THE PROBLEM OF SECURITY IN OUTER SPACE IN LIGHT OF THE RECENTLY ADOPTED INTERNATIONAL CONVENTION ON LIABILITY IN OUTER SPACE

*Dr. Michael Smirnoff**

Today, in international law, the problem of security has acquired a new dimension. With the conquest of the air, and now of outer space, there has come the new notion of "security in the vertical sense".

The problem of security in air space is now sixty years old, and many books and articles have been written on this subject. In recent times international literature has dealt especially with the problem of security in outer space. One could argue that the existence of some 2,000 artificial satellites does not justify the establishment, for the huge region of outer space, of some special measures for security. However, we contend that the number of artificial satellites, spaceships and special laboratories for outer space research is becoming more and more important, and a direct danger of colliding space craft ceases to be merely a remote consideration. Such collision could occur between spacecraft themselves or between spacecraft and conventional airplanes in the air space at the moment of take-off of spacecraft or before their passage into orbit.

In this connection, it should be noted that the problem of delimitation of air space and outer space is still not solved. Our proposition at the London Colloquium on International Space Law,[1] to solve this problem by the establishment of a common legal regime for air- and spacecraft, remained merely a proposition.

Opposition to our solution for the delimitation of air and outer space was justified by the then existing enormous difference between the technological and legal aspects of air and space flights. But, with the development of mixed air-space lines which will begin at one point on earth and then pass rapidly through outer space to another point on earth, a common legal regime would provide a convenient substitute for two different legal systems for the same craft and same activities.

Security in outer space becomes even more important in all its aspects, particularly in view of the need for a set of measures to reduce the chances of direct collision. The regulation of all activities in outer space to avoid international conflicts on earth, leaving aside possible conflicts with intelligent living beings that may be found in outer space, enhances the need for such measures.

In circles which for the past fifteen years have dealt with the problems of outer space, the problem of security has been identified with the problem of liability. The solution to the problem of liability, without a doubt, should diminish the possibilities of

---

*Member of the Editorial Advisory Board of the *Journal of Space Law,* member and past president of the International Institute of Space Law, member of the International Astronautical Federation, and member of the International Astronautical Academy.

[1] Proc. 2nd Colloquium on the Law of Outer Space 152 (1960).

conflicts in outer space. Although the complete identification of the problem of security with the problem of liability cannot be carried to the extreme, it is clear that inclusion in international legal documents of all activities which create not only liability for compensation of damages but also require interdiction, would go far toward the relaxation of relations in outer space. In this respect, the basic document for the legal regulation of relations in outer space is the Space Treaty of 1967,[2] which has foreseen a whole set of activities of a non-peaceful character and has explicitly forbidden such activities.

Also, we should be reminded that within the framework of the International Astronautical Federation[3] and the International Institute of Space Law there had existed for some time a committee for liaison between technical and legal experts on the problems of outer space.[4] This committee had exactly determined the activities which by their nature could be harmful in outer space. The list of activities was prepared at the same time when the interstate organizations officially produced the International Convention on Liability in Outer Space.[5]

The Convention has been on a list of problems ever since the very beginning of the attempts to solve such problems legally through the United Nations. The Space Treaty of 1967 merely outlined the general solution to the problems of liability of States in outer space and, therefore, had to be expanded by putting more detailed norms in what became the Liability Convention. It may be recalled that as far back as 1959, this problem of spelling out the details was put on the agenda of the U. N. Ad Hoc Committee for the Peaceful Uses of Outer Space. Later, in 1962, a permanent Committee on the Peaceful Uses of Outer Space was established by the United Nations with its legal and technical subcommittees. The Space Treaty of 1967 was the basic legal document from which came the detailed drafts of two conventions: the Agreement on the Rescue and Return of Astronauts (1968),[6] and the Convention on Liability in Outer Space (1972).

The latest points of concern for the Legal Subcommittee of the permanent U. N. Committee are in the preparation of drafts for a new convention on the registration of

---

[2]Treaty of Principles Governing Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, signed January 27, 1967, entered into force October 10, 1967, [1967] 18 U.S.T. 2410, T.I.A.S. No. 6347.

