

MAJOR DEFINITIONAL ISSUES IN THE SPACE AGREEMENTS

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Abstract

This presentation purports to focus on significant definitional and policy issues associated with the five international space treaties drafted under the auspices of the United Nations by the Committee on the Peaceful Uses of Outer Space (COPUOS). It identifies briefly some of the basic concepts and terms set forth in these agreements which need clarification and recommends that the issues of the need, nature and extent of clarification (if possible in harmony with municipal law) should be undertaken by scientists, lawyers and policy makers in an interdisciplinary effort at the highest levels with a view to determining whether needed clarifications might serve as possible future supplements to international space law.

Introduction

The uncertainty of the meaning of many important and frequently used concepts and phrases used in the five COPUOS-drafted international space treaties¹ as well as the varied legal consequences arising from different understandings and perceptions relating to them are likely to contribute to disputes and legal instability which, in turn, may adversely affect efforts aimed at the commercialization of space activities.

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A thoughtful study by the International Institute of Space Law (IISL) would help both national and international policy makers in their consideration of relevant definitional issues and may also be of assistance to ensure, to the extent possible, the harmonization of national and international space laws.²

The importance of one aspect of the need for definitional clarification has already surfaced in recent COPUOS meetings in connection with the meaning of "launching State."³ Apart from the concept of "launching," which under its partial definition includes "attempted launchings,"⁴ there are several equally important household phrases like "outer space" and "space object" which are also only partly clarified⁵ while others, like "space debris," "procurement," "personnel" and "astronaut," remain undefined in the space treaties.

Outer Space

As to the key phrase "outer space," fortunately, international customary law over the years appears to have firmly established the generally accepted rule that earth orbiting satellites move in outer space and leaves no doubt that this area and the area beyond it is outer space.⁶ Notwithstanding its clarity, the rule leaves the question of the precise delineation of airspace and outer space, which has been with us since the beginning of the Space Age and still appears on the agenda of COPUOS, unresolved. While opinions have differed about the need for a precise delimitation, the advent of the aerospace plane is likely to refocus attention on it and may also lead to a reconsideration of past positions.⁷

Space Object

Equally if not more important is the issue of the meaning of "space object." Individuals and

organizations will have to know whether a particular object in a given set of circumstances is to be regarded as a "space object" under the space treaties -- because significant legal consequences follow from such determination. An attempt at clarification may point to an authoritative pronouncement that may provide guidance in reflecting the choices made by international policy makers as to whether damage caused by a particular object should or should not entail international liability under the Liability Convention and whether such an object should or should not be returned to the launching authority as required by the Astronauts Agreement.⁸

Related issues of practical operational relevance which will require special consideration include, for instance, the issue of whether, under the respective space treaties, international liability extends to damage caused by man-made "space debris" on earth or in outer space and to damage caused before, during or after the embarkation and disembarkation phases.

The panorama of terms, phrases and expressions used in the five space treaties, ranging from "manned and unmanned stations"⁹ to "objects landed or constructed on a celestial body,"¹⁰ raises a long list of additional significant legal and related policy issues associated with the notion of "space object" which will require careful assessment by authoritative decision makers. Foremost among them is the fundamental issue whether provisions of the space treaties applicable to space objects are also applicable to them, or to put it briefly, are all of these objects to be regarded as "space objects." These and a host of other issues will need to be analyzed in the light of different factual assumptions, keeping in mind that some of the facilities, equipment, stations, etc. may be made of extraterrestrial materials. In any scenario associated with the use of the moon and other celestial bodies and the impending utilization of their resources, the issue whether in given situations damage caused by the use of such materials entails liability or requires the object's return under the space treaties will have to be addressed.¹¹

Launching

Turning to the term "launching," private entrepreneurs will have to know whether take-off

of an aerospace plane constitutes "launching" in the sense of the space treaties. For instance, if launch is understood to mean the "placing or attempting to place a vehicle constructed for the purpose of operating in, or placing a payload in a suborbital trajectory or in outer space,"¹² an aerospace plane would appear to be covered despite the fact that it would take off as a conventional airplane and would only reach the fringes of outer space. Nonetheless, it seems that an authoritative policy determination of the meaning of launch will have to be made.

Procurement

The question of what constitutes "procurement" is another important area requiring special attention especially in connection with the transportation of foreign space objects or people. Both public and private entities will need to be certain of the type of involvement in a space activity which will amount to "procurement" of the launching of a space object. Such "procurement" will make the State a "launching State" under the Registration and Liability Conventions¹³ with attendant consequences of requirements for registration and liability for damage caused by the launched space object.

Procurement may range from procuring the launch of minor objects such as get-away specials, or major objects, such as communication satellites. One of the questions is whether, irrespective of the size of the object requested to be flown, the request should be regarded as procurement of the launch, particularly when many additional sizeable and valuable objects are carried. In other words, it will have to be determined whether or not every participation by payload or personnel in a space endeavor, not in the "launching" phase *per se* but otherwise, is to be regarded as "procurement."¹⁴

Personnel and Astronauts

Lastly, it may be recalled that the law embodied in the texts of the space treaties does not address the issue whether "personnel" of a space object is to be taken to include not only the crew but also the passengers of a spacecraft.¹⁵ One of the related questions in connection with the aerospace plane will be whether to regard the personnel or passengers of such a plane as "astronauts."¹⁶

The foregoing brief illustrations of important definitional and related policy issues, left unresolved in the major international space agreements, have been intended to furnish some idea about their many faceted implications.

Conclusion

As with all human activities in modern times so also with space activities law and legal regulations had to accompany the scientific discoveries and technological achievements in order to provide some measure of order and in an attempt to prevent or reduce the chances of possible conflicts from arising in mankind's new environment.

