



*Promoting Cooperative Solutions for Space*

# **Deficiencies and Pressing Issues in the Existing Legal Regime of Outer Space: the incompleteness of the legal order for space**

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Theme 3: Legal Regime for Outer Space**

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The law has limits. The law can take us so far; but beyond a certain point we are, as it were, on our own.

There is the limitation imposed by what we might call the 'grain' of international law.

You cannot continue indefinitely to ask more and more detailed questions and expect to get a legal answer. There is a limit to the level of detail in which every legal question can be answered.

The fact is that legal rules are not infinitely precise. There is always room for a marginal case, to which the application of the rules is unclear.

Vaughan Lowe, 2016

Hague Academy of International Law, *The Limits of the Law*, Recueil des Cours, Tome 379

It is increasingly clear that the body of international space law, drafted in the 1960s and 70s (and showing the hallmarks of that era), has a number of **deficiencies** in relation to existing, emerging, and proposed space activities.

These deficiencies include both **intended deficiencies** in the law—where the drafters refrained from lawmaking (either out of modesty or political expediency); as well as **unintended** and **emergent deficiencies** (where technological progress in spaceflight technologies and capabilities were not addressed in the law because they were simply not imagined at the time).

Both **gaps and unclarity** in space law mean that the subjects as well as the objects (non-state actors) of space law are simply uncertain as to the legality or illegality of their proposed activity.

**Legal uncertainty** clouds the regulation of everything from

- space debris removal
- satellite servicing
- manufacturing in space
- Near-Earth Object (NEO) threat mitigation and response
- the treatment of astronauts
- space activities by non-state actors
- anti-satellite testing
- conflict in / from / to outer space
- space resources use
- admissibility of satellite data in courts
- et cetera*

# DEONTIC LOGIC OF REGULATION

Action might be regulated in the following manners

- 1) **Obligatory**
- 2) **Prohibitory**
- 3) **Licensory** (generally prohibited, but permitted through license, with obligations)
  - 1) **Permissory** (permitted, sometimes without obligations)
  - 2) **Legally Neutral** [aka gaps/*lacunae*, *non liquet*, silence, etc.] and “no law areas”

See Ilmar Tammelo, *on the Logical Openness of Legal Orders, A Modal Analysis of Law with Special Reference to the Logical Status of Non Liquet in International Law*, 8 AJCL 187 (1959).

## DEFICIENCIES IN THE LAW

Gaps (*lacunae*) OR Lack-of-clarity (*non liquet*)  
[In their normative substance]

AND

Intentional “intrinsic” OR Unintentional “emergent”  
[In how they arose]

## DEFICIENCIES IN THE LAW

	Intentional “intrinsic”	Unintentional “emergent”
Gaps <i>lacunae</i>	<i>Drafters willfully refrained from legislating. The gap is intentional.</i>	<i>Gap developed through changing activities. Drafters did not envision or predict such activities.</i>
lack-of-clarity <i>non liquet</i>	<i>Drafters failed in their precision. The law is unclear on its face.</i>	<i>Lack of clarity developed through changing activities. Drafters did not ‘future proof’ the law for future activities.</i>

# WHERE CAN WE LOOK FOR DEFICIENCIES IN SPACE LAW?

We can look to:

- 1) The legal order of space law (and characterize & address them)

Here is where traditional *lacunae* and *non liquet* may be found

- 1) space activities themselves, and see deficiencies in how it is regulated

This will often give complimentary results; approached from different perspectives.

Legal analysis



factual analysis

## Article I

The exploration and use of outer space, including the Moon and other celestial bodies, shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind.

Outer space, including the Moon and other celestial bodies, shall be free for exploration and use by all States without discrimination of any kind, on a basis of equality and in accordance with international law, and there shall be free access to all areas of celestial bodies.

There shall be freedom of scientific investigation in outer space, including the Moon and other celestial bodies, and States shall facilitate and encourage international cooperation in such investigation.

## DEFICIENCIES IN THE LAW

	Intentional "intrinsic"	unintentional "emergent"
<b>Gaps lacunae</b>	<i>Drafters willfully refrained from legislating. The gap is intentional.</i>	<i>Gap developed through changing activities. Drafters did not envision or predict such activities.</i>
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## Article II

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.

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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.

### ARTICLE II—OUTER SPACE IS THE PROVINCE OF MANKIND

Article II is a statement that outer space is not subject to national appropriation by means of sovereignty, by means of use or occupation or by any other means, which means that outer space is the province of mankind. It is complementary to article I.