[3]The International Astronautical Federation was founded in 1950. It is presently dealing with research on the technical aspects of astronautics. The International Institute of Space Law was created within the framework of the International Astronautical Federation in 1960. The task of the International Institute of Space Law was to study the legal problems of outer space. Its first director was the author of this article.

[4]The Liason Committee, presently under the chairmanship of Dr. Manfred Lachs, a Polish lawyer, has representatives from the astronautical field as well as lawyers who primarily deal with the problems of outer space.

[5]For a text of the Convention on International Liability for Damage Caused by Space Objects, see 8 U.N. Monthly Chron. 19-25 (1972).

[6]Agreement on Rescue of Astronauts, the Return of Astronauts, and the Return of Objects Launched Into Outer Space, U.N. Doc. A/Res/2347 (XXII), January 16, 1968, entered into force December 3, 1968, [1968] 19 U.S.T. 7570, T.I.A.S. No. 6599.

space craft and for a special convention on the legal status of the moon.

The convention which interests us particularly in this article is the International Convention on Liability for Damages Caused by Space Objects.[7] This Convention was the fruit of lengthy studies in the Legal Subcommittee and, in many semi-official and non-official lawyers' organizations. As an example, we should point out that as far back as 1960, during the Third Colloquium on the Law of Outer Space, the problem of liability was debated in the International Institute of Space Law. As a separate question presented in an introductory report by Professor Pepin of France, the Colloquium gave rise to a very ample discussion of the problem at the above mentioned meeting of the Institute in Stockholm.[8]

The problem of liability for damages caused in outer space, as a measure of the increase of security in outer space, had not only legal and technical aspects but was also narrowly linked with the financial aspect of that question. The clearly declared desire to save mankind from damages caused by spacecraft had inevitably an economic side as well. This consisted of the fact that financial means had to be found for the insurance of liability, without which the latter could become a dead letter because of the huge amounts of damages that might result from the different activities of spacecraft.

In the Legal Subcommittee several initial drafts were submitted by Belgium, the United States, Hungary, India and Italy. After many years of discussion of those drafts the Legal Subcommittee finally, on June 28, 1971, adopted a definite text. This draft was sent to the General Assembly of the United Nations during its 26th Session and the Assembly adopted, on November 29, 1971, the Convention in its final form. Ninety-four countries voted for the adoption; no vote was cast against the Convention, while there were abstentions only by Canada, Japan, Iran and Sweden. On March 29, 1972, twenty-three countries signed the Convention, and now its ratification is proceeding.

The Convention, with its twenty-eight articles, represents the quintessence of international thought on the problem of liability in outer space as founded upon the basic Space Treaty and the Agreement on the Rescue and Return of Astronauts. But, in its twenty-eight articles, the new Convention remains merely an enlargement of the considerations presented in the two earlier texts.

To respond to its basic task, the increase of security in outer space, the Convention had to create very precise definitions of the notions with which it operated. Thus, in Article I, it gave definitions of the following terms: damages, launching, the launching state, and space object. Although some of these definitions have already been attacked for their insufficient precision, they are very welcome news in the practice of interna-

---

[7] I. H. Ph. Diedericks-Verschoor, The Convention on International Liability for Damages Caused by Space Objects. Proc. 15th Colloquium on the Law of Outer Space 19 (1973).

[8] Proc. 3rd Colloquium on the Law of Outer Space 131-37 (1961).

tional conventions on space law.[9]

The basic principle of the Convention is absolute liability of countries for all damage caused by their spaceships on the ground or to aircraft in flight. We are dealing here with so-called "absolute liability", whereby states are always liable even in cases of "*force majeure.*"

The principle of liability, to the extent that it involves very heavy financial burden with respect to the insurance problems of that liability, has not been the object of substantial discussion. The era of cosmic flight brought with it undoubtedly an untra-hazardous activity. As a result, men on earth would be deprived of an elementary means of defense, since it is impossible to foresee re-entry into the atmosphere of all parts of a spacecraft which may cause very substantial terrestrial damage. As a typical indication of concern for this problem, a member of the British Parliament has recently drawn attention to an example of damages to people and property in the case of a spacecraft falling on Westminster Abbey.

