

INFLUENCE OF THE CONQUEST OF
OUTER SPACE ON NATIONAL SOVEREIGNTY: SOME
OBSERVATIONS

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The conquest of outer space has opened a new phase in the relationship between national law and international order. It is a vital factor in the evolution of society and space activities and, in the words of the Chairman of the United Nations Committee on the Peaceful Uses of Outer Space, Mr. Peter Jankowitsch, "while new in man's experience, nevertheless holds forth a promise of enhancing our ability to survive not only on the planet Earth but in the Universe itself."¹

Within a remarkably short time after the first Sputnik was launched into orbit around the Earth in October 1957, a universal consensus was achieved on the two fundamental legal principles to govern this new medium; first, that outer space is free for exploration and use by all States and, second, that it is not subject to national appropriation. The basis of the legal regime applicable to outer space is to be sought *not* in its nature but in the consensus that by the principle of freedom, a principle confirmed by the Outer Space Treaty of 1967, the interests of the whole world community are best served.

It has long been recognized that in the present circumstances where only a handful of States possess space capabilities, an unregulated application of the freedom principle would lead to situations of a monopolistic nature. It is for that very reason that efforts by the U.N. continue to be made to devise rules by which the needs of the *non-possidentes* are protected. The question arises, however, as to what extent these efforts have had positive results.

Among the several issues on which the U.N. Committee on the Peaceful Uses of Outer Space is presently trying to frame rules, two are of direct practical significance; namely, the use of direct broadcasting and remote sensing satellites. An examination of the lengthy discussions in the Committee on the various aspects of both these issues, however, lies outside the scope of this article. Although valuable progress has been made in reaching agreement on several of the aspects involved in the application of both types of satellites, the views expressed previously on the most fundamental problems arising in both fields are yet too far apart to expect that a consensus on binding international rules can be reached in the near future. In the field of direct broadcasting

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¹U.N. Doc. A/AC.105/p.v. 168, at 12 (1977).

satellites, the most important and controversial issue is that of freedom of information. In the field of remote sensing satellites, the conflicting opinions relate mainly to the question of whether the data obtained by these satellites should be disseminated internationally and made available to all countries or whether the sensing State should provide the information *only* to the sensed State.²

At this stage there is one great impediment to the adoption of rules by which limitations on national sovereignty in both fields are imposed; namely, an insufficient awareness of the fact that the immense benefits which can flow from the use of outer space will only be achieved at the expense of the absolute priority of national sovereignty. Although the conquest of space has not eliminated the pivotal importance of national interest, it has radically affected its dimension and objectives. The extent to which the national interest has been changed by this new medium is only vaguely realized. On the other hand it should be recognized that a universal acceptance of certain limitations on national sovereignty, necessary to enable the world community to draw the immense benefits flowing from the use of outer space, will, to a great extent, be dependent on an alleviation of the fear of the many States which at present lack the industrial and technological capabilities to participate in space activities. Their fear being that the freedom of outer space will be, in practice, only a freedom of the few who do possess these capabilities.

The urgent need to mitigate these fears, by measures directed toward a lessening of the present inequalities, has clearly been demonstrated by a recent event.

I. THE BOGOTA DECLARATION

On December 3, 1976, eight Equatorial States, at a conference in Bogota, adopted a Declaration³ by which it was claimed that the segments of the geostationary orbit at a height of 36,000 km above sea-level formed an integral part of the territory over which the underlying State exercised sovereignty. This claim is based on the following arguments:

- a) The geostationary orbit is a physical fact rising from the nature of our planet because its existence depends exclusively on its relation to gravitational phenomena caused by the Earth and for that reason should not be considered as part of outer space.
- b) The geostationary orbit is a scarce national resource.

² See generally Goedhuis, *Some Substantive and Procedural Issues Presently at Stake in Space Legislation*, 3 *Zeitschrift für Luft- und Weltraumrecht* 195, (1976), in which the present author comments on the different approaches to the solution of the problems.

³ See the statements made by the U. S. delegate at the meeting of U.N. Legal Sub-Committee on Outer Space, on 6 April 1977. U.N. Doc. A/AC. 105/C.2/SR 281, ed. note.

c) The international community is now calling into question all the terms of international law laid down in the Outer Space Treaty of 1967, which were drawn up at a time when the developing countries could not count on adequate scientific advice. The terms, according to the Declaration, were prepared by the industrialized States for their own benefit.

d) As there is no definition of outer space, the provision in the Space Treaty regarding the nonappropriation of this space is inapplicable to the geostationary orbit.

