IS CURRENT INTERNATIONAL SPACE LAW FIT FOR PURPOSE

Professor Sa'id Mosteshar
ISPL Director

INTRODUCTION

It is often argued that the rate of change of space technology and its applications is greater than the rate of change of the law, leading to a growing vacuum in international space law that is being filled by national legal initiatives. This article examines whether this is the case, considering activities ranging from space traffic management, space mining and tourism to 'living off world.'

A separate question arises about the interpretation of these treaties in a modern context, and the prospects of creating new treaties. The article will briefly consider the future course of international space law.

The main international treaty governing space activities, the Outer Space Treaty,[1] dates back to 1967 when space technology was relatively primitive compared to that of today. It is also true that improvements and advancement in technology will continue at an increasing pace. A consequence of this has been to reduce the cost of access to space. Coupled with growing concentration of wealth, space ventures are now within the reach of private entities and individuals.

The advent of increasing private investment in space ventures has led to a couple of dangerous misconceptions.

One myth being perpetuated is that international law has failed to keep pace with these developments and is in need of revision or should be amplified by national laws. However true it may be that these laws have not changed as rapidly as technology, that is the wrong test.

The relevant question is whether the laws accommodate current and potential future activities. The answer to that question is a resounding yes.

NON-GOVERNMENTAL SPACE ACTIVITIES

One of the early lines of attack on the OST was that it binds only governments and not private commercial operators. But the OST anticipated the advent of space activity by private individuals and companies as well as by international organisations.

OST, Article VI states:

> " States Parties to the Treaty (currently 109 countries) shall bear international responsibility for national activities in outer space, including the moon and other celestial bodies, *whether such activities are carried on by governmental agencies* ***or*** *by* ***non-governmental entities****, and for assuring that national activities are carried out* ***in conformity with*** *the provisions set forth in the present* ***Treaty****. The activities of* ***non-governmental entities*** *in outer space, including the moon and other celestial bodies,*

1 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space,

> *shall require **authorization** and **continuing supervision** by the appropriate State Party to the Treaty.*[2] When activities are carried on in outer space, including the moon and other celestial bodies, by an international organization, responsibility for compliance with this Treaty shall be borne both by the international organization and by the States Parties to the Treaty participating in such organization."

To all intents and purposes, Article VI means in part that the government of a State Party to the OST has continuing jurisdiction over its private citizens performing space activities, and is responsible for authorizing space activities carried out by them, and has the obligation to continually supervise their activities to ensure that they are carried out in conformity with the Outer Space Treaty and international law in general.

It is true that the obligations under the Treaty are on the State to ensure its nationals comply with the requirements of the OST. Most implement their obligation through national legislation, which cannot negate any prohibitions in the OST. In a few jurisdictions international treaties are self-implementing and become a part of the national law, but even then legislation is necessary to provide the framework for authorisation and supervision of non-governmental activities. I would challenge anyone to conceive a space project that is prevented by international space law.

SPACE RESOURCE EXPLOITATION

In recent years there has been a strong attempt to legitimise space resource extraction, which *is* prohibited by the OST.

OST Article II provides:

> "Outer space, including the Moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or *by any other means*."[3]

Interested parties have advanced arguments that:

1. The prohibition does not apply to private entities;
2. Article II only prevents assertion of sovereignty and territorial appropriation;
3. Extraction of resources from space is analogous to fishing in the High Seas, also outside the territory of any State.

These assertions overstate the position or misinterpret the law.

1. OST, Article VI contradicts limitation to only States and not private entities. It is the obligation of each State to ensure that its nationals' cannot conduct space activities without its authorisation and they comply with the terms of the OST.

2. The OST Article II refers to sovereignty as only one example and includes *any other means*. Furthermore, it prohibits *appropriation* and not only *sovereignty*, unlike the Law of the High Seas:

Convention on the High Seas, 1958

---

2 Emphasis added.

3 Emphasis added

> Article 2
>
> The high seas being *open to all nations*, no State may validly purport to subject any part of them to its *sovereignty*.[4] Freedom of the high seas is exercised under the conditions laid down by these articles and by the other rules of international law. It comprises, inter alia, both for coastal and non-coastal States:
>
> (1) Freedom of navigation;
> (2) Freedom of fishing;
> (3) Freedom to lay submarine cables and pipelines;
> (4) Freedom to fly over the high seas.
>
> These freedoms, and others, which are recognized by the general principles of international law, shall be exercised by all States with reasonable regard to the interests of other States in their exercise of the freedom of the high seas.

This Convention was finalised only five years before the UN 1963 Resolution adopting the Declaration of Principles Governing Activities of States in the Exploration and Use of Outer Space,[5] which included the wording of OST Article II as its third principle. It follows that a distinction was being drawn in the OST between *appropriation* and claim of *sovereignty* in the High Seas Convention.

3. In recognising the general international law permitting fishing in the High Seas, the Convention makes an exception for this activity.