Normally, the law is slow to react to societal changes. So far, this apparently has not been the case either in the domestic or the international field of space law. While the tempo is likely to diminish in the future and has already shown some signs of this, there is every expectation that the body of law will substantially grow with the expected increase of human activities in space.

The briefly outlined definitional issues should be addressed by policy makers to provide much needed legal stability conducive to fostering the involvement of private enterprise in space activities. The clarification of these issues will be ever more pressing as we expand the horizons of space exploration and use in the 21st century.

With a reduction of international tensions and the disappearance of the cold war psychology in what used to be a bipolar world, the unique opportunities of world-wide international cooperation make the objective of achieving consensus on the scope and meaning of hitherto undefined or only partially defined space law terms and concepts less difficult to achieve. It is this writer's belief that the time is now to advance suitable proposals, embodying clarification of key notions and phrases of space law for consideration by national and international institutions and policy makers.

The issues of the need, nature and extent of clarifications of basic concepts and terms in international space law (if possible in harmony with municipal space law) should be undertaken by scientists, lawyers and policy makers in an interdisciplinary effort at the highest levels with a view to determining whether needed clarifications might serve as possible future supplements to international space law.

The annual IISL Colloquia will continue to provide a forum for the discussion of significant definitional and related policy issues arising from activities associated with the exploration and use of outer space. In addition, the Institute through the publication of its proceedings, research projects, direct communications to the UN and other organizations can be of assistance in the formulation of legal instruments and influence national and international policy making. In this effort the IISL, together with the International Astronautical Federation and the International Academy of Astronautics, can play a key role. It is our hope that the IISL will meet this challenge.

NOTES

1 The five treaties are: Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, Jan. 27, 1967, 18 U.S.T. 2410, T.I.A.S. No. 6347, 610 U.N.T.S. 205 (*entered into force for the United States* Oct. 10, 1967) [hereinafter "Outer Space Treaty"]; Agreement on the Rescue of Astronauts, the Return of Astronauts, and the Return of Objects Launched into Outer Space, April 22, 1968, 19 U.S.T. 7570, T.I.A.S. No. 6599, 672 U.N.T.S. 119 (*entered into force for the United States* Dec. 3, 1968) [hereinafter "Astronauts Agreement"]; Convention on International Liability for Damage Caused by Space Objects, March 29, 1972, 24 U.S.T. 2389, T.I.A.S. No. 7762, 961 U.N.T.S. 187 (*entered into force for the United States* Oct. 9, 1973) [hereinafter "Liability Convention"]; Convention on the Registration of Objects Launched into Outer Space, *opened for signature* Jan. 14, 1975, 28 U.S.T. 695, T.I.A.S. No. 8480, 1023 U.N.T.S. 15 (*entered into force for the United States* Sept. 15, 1976) [hereinafter "Registration Convention"] and Agreement Governing the Activities of States on the Moon and Other Celestial Bodies - adopted by the U.N. Gen. Assembly on December 5, 1979, *opened for signature* on Dec. 18, 1979, *entered*

into force July 11, 1984 (*not in force for the United States*), U.N. Doc. A/RES/34/68 (1979) [hereinafter "Moon Agreement"].

2 A special session was devoted to definitional issues during the 1991 IISL Colloquium in Montreal under the chairmanship of this writer. See the papers presented by Professors Böckstiegel, Cheng, He, Kopal and Wirin, 34 PROC. COLLOQ. L. OUTER SPACE 13-52 (1992).

3 See Stephen Gorove, *Thirtieth Session of the Legal Subcommittee of COPUOS - Chances for Progress and Some Thoughts for Possible Consideration*, *id.* at 376, 378.

4 Liability Convention, *supra* note 1, at Art. I (b).

5 For a partial clarification of the notion of "outer space," see text preceding footnote 6. As to "space object," while the major space treaties frequently use this phrase, only a partial definition may be found in the Liability and Registration Conventions both of which state that the term "space object" includes "component" parts of a space object as well its "launch vehicle" and "parts" thereof. See Liability Convention, *supra* note 1, Art. I(d) and Registration Convention, *id.* Art. I(c).

6 See Myres S. McDougal, *The Emerging Customary Law of Space*, 58 NW. U. L. REV. 618 (1964); STEPHEN GOROVE, DEVELOPMENTS IN SPACE LAW - ISSUES AND POLICIES 39 (1991).

7 Cf. Stephen Gorove, *supra* note 3, at 381.

8 Astronauts Agreement, *supra* note 1, Art. 5(3)

9 Moon Agreement, *supra* note 1, Art. 9, para. 1.

10 Outer Space Treaty, *supra* note 1, Art. VIII.

11 Cf. Moon Agreement, *supra* note 1, Art. 11(2).

12 For a comparable definition of a launch vehicle in the Model Agreement between the Department of the Air Force and NASA, see Stephen Gorove, *U.S. Space Laws in Perspective - Focus on Recent Domestic Highlights*, 33 PROC. COLLOQ. L. OUTER SPACE 206, at 207 (1991)

13 See Registration Convention, *supra* note 1, Art. I(a) and Liability Convention, *supra* note 1, Art. I(c).

14 See STEPHEN GOROVE, DEVELOPMENTS IN SPACE LAW - ISSUES AND POLICIES 188 (1991).

15 The question of the status of passengers has been the subject of several discussions at IISL Colloquia. See, for instance, Professor Diederiks-Vershoor's report on the Dresden Colloquium, 18 J. SPACE L. 165, at 171 and 172,

16 See Stephen Gorove, *Legal And Policy Issues of the Aerospace Plane*, 16 J. SPACE L. 147, at 151 (1988).