In the discussions leading to preparation of the text of the Convention the example of the Rome Convention on liability for damages caused by air traffic to third persons on the ground was frequently mentioned.[10] There, the principle of objective, rather than causal, liability was adopted. Since, in that Convention, objective liability was accepted as far back as 1952, there seemed no reason why not to adopt this principle also in the Convention on Liability in outer space.

An exception to this general rule of absolute (objective) liability was foreseen in article III of the Convention, which refers to the damages "caused elsewhere than on the surface of the earth to a space object of one launching State or to persons or property on board such a space object by a space object of another launching State." In this case the liability will be causal based on the fault of the launching state. This reminds us of a

---

[9]At the 15th Colloquium on the Law of Outer Space at the International Institute of Space Law, a special meeting was devoted to the problem of interpretation and application of the new convention on liability in outer space. At the meeting the following papers were presented: M. Bodenschatz, United Nations Liability Convention for Damages Caused by Space Objects; A. Cocca, The Concept of Full Compensation in the 1972 Convention; I. H. Ph. Diedericks-Verschoor, *supra,* note 7; G. Gal, Space Treaties and Space Technology-Questions of Interpretation; J. Harczeg, Some Problems of the Convention on Liability Arising from Space Objects; G. Meloni, Analyse de L'Interprétation de la Convention sur la Responsabilité Resultant des Activities Spatiales; F. Rusconi & P. Luzeane, Algunas Puntualisciones Acercà de la Interpretacion y Applicacion del Convenes Sabre la Responsibilidad Internacional; C. Paterman, Interpretation of Some Articles of the Liability Convention; D. Poulantzas, Some Remarks on the Convention on International Liability for Damages Caused by Space Objects; J. Rajski, Interpretation et Application de la Convention sur la Responsabilité pour Dommages Causés par des Objets Spatiaux; S. Williams, Further Remarks on Space Liability.

[10]Rome Convention Relating to Damage Caused by Foreign Aircraft to Third Parties on the Surface, signed October 7, 1952, entered into force February 4, 1958, I.C.A.O. Doc. 7364 (1952), 310 U.N.T.S. 181.

similar situation in air law, namely the Draft Convention on Aerial Collision [11] which was also based on the principle of casual liability.[12]

The Liability Convention also foresees in article IV-1(b) case of cf causal liability when the damages were done to a "space object of a third State or to persons or property on board that space object elsewhere than on the surface of the earth." In this case the liability to the third State will again be causal based on the fault of the launching States or of persons dependent upon those States.

The Convention allows for exoneration from liability under article VI in the well known case where the injured party, by his own fault, contributes to the damages.

It is important to note that whenever the Convention refers to States, the reference is also applicable to international intergovernmental organizations which deal with space activities.[13]

The determination of damages and compensation for those damages is based upon the principles of international law and the principles of justice and equity.[14] The reparation of damages must be such as to restore persons, States or international organizations to the situation which existed prior to the damage. Despite the fact that this seems to mean that only direct damages are compensable, and not indirect damages, it is quite possible that under appropriate circumstances another opinion may prevail.

Very lengthy discussions were necessary for a solution to the problem of limitation of responsibility. As a matter of fact, the Convention does not contain any limits of the amount of liability. This will probably be a decisive factor in the ratification process. Many nations will consider such an omission as financially implying too heavy a burden and, insofar as insurance is concerned, as having no chance of realization.

---

11 This Draft was elaborated on by the Legal Committee of ICAO at its 15th Session in 1964. after many other drafts had been written by the Comité Internationale Technique d'Experts Juridiques Aériens (CITEJA) before the war. It was the opinion of many delegates that this draft was not precise enough. It has, therefore, not been presented for ratification to the member States. Report and Minutes of the Legal Commission, I.C.A.O. Doc. 8517, A15-LE/10 (1964).