These arguments call for the following comments:

a) The geostationary orbit is like any other repeated orbit except that the motion of the orbital vehicle is synchronized or nearly so with a particular location on the surface of the Earth. The geostationary orbit depends on properties of the Earth as a whole.⁴

b) Independent of the issue of whether the geostationary orbit is a natural resource⁵, the elementary question is whether this orbit lies in outer space to which the fundamental principle of freedom for exploration and use applies. There is no intrinsic difference between this orbit and any other orbit.

c) It is difficult to accept the view that the international community is calling into question all the terms of the present rules of space law. The fundamental principle of freedom of outer space is based on the consensus that by this principle the interests of the whole world community are best served. Since this principle was accepted as a rule of positive international law, it has never been challenged by any State until the claim made by the equatorial countries. New arguments were put forward by the Colombian delegate, Mr. Aquilera, at the last meeting of the U.N. Committee on the Peaceful Uses of Outer Space. First, Mr. Aquilera referred to the fact that Colombia had not ratified the Outer Space Treaty. Second, he voiced the opinion that the principles of freedom and nonappropriation of outer space did not constitute peremptory norms of international law whose binding nature was independent of the formal conclusion of an international treaty.⁶ These arguments also should be rejected. When considering the legal value of the two fundamental principles applicable to outer space, the decisive

⁴ Cf. U.N. Doc. A/AC.105/C.2/SR.281, at 2 (1977) (statement made by U.S. delegate, Mr. Stewart, during the 28th meeting of the U.N. Legal Sub-Committee of the Committee on the Peaceful Uses of Outer Space). See also U.N. Doc. A/AC.105/C.2/SR.269, at 9 (1977). Therein, Mr. Greenwood, the U.K. delegate, stated there was no validity in a claim based on the law of gravity because the gravity of the whole Earth kept the satellites in orbit and any attempt to subdivide gravity would be scientifically absurd.

⁵ See U.N. Doc. A/AC.105/C.2/SR.281, at 2, 5 (1977). The U.S. delegate, Mr. Stewart, at the 28th meeting of the U.N. Legal Sub-Committee of the Committee on the Peaceful Use of Outer Space, expressed the view that the geosynchronous orbit was essentially a regime of satellite flight paths, not a physical natural resource. Mr. Stewart's view was contested by the Argentine delegate, Mr. Cocca.

⁶ U.N. Doc. A/AC.105/p.v.173, at 56 (1977).

point is whether the requisite consensus on these principles has been manifested through the conduct of States, through express statements or acquiescence in the conduct or statements of others.

For a short time immediately after the first Sputnik was launched in October 1957, it appeared that the world would have to go through a period in which States claimed sovereignty over parts of outer space. However, in the last fifteen years, no State, either by acts or words, has put forward any such claims. On the contrary, they have explicitly and constantly acknowledged the binding character of the principles of freedom and nonappropriation.

The outstanding event in the legal field prior to the adoption of the Outer Space Treaty of 1967 was the unanimous acceptance by the General Assembly of the U.N. on December 13, 1963, of a Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space.⁷ While consideration of the legal effect of Resolutions of the U.N. General Assembly lies outside the scope of this article, it is important to note that the statements of almost all the members of the U.N. who spoke during that Assembly attached to the Declaration an importance similar to that resulting from legally binding instruments.

Thus, by expressing their will to be bound by the provisions of the document in question, they consented so to be bound, and there is no reason why they should not be held to it. For their intention seems to have been clear, the question of form, therefore, ceases to be of essence.⁸

In an article published a year before the adoption of the Outer Space Treaty, the present author, on the basis of an investigation of the attitude of bodies concerned with the development of space law (including the Institut de Droit International, the International Law Association and the David Davies Memorial Institute) and of the opinion of the leading commentators on space law, concluded that they all considered the two basic principles of freedom and nonappropriation of outer space as forming part of positive international law, thus confirming the attitude of the States.⁹ Thus, insofar as these two principles are concerned, the Outer Space Treaty of 1967 did not create new law but codified already existing law. Consequently *every* State, independent of this Treaty, is bound by these two basic principles.

It is true that there is as yet no rule of positive international law by which a *precise* limit has been drawn between air space and outer space. However, based on the attitude of the overwhelming majority of States, the consensus is that to allow States to exercise

⁷U.N.G.A. Res. 1962 (XVIII) (1963).

⁸M. Lachs, *The Law of Outer Space* 138 (1972). (Mr. Lachs was at that time President of the International Court of Justice).

⁹Goedhuis, *Reflections on the Evolution of Space Law*, 2 Neth. Int'l L. Rev. 112 (1966).

sovereignty at or above the lowest height of satellites put into orbit would, to an unacceptable extent, invalidate the principles of freedom and nonappropriation of outer space.

