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# SPACE OBJECTS - "WHILE IN OUTER SPACE"

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The Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space (Space Treaty) of 1967, the basic instrument of international space law does not define the concept of space object. "Objects" appear in the Treaty as "objects launched into outer space" (Articles VII, and VIII), "objects placed into orbit around the Earth" (Article IV) or simply "objects launched."

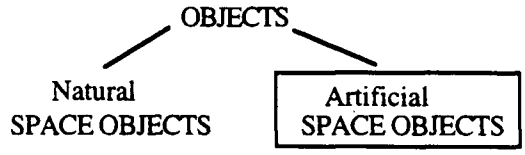
The Convention on International Liability for Damage Caused by Space Objects (Liability Convention) of 1972 - otherwise referring to the term space object 16 times - merely gives a definition per idem stating that "the terms space object includes component parts of a space object as well as its launch vehicle and parts Thereof" (Article I/d).

The Convention on Registration of Objects Launched into outer space (Registration Convention) of 1975 is dealing with "objects launched into outer space" - i.e. space objects "launched into Earth orbit or beyond" (Article II.) Registration by the launching state is an obligation for such devices. For the purpose of registration attempted launches of space objects are excluded. This Convention makes mention of space objects 17 times.

Attempting to define space object we have to follow the classic rule: definition fiat per genus proximum et differentiam specificam.

Genus proximum in this case is: object. To quote only some encyclopedic dictionaries object is "a material thing that can be seen or touched" (1.), or "thing placed before eye or presented to sense, material thing" (2.) or "a perceptible body or thing" (3.).

Differentia specifica: space objects differ from other things by the specifics feature that they are parts of the cosmic space - things moving in the universe following astronomical rules (Keplerian Laws). In this broader sense celestial bodies, planets, moons, asteroids etc. are space objects too.




In legal (narrower) sense only artificial (man-made) objects may be qualified as space objects.

Further question for a definition is where and when does start this quality of man-made object? In the theory two different answers to this question may be given.

A/

The spatial (topographic) type of definitions is based upon the concept of outer space and the subjacent atmosphere.

For example:

> "...a space object is any object which is designed or intended for use in outer space." (S. Gorove)
>
> "...every (regardless of the used name) technical device which may serve the space exploration or use and which was placed beyond the atmosphere being subject to state sovereignty." (A. Góbriel)
>
> "...artificial objects aimed to leave Earth atmosphere." (E. Fasan)
>
> "...as far as jurisdiction and control are concerned, a 'space object' is an 'object launched into outer space'." (I. H. Ph. Diederiks-Verschoor)

For me this kind of definition seems to be questionable due to the simple fact that up to the present day all attempts to state where outer space begins or Earth atmosphere ends, hopelessly failed.

B/

Having no definition of outer space in mind the functional (orbital) theory provides the only realistic approach to a definition of space object.

The rules of space law govern space activity i.e. any activity purposing to put any object into orbit round the Earth or other celestial bodies, the motion of such objects along such orbits or their return therefrom, their landing and staying on celestial bodies other than Earth and return therefrom (4.).

Space objects are things by which this activity is carried out.

The legal meaning of space objects, taking into consideration above premises may be defined as follows:

Space objects are man-made objects launched into orbit round the Earth or other celestial bodies, or put on the surface of a celestial body other than Earth.

The decisive element of this definition is the orbital movement - realized or intended. Launching of sounding rockets, ICBM-s, though their suborbital trajectory crosses spaces higher than the perigee of satellites orbiting round the Earth, is no space activity and these devices can not be included into the said definition. They are no space objects. This view may be supported by the practical application of the Registration Convention. Launching of rockets are not registered and this practice is not considered as a breach of obligations laid down in the Convention. I agree fully with A. D. Terekhov in the view that merely because a certain man-made object is or has been at an altitude which is indisputably considered to by in outer space is not, by itself, a sufficient justification for it to be legally qualified as a space object (5.). On the other hand component parts of space devices (6.)k, or parts, fragments of a space object even if they should be qualified space debris, are space objects being manmade orbiting objects (7.).

The Space Treaty in Article VIII stipulates:

A State Party to the Treaty on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such object, and over any personnel thereof, while in outer space or on a celestial body.

Concerning the question of "where and when" is it possible to interpret this principle as an argument for the spatial approach of the term "space object"? In my humble opinion no.

The qualification "space object" will not be vested on an object at a certain altitude. The intention of space (orbital) activity exists at the very moment of launching. The object, therefore, is from this moment a space object. Though under the jurisdiction of the launching state which according to Article VIII. will be retained during the whole flight - but governed by special rules of space law (jus speciale) from zero altitude and time of lift-off.

This only consequent interpretation appeared in a "compromise proposal" of the Soviet Union to COPUOS in 1987, which, in a peculiar way, combined the spatial and functional approach:

> Any object launched into outer space shall be considered as being in outer space at all stages of its flight after launch at which its altitude above sea level is 110 km or more (8.).

The main idea in this formula is not else than even a delimitation of outer space could not exclude the necessity of the functional determination of rights and obligations of launching states resulting from international space law.

## FOOTNOTES

1. The Oxford Reference Dictionary. Ed. J. M. Hawkins oxford 1986, p. 579.

2. The English Illustrated Dictionary. Second Ed. London 1979, p. 483.

3. Webster's Dictionary of the English Language. New York 1991, p. 483.

4. Gy. Gál: Space Law, Budapest-Leyden-Dobbs Ferry 1969, p.36.

5. A. D. Terekhov: Passage of Space Objects through Foreign Airspace. Proceedings IISLXXXII. Coll. 1989

Torremolinos, p. 52. Among other national legislations e.g. the Act on Space Activities (1982:963) of Sweden accepted this view: "Launching of sounding rockets is not designated as space activity" (Section I.).

6. See e.g. United Kingdom Outer Space Act 1986, 13-(1)b: "space object" includes the component parts of a space object, its launch vehicle and the component parts of that.

7. That the object is no longer capable of fulfilling its duty has no influence on its legal status." G. Hacket: Space Debris and the Corpus Iuris Spatialis. (Forum for Air and Space Law, Ed. by M. Benkó, Vol. 2. p. 58.)

8. "Compromise proposal an the question related to the definition and delimitation of outer space." UN.Doc.A/AC. 105/L.168 of 5 June 1987.