The CHAIRMAN. Any further questions?

Senator CHURCH. It cannot be claimed for Ferdinand and Isabella.

Mr. GOLDBERG. That is correct.

The CHAIRMAN. No. III.

Intentional “intrinsic” gap? Non liquet??

# Intentional “intrinsic” gap

transit of WMDs  
through space

## Article IV

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.

Intentional “intrinsic”  
lack of clarity

What does *envoy of  
mankind* mean?

Article V

States Parties to the Treaty shall regard astronauts as *envoys of mankind* in outer space and shall render to them all possible assistance in the event of accident, distress, or emergency landing on the territory of another State Party or on the high seas.

# Intentional “intrinsic” lack of clarity

How do we interpret & apply these principles?

What is *due* regard?

What is *harmful* contamination?

## Article IX

In the exploration and use of outer space, including the Moon and other celestial bodies, States Parties to the Treaty shall be guided by the principle of cooperation and mutual assistance and shall conduct all their activities in outer space, including the Moon and other celestial bodies, with due regard to the corresponding interests of all other States Parties to the Treaty.

States Parties to the Treaty shall pursue studies of outer space, including the Moon and other celestial bodies, and conduct exploration of them so as to avoid their harmful contamination and also adverse changes in the environment of the Earth resulting from the introduction of extraterrestrial matter and, where necessary, shall adopt appropriate measures for this purpose.

# EMERGENT DEFICIENCIES

Not found in the law themselves, but as space activities develop, and we question how they are regulated by the existing laws.

We look to the law, and are not given a clear signal as to an activity's legality.

# EMERGENT DEFICIENCY: SPACE MINERAL RESOURCE USE

## *Title*

TREATY ON PRINCIPLES GOVERNING THE ACTIVITIES OF STATES IN THE EXPLORATION AND USE OF OUTER SPACE,  
INCLUDING THE MOON AND OTHER CELESTIAL BODIES

## *Preamble*

Inspired by the great prospects opening up before mankind as a result of man's entry into outer space,

Recognizing the common interest of all mankind in the progress of the exploration and use of outer space for peaceful purposes,

## *Article I*

The exploration and use of outer space, including the Moon and other celestial bodies, shall be carried out for the benefit

and in the interests of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind.

Outer space, including the Moon and other celestial bodies, shall be free for exploration and use by all States without discrimination of any kind, on a basis of equality and in accordance with international law, and there shall be free access to all areas of celestial bodies.

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## Emergent Deficiencies driven by new activities

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## Paths Forward

This presentation is about identifying and characterizing deficiencies in space law - both the sources of law, and in the lack of regulation of emerging space activities.

It does not offer ways forward, to solve the deficiencies (or close the gaps). However, methods to do that include:

- : Courts deciding cases, & solving deficiencies with reference to general principles.
- : The creation of more (& more refined) space law & norms for space

Thank you!

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## References and suggested reading

H. Lauterpacht, THE FUNCTION OF LAW IN THE INTERNATIONAL COMMUNITY, *Chapter IV - 'Lacunae' in International Law*, (1933, 1966).

Julius Stone, *Non Liquef and the Function of Law in the International Community*, 35 BYIL 124 (1959).

W. M. Reisman, *International Non-Liquef: Recrudescence and Transformation*, 3 Int'l L. 770 (1969),  
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J. Kammerhofer, *Gaps, the Nuclear Weapons Advisory Opinion and the Structure of International Legal Argument between Theory and Practice*, 80 BYIL 1 (2010),  
<https://doi.org/10.1093/bybil/80.1.333>

H. Quane, *Silence in International Law*, 84 BYIL 1 (2014),  
<https://doi.org/10.1093/bybil/bru021>.

V. Lowe, *The Limits of the Law*, Hague Academy of Int'l Law, 2016.

In fact, being, as we are, only on the threshold of the law of tomorrow, we should give the rules already in existence a very extensive interpretation and see to it that those to come fully implement these basic objectives.

In shaping the law of outer space, as indeed of international law in general, the jurist has an important task to perform. It is not only the framing of technical treaty clauses, not only the analysis of documents. It is much more: he is called upon to make law progress and move, to mould it in the interests of men and nations, to guarantee the protection of law to the great achievements of the past and present, to remove threats to our survival, to strive for a progressive law of tomorrow.

Manfred Lachs, 1964

Hague Academy of International Law, *The International Law of Outer Space*, Recueil de Cours, Tome 113.