12 The literature on aerial collisions is extensive; notice should be given to the following: M. Bodenschatz, Haftungsfragen Zusammenstoss von Luftfahrzeugen, Versicherungswirtschaft, 217 (1960); M. Bolla, L'Abordage Aérien, These 176 (1947); H. Drion, Zur Frage eines Internationalen Abkommens Betr. den Zusammenstoss in der Luft, ZLR 22-31 (1957); Fitzgerald. The Development of International Liability Rules Governing Aerial Collisions, Current Law and Social Problems 154-55 (1961); M. Juglart, Abordage Aérien, Revue Trimestrielle de Droit Commercial 662 (1960); R. Mankiewicz, The ICAO Draft on Aerial Collision, 30 J. Air. L. & Comm. 375-89 (1964); I. H. Ph. Rode-Verschoor, La Responsabilité dans L'Abordage entre les Aeronefs, RGA 274 (1955).

13 See Art. XXII of the U.N. Convention on International Liability for Damage Caused by Space Objects, as approved by the Legal Subcommittee of the U.N. Committee on Peaceful Uses of Outer Space on June 29, 1971, endorsed by that Committee in September, 1971, and adopted unanimously by Resolution 2777 (XXVI) of the U. N. General Assembly on November 29, 1971. For text, see 8 U. N. Monthly Chron. 19 (1972).

14 *Id* at Art. XII.

During the discussion of a definite text for the Convention some delegates declared themselves in favor of the establishment of an International Fund for the payment of damages caused by space craft. This proposition was not adopted, and the financial aspect of this problem continues to harbor great difficulties for the eventual ratification of the Convention.

As occurred with the Space Treaty of 1967 which produced many differing interpretations, such perplexities may also be the case with the Convention on Liability in Outer Space. It is well known that in preparation and later in practice there were many differences in the interpretation of article IV of the 1967 Space Treaty. During the six years after creation of that treaty many attempts were made to establish authoritative interpretations of its articles.[15] In view of the failure of those efforts the U.S.S.R. on June 4, 1971, sent directly to the Secretary General of the United Nations its proposed text for a new treaty on the legal status of the moon.[16] This is now on the agenda of the U. N. Committee on the Peaceful Uses of Outer Space, and it is likely that it will be adopted after a thorough discussion of its provisions.

Utilizing our experience with the Space Treaty of 1967, the International Institute of Space Law devoted, as already mentioned, a part of its Colloquium in Vienna, 1972, to the problems of interpretation and application of the new Convention on Liability in Outer Space. It is quite understandable that it was impossible in so short a time to reach conclusions regarding interpretation and application of the different articles of the new Convention. Therefore, it is normal that this problem should appear again on the agendas of many discussions of international lawyers and certainly on the next Colloquium of the International Institute of Space Law which will be held at Baku, U.S.S.R. in October of 1973.

Our experience with the works which were presented before the last Colloquium on the Law of Outer Space in Vienna, 1972, shows us that with regard to the security problem in outer space the situation is now much better. Many cases which could give rise to international conflicts in cosmic law are now neutralized by the detailed regulations of the Liability Convention.

It is true that the value of the Convention is a function of the number of its ratifications. Unfortunately, there have been so few ratifications that even article XXIV of the Convention, which provides that five ratifications are necessary for the validity of the Convention, has not yet been fulfilled.[17]

---

[15] M. Smirnoff, La Nécessité d'un Traité sur le Statut Juridique de la Lune. Proc. 15th Colloquium on the Law of Outer SpaCe 6 (1973).

[16] At this point, it is appropriate to note the arguments of G. Zhukov on the position of the USSR delivered to the 14th Colloquium on the Law of Outer Space. G. Zhukov, The Legal Regime of the Moon: Problems and Prospects. Proc. 14th Colloquium on the Law of Outer Space 50 (1972).

[17] Editor's note: Convention on International Liability for Damage Caused by Space Objects, done at Washington, London, and Moscow March 29, 1972, entered into force September 1, 1972, ratified by the President May 18, 1973, 68 Dept. State Bull. 949 (1973).

Therefore, if the Liability Convention is to become an element for the betterment of relations in outer space, it is necessary to make all efforts that will speed its ratification. To this end, the meetings of lawyers all over the world who share this concern should be of greatest value.