In addition to the fact that unilateral claims of sovereignty over parts of outer space would infringe upon the basic principles of space law, there remains unanswered the question of how the Equatorial States expect to be able to discharge, at a height of 36,000 km above the Earth, the authority indispensable to the exercise of sovereignty.

However unsubstantial both the geophysical and legal arguments invoked by the Bogota Declaration may be, this Declaration has indicated the existence of a deeply rooted fear in several of the signatory States that their interests under the present legal regime of outer space are insufficiently safeguarded. Therefore, it is highly desirable to develop means by which these fears can be allayed.

That there are difficulties to be encountered in arriving at universally acceptable rules of international law, by which the present inequalities of States in the use of outer space will be sufficiently mitigated, cannot be denied. The absence of such rules presents, as demonstrated by the Bogota Declaration, the danger of efforts being made toward dismantling the principle of freedom of outer space. The best, and presently, the only chance of warding off this danger lies in a stronger and speedier pursuit of international cooperation between the have's and the have-not's. The endeavors made by the U.N. in the last years point to a growing awareness of the imperative need of such cooperation.

II. INTERNATIONAL COOPERATION IN THE USE OF DIRECT BROADCASTING AND REMOTE SENSING SATELLITES

In the field of direct broadcasting satellites a promising beginning has been made by the Indian Satellite Instructional Television Experiment which is based on an agreement between India and the United States.¹⁰ Under this agreement many thousands of Indian villages are receiving instructional programs by means of an American geostationary satellite. Under the auspices of the U.N. projects are prepared to provide, by means of such satellites, educational and welfare programs for, *inter alia*, the people of the South American countries, Iran and Indonesia.¹¹ A discussion of the unsettled problems arising in the application of direct broadcasting satellites, in

¹⁰ *Id.*

¹¹ See Report on the Joint UN/UNESCO Regional Seminar on Satellite Broadcasting Systems for Education and Development, U.N. Doc. A/AC.105/160 (1975).

particular as regards the principle of freedom of information, lies outside the scope of this article.¹²

Attention should be drawn to one significant event which happened in February 1977 when the World Administrative Radio Conference of the ITU adopted an Agreement and Plan which permits only State-to-State direct broadcasting by satellites in the case of a few groups of countries which have agreed to share orbital positions and frequencies and have a common international beam.

During the 16th Session of the Legal Sub-Committee of the U.N. Committee on the Peaceful Uses of Outer Space, the British delegate, Mr. Greenwood, suggested that the results of the Conference had shown that there was no reason to fear that some countries with the technical ability and resources required could establish direct broadcasting by satellite to other countries against the wish of those countries.¹³ Delegates of other countries, however, remarked that the ITU Plan, important though it was, did not solve all political and legal problems and that there was a need for clear guidelines to avoid disputes.¹⁴ From the statements made during this session by several Equatorial States, it appears that the fears on which their claims of sovereignty are based have not been allayed by the ITU Agreement.

The need for increasing international cooperation has also been recognized with regard to the use of remote sensing satellites. In a speech to the U.N. General Assembly on September 18, 1969, President Nixon set forth the U.S. policy on the application of these satellites in which, *inter alia*, the following observations were made:

We are just beginning to comprehend the benefits that space technology can yield here on Earth and the potential is enormous We have determined to take actions with regard to earth resources satellites and the purpose of these actions is that this program will be dedicated to producing information not only for the U.S. but also for the World Community Such an adventure belongs not only to one nation but to all mankind and should be marked not by rivalry but by the same spirit of fraternal cooperation that has long been the hallmark of the International Community of Science.¹⁵

In 1976 the U. S. delegate declared in a meeting of the Legal Sub-Committee of the U.N. Committee on the Peaceful Uses of Outer Space:

Landsat II, like the first earth resources satellite, is serving as a focus for cooperation. Investigators from 45 Countries and 5 International organizations have been selected to

¹² See Goedhuis, *supra* note 2, at 203 (for a discussion of the conflicting views).

¹³ U.N. Doc. A/AC.105/C.2/SR.269, at 7 (1977).

¹⁴ See, e.g., U.N. Doc. A/AC.105/C.2/SR.276 (statement by the delegate of Sweden, Mr. Berg); U.N. Doc. A/AC.105/C.2/SR.275, at 4 (statement by the delegate of the Soviet Union, Mr. Kolossov).

