coordination at the international level.

Among the most important of these issues are: establishing and maintaining a base for landing on the surface of the satellite and deploying equipment for launching from it, how to cooperate when accidents and problems arise, establishing legal regulations, establishing communication centers on the surface of the satellite, exploiting the satellite's minerals and natural resource reserves, developing scientific research, exchanging meteorological and astrophysical information and information necessary for People in circles and other unpredictable issues.

Also, the government of the principle of no property has obvious consequences; Since no country has the sole right to determine the boundary between airspace and outer space, and since no country is considered to own space or any part of it, all spacecraft must necessarily follow the exclusive jurisdiction of the country registering the space object, and sometimes even the owner of the relevant territory.<sup>1</sup>

This article will suffice to mention the point that until the boundary between airspace and outer space is defined, the implementation of this principle will be problematic in practice. In general,

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Primarily in the Field of Private International Law”, Recueil des cours, vol. 172, 1981, p. 333.

<sup>1</sup> Ziaei Bigdali, Mohammad Reza; Public International Law, Ganj Danesh, 2005, p. 434.



the formula contained in Article 2 of the Outer Space Treaty is a manifestation of the fundamental difference between air rights and outer space rights, which is the same as the discussion of national sovereignty. Although indirect signs of sovereignty still appear in some space activities, such as remote sensing<sup>1</sup> and remote communications<sup>2</sup>, the general prohibition of ownership of space has established itself as a fundamental principle of the Outer Space Treaty.

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<sup>1</sup> Remote Sensing

<sup>2</sup> Telecommunications





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