You may think that I have just contradicted myself, but if you were listening carefully, my earlier statement referred to international space law, not just the OST. The distinction is that while the OST prohibits appropriation, the later Moon Agreement[6] makes special conditions under which appropriation may take place.

The Moon Agreement, Article 11(5) states:

> States Parties to this Agreement hereby undertake to establish an international regime .... to govern the exploitation of the natural resources of the Moon as such exploitation is about to become feasible.

The main purposes of the international regime ... shall include:

> (a) The orderly and safe development of the natural resources of the Moon;
>
> (b) The rational management of those resources;
>
> (c) The expansion of opportunities in the use of those resources;
>
> (d) An *equitable* sharing by all States Parties in the benefits derived from those resources, whereby the interests and needs of the *developing countries*, as well as

4 Emphasis added.

5 Adopted by General Assembly Resolution 1962 (XVIII), 13 December 1963.

6 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies; Adopted by General Assembly Resolution 34/68, 5 December 1979, Entry into force 11 July 1984.

> the efforts of those *countries [that] have contributed* either directly or indirectly to the exploration of the Moon, shall be given special consideration.[7]

Therefore, there is no absolute prohibition on appropriation of outer space and celestial bodies' resources. This is permitted subject to conditions that must be imposed by the States. Of the 105 States that have ratified the OST, only 15 had ratified the Moon Agreement, none with national space activities and unlikely to have any in the near future. In the last couple of years three other countries have joined the Agreement, Austria, Belgium and the Netherlands, all with significant space interests and actively engaged in COPUOS[8].

SPACE TRAFFIC MANAGEMENT

Space traffic management, STM, aims to protect the space environment and sustain its use for all nations. This is not only consistent with international space law, but positively encouraged. In its very first Article the OST requires that "exploration and use of outer space .... be carried out for the benefit and in the interest of all countries ..." OST, Articles I.

It creates the condition for developing STM in a cooperative environment in the terms of OST, Article III:

> States .., shall carry on activities in ... outer space ... in the interest of maintaining international peace and security and promoting international cooperation and understanding.

This is further reinforced by OST, Article IX that provides:

> In the exploration and use of outer space ... States ... shall conduct all their activities ... with due regard to the corresponding interests of all other States ...

SPACE TOURISM

There is nothing in space law that prevents space tourism. The topics that have engaged lawyers are primarily those relating to accidents.

Consider the scenario where a tourist ends up in the territory of an unrelated State. Article 4 of the Rescue Agreement,[9] requires that State to assist in the rescue of the *personnel* of a spacecraft and return them to the launching State. We continue to argue whether *tourists* are *personnel* of the spacecraft, or just passengers and not covered by the Treaty.

Another factor in space tourism is the liability of the operator in case of an accident. The operators are required to obtain the informed consent of the tourist. Both the amount and nature of the information to be given to the tourist are uncertain, but may be what an insurer would require. Any technical information may be subject to ITAR and therefore limited.

Furthermore, even with *informed consent*, liability for death cannot be waived in many jurisdictions, including England and other EU countries, New York or California.

---

7 Emphasis added.

8 UN Committee on Peaceful Uses of Outer Space.

9 Agreement on the Rescue of Astronauts, the Return of Astronauts and Return of Objects Launched into Outer Space; Adopted by General Assembly Resolution 2345 (XXII), 19 December 1967, Entry into force, 3 December 1968.

LIVING OFF-WORLD

As indicated above, no State or its national can appropriate any part of outer space, including any celestial body. Therefore, under international space law all States and their nationals will have free access to all parts of outer space, [OST, Article I]. This aspect of the OST may be argued now to be part of general international law and applicable to all States.

With that proviso, no law of outer space prevents *living off-world*. Individuals in off-world communities, who are not stateless, will be subject to laws of their nationality and come under the *personal jurisdiction* of that State. While in outer space, individuals launched in a spacecraft that is carried on the Register of a State, will also be subject to the jurisdiction of the registering State, which retains *jurisdiction and control* over the space object and its personnel. [OST, Article VIII]

FUTURE OF INTERNATIONAL SPACE LAW

The Treaties are not perfect, but they and general international laws of outer space do not prevent the legitimate conduct of space activities. As with any other area of human endeavour, they regulate the manner and circumstances in which they can be carried out.

Problems in space have more to do with unlawful practices and laxity of enforcement. It has always been clear that objects orbiting the Earth or other body will remain there for decades or centuries. It is a fact of physics. OST Article IX clearly requires that space activities must take account of corresponding interests of other States, which I say prohibits littering the orbits with debris. Yet only recently have space operation licences started to require safe de-orbiting of spent satellites.

Like the climate, space is international and requires internationally harmonised practices. There is growing focus on establishing best practices that States then adopt by inclusion in their national laws. One significant effort is the creation of principles of responsible behaviour in outer space, PORBOS, promoted by the European Union.

In the current geo-political environment there is no possibility of re-creating the laws we currently have or anything approaching as good. But, driven by self-interest States will take steps to secure a sustainable space environment.