¹⁵ For the text of President Nixon's address, see 61 Dept. St. Bull. 297 (1969).

conduct studies with data they obtain. More than 1/3 of the member states of this Committee are working with us in expanding the practical uses of remote sensing by satellite.¹⁶

At the last session of the Sub-Committee in 1977, the U. S. delegate referred to the latest developments in this field. The imagery collected in the U.S. from Landsat was available from the Earth Resources Center at Sioux Falls, South Dakota, which already served approximately 130 countries. He was especially pleased to note that not only the United States, but also Brazil, Canada and Italy were now operating ground stations to receive, process and disseminate Landsat data, and that other stations were under construction or being planned in Argentina, Chili, Iran and Zaire.¹⁷ The Soviet delegate, Mr. Piradov, referred to the report of February 16, 1977,¹⁸ in which the Soviet Union had announced that it was prepared to carry out work on remote sensing of the territory of other States and to make the resulting data available to the States concerned on the basis of the appropriate agreements. He also mentioned the signing of the Convention on the International Organization for Maritime Satellite Communication (INMARSAT) by which maritime communication by satellite was made available to all States.¹⁹

However important these developments are, the cooperative endeavors are not yet of sufficient magnitude to achieve a substantial reconciliation of the diverse national interests in outer space. The answer to the all important question whether mankind will meet the challenge raised by the conquest of space will depend on the readiness of States to develop international cooperation far beyond its present beginning.

Observations on the need to increase the volume and scope of international cooperation have been limited in this article to the two fields of space activities which *at this stage* are of the greatest practical significance. On the initiative of Argentina, discussions have started at the U.N. on the international problems arising from the exploitation of solar and other related energies. It is generally recognized that one of the most important resources which may be found in outer space is solar energy. A consideration of the far-reaching implications of this revolutionary technology, the development of which can be expected in a more or less distant future, lies outside the scope of this article. One thing can be said with certainty, however, for the development of this resource of outer space, international cooperation is a *conditio sine qua non*.²⁰

¹⁶ See U.N. Doc. A/AC.105/p.v.146, at 53 (1976); see also U.N. Doc. A/AC.105/p.v.146, at 3 (1976) (remarks by the delegate of India, Mr. Vellodi).

¹⁷U.N. Doc. A/AC.105/C.2/SR.268, at 6 (1977).

¹⁸U.N. Doc. A/AC.105/C.1/T96 (1977).

¹⁹U.N. Doc. A/AC.105/C.2/SR.266, at 5 (1977).

²⁰ See Williams, *International Law in the Pursuance of Sun Power as a New Source of Energy*, 5 Int'l Rel. 24 (1977).

In discussing the Bogota Declaration, it has been suggested that there can be no justification for basing a claim of sovereignty over parts of outer space on the absence of a rule of positive international law by which the term outer space is clearly defined. This Declaration has demonstrated, however, that this absence can lead to serious conflicts and that it therefore has strengthened the position of those countries which have stressed the need of arriving at such a rule by which air space and outer space are clearly demarcated. A survey of the various approaches to the solution of this problem would far exceed the confines of the present article but from an analysis of the discussions on this issue, some trends may be indicated.²¹

All States recognize *in principle* the need to clearly define the scope of applicability of the two fundamentally different legal regimes of air space and outer space but opinions diverge on the timing of laying the foundation of an accord. Although a survey of the present attitudes of States shows that there is as yet no agreement on the urgency in fixing a demarcation line between air space and outer space, there appears to be a considerable measure of agreement on the requirement that *any* definition of the medium where the freedom of exploration and use applies should be such as to allow this medium to fulfill its mission to the greatest possible extent. This requirement can only be met by preventing States from claiming sovereignty at or above the lowest height where satellites can be placed in orbit. Detailed studies made by COSPAR in the last few years have indicated that at a height of approximately 100 km above sea level satellites will not be able to continue in orbit and will fall to Earth. Thus, the support of a growing number of States for a demarcation of air space and outer space at this height is welcomed.

III. THE PROBLEM OF ACCESS TO OUTER SPACE

Insofar as the *content* of the national sovereignty over air space is concerned, a question of increasing importance arises. Is this sovereignty limited by a right of freedom of access for satellites in order to reach the "free" outer space?

This problem is at present not of immediate *practical* importance as the few States possessing space capabilities are endowed with sufficient territory and adjacent high seas to launch spacecraft without having to cross foreign air space. This situation will change, however, when technical developments in smaller or landlocked States will enable them to take part in space activities. If it is always difficult to separate *lex lata* from *lex ferenda* in law which is developing, then this difficulty is particularly great in assessing the legal situation as regards access to outer space.

A number of authoritative writers have expressed the opinion that there already exists a customary right of free passage for spacecraft through the territorial airspace of

²¹ See, *Some Observations on the Problem of the Definition and for the Delimitation of Outer Space* (to be published in 2 *Annals of Air and Space Law* (1977)).

foreign States if such passage is needed to reach the *free* outer space. It has been suggested that the permission of free passage can be considered to be implied in the universal acceptance of the principle of freedom of exploration and use of outer space for which freedom of passage is a necessary condition.²²

It is obvious that for all States to be able *on an equal basis* to draw the benefits flowing from the exploration and use of outer space, the recognition of a principle of free access is indispensable. Although developments in the last years point to a steady growth of a feeling of necessity for a rule of free passage, the essential elements for the creation of a rule of customary law allowing such passage are still lacking.

In this context an analogy can be drawn between the consequences of the lack of freedom of passage for aircraft through foreign air space above territorial waters, which might prevent them from drawing all the benefits flowing from the free air above the high seas, and the consequences entailed by a lack of freedom of passage for spacecraft which might prevent them from reaching the free outer space. The consequences in the latter case, however, might be of a much more serious nature. Insofar as air navigation is concerned, the lack of recognition of a right of transit as a rule valid *pleno jure gentium* does not make such navigation totally impracticable because of a frequently existing possibility of alternative routes; whereas, with regard to space activities, freedom of passage through territorial air space could be a *conditio sine qua non*.

The existence of a right of transit *in general* may be said to be dependent on two basic conditions. First, the State claiming such right must be able to justify it by reference to considerations of necessity. Second, the exercise of the right must be such as to cause no harm or prejudice to the State whose territorial air space is passed through.²³

As regards the operation of spacecraft, the first condition will, to a growing extent, undoubtedly be fulfilled. As regards the second condition, however, the crucial problem is the assessment of whether a spacecraft presents a potential risk to the security of the State. Absent a prelaunching inspection system, a State, in the present phase of development of space technology, cannot know for certain whether a foreign satellite passing through its territorial airspace is peaceful, and opinions on the interpretation of this term are strongly divergent. One of the difficulties is that an *in essence* peaceful use of spacecraft often has military implications. It should not be forgotten that the difference in the *degree* of risk to the security presented by a foreign spacecraft passing over the surface territory of a State, is often not dependent on the height at which the spacecraft passes. A foreign spacecraft passing over a State at orbiting height can present as great a risk to its security as a foreign spacecraft passing through the territorial airspace of this State.

²² See Goedhuis, *supra* note 8, at 136.

²³ Cf., Lauterpacht, *Freedom of Transit in International Law*, Transactions of the Grotius Society 313 (1958/59).

As regards *both* the basic conditions upon which the existence of a right of transit depends, there is a difference between transit by aircraft and by spacecraft. It does not seem too optimistic to expect that this difference may lead to States showing a greater inclination to agree on a right of transit for spacecraft than they have shown as regards a right of transit for aircraft.

A contribution to a possible, though *temporary*, solution of the problem has been made by the David Davies Memorial Institute. It provided that:

[N]o spacecraft launched from the territory of any State may at any stage of its flight enter the air space of another State without the consent of that State; provided that such consent shall not be withheld if prior notice has been given to that State of the intended flight and it has been shown to its satisfaction that the flight is solely for scientific and peaceful purposes and shall be so controlled as to obviate the danger to aircraft.²⁴

The U.N. Committee on the Peaceful Uses of Outer Space has until now refrained from an in-depth study of the problem of freedom of transit. It is therefore of particular importance that at the 168th meeting of the Committee, held on June 20, 1977, the Chairman, Mr. Jankowitsch, referring to the fact that in a short time economical space transportation will be available to the world with the advent of the space shuttle, suggested a study by the Committee as to what the ramifications of that advent will be and suggested that the Committee begin planning for the most beneficial use of that new capability.²⁵

IV. CONCLUSION

Returning to the point of departure of this article, it is suggested that, due to the rudimentary stage of development of space activities, there is as yet an insufficient awareness of the extent to which the dimensions and objectives of the national interest have been transformed through the conquest of space.

The two main factors which have radically changed this interest are: the extraordinary interdependence of space activities and the growing convergence of interest in this field. The immense benefits which *can* flow from practical space applications cannot possibly be obtained without the willingness of States to accept limitations on their national sovereignty greater than those which, until now, have been obtained.

Further and especially *speedier* progress in international cooperation will be the indispensable prerequisite to achieve this aim.

²⁴Draft Code of Rules on the Exploration and Use of Outer Space, para. 2 (1962).

²⁵U.N. Doc. A/AC.105/p.v.168, at 18 (1977).