concerning uses of the geostationary orbit cannot be solved by drawing a legal boundary line between airspace and outer space, leading to the conclusion that the geostationary orbit should be a separate agenda item. Curtailing space activities by means of a boundary line between airspace and outer space could not be the sole means of regulating international space programs or national programs with international characteristics.

It should be noted that the 1967 Treaty on Outer Space includes both spatial and functional concepts in such a manner that each or both can serve as the basis for legal guidance related to a specific objective. This is not a case of either/or spatial and functional concepts but of both being used simultaneously. There is nothing unusual about this as the same pattern exists on the Earth where identifiable functions are performed in designated geographic areas. Almost all the nations represented on the Committee on the Peaceful Uses of Outer Space are on record that the 1967 Treaty places the geostationary orbit in outer space and thus denies claims of equatorial countries to segments of that orbit. In fact, it does not seem that the Legal Subcommittee can achieve a consensus on solutions to all these related problems, many of which are not in its sole jurisdiction. The International Telecommunication Union performs a crucial function in relation to the geostationary orbit by allocation of frequencies and policy statements concerning its status as a limited natural resource. The International Civil Aviation Organization, which is undoubtedly concerned about the upper height of sovereign airspace, is evidently waiting for a request from some nation to study this matter. The agenda item on the Legal Subcommittee needs to be worded with regard to the objectives sought by defining outer space, *i.e.*, what purposes will a boundary achieve and how can these purposes be attained without impeding desirable advances in space science and technology?

This perspective on the present situation should enable us to examine possibilities concerning the future course of formulating space law within the United Nations. Looking toward the year 2000 and beyond, the objective should be to formulate a basic body of space law with the widest international acceptance. The record of the Legal Subcommittee should not be graded on the number of treaties agreed upon in the shortest period of time. General Assembly directions to the Committee on the Peaceful Uses of Outer Space and its Legal Subcommittee need not be based upon the assumption that each assigned subject should result in a resolution and/or a treaty. Some subjects should be placed on the agenda for discussion and analysis. New subjects might include legal provisions for coordination of existing institutional arrangements, a plan well suited to the expertise of official observers from United Nations specialized agencies and other international organizations. Options could be studied for the international regime envisaged by the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies which was opened for signature at the United Nations on December 18, 1979.[13] The success and failure of methods employed by different international organizations could be analyzed in order to propose effective

[13]"Agreement Governing the Activities of States on the Moon and Other Celestial Bodies: History and Analysis," prepared at the request of Senator Howard W. Cannon, Chairman, Committee on Commerce, Science, and Transportation, by Eilene Galloway. U. S. Sen., 96th Cong. 2d Sess. (Comm. Print, 1980). Resolution adopted by the General Assembly on the report of the Special Political Committee (A/34/664) and on Agreement Governing the Activities of States on the Moon and Other Celestial Bodies. (A/RES/34/68 at 1-2, Annex at 3-12 (December 14, 1979).

plans for the future. Solar power satellites could receive more study in connection with possible legal proposals. Legal arrangements for space colonies could be outlined. The national space laws of each nation need to be compiled and disseminated together with information now furnished the United Nations on national space activities. Participants in the Committee on the Peaceful Uses of Outer Space and its two subcommittees should become familiar with the science and technology of space programs and interrelationships with other factors of which the law is only one. Additional effort could be made to integrate the work of the Scientific and Technical Subcommittee with that of the Legal Subcommittee. If the Legal Subcommittee meets for one month each year and considers only subjects that are basically irreconcilable, the member delegates will become frustrated over inability to form a consensus. International space problems cannot be settled by majority vote, but if consensus is reached by broad generalities which have different meanings for different nations, space law cannot be strengthened.

The most essential task for the immediate future is to increase the number of States that are Parties to the space treaties. Of the 47 nations represented on the Committee on the Peaceful Uses of Outer Space, only 14 have ratified or acceded to the four space treaties in force: Bulgaria, Canada, Czechoslovakia, France, German Democratic Republic, Federal Republic of Germany, Hungary, Mexico, Niger, Poland, Sweden, U.S.S.R., United Kingdom and the United States. Thirteen of the COPUOS members have not ratified the 1967 Treaty on Outer Space: Albania, Benin, Chad, Chile, Colombia, India, Indonesia, Iran, Kenya, Morocco, Nigeria, Philippines and Sudan. Twelve COPUOS members have not ratified the Astronaut Agreement; twenty are not parties to the Liability Convention; and 31 have not yet ratified the Registration Convention. By April, 1980, of the approximately 150 nations, the 1967 Treaty on Outer Space had been ratified by only 76 countries; the 1968 Astronaut Agreement by 71; the 1973 Liability Convention by 58, and the 1976 Registration Convention by 26.[14]

This tabulation was made prior to November 3, 1980 when the UN General Assembly by Resolution 35/16 increased the COPUOS membership by adding China, Greece, Spain, Syria, Upper Volta, Uruguay and Viet Nam, making a total of 53. Greece and Turkey will alternate membership every three years as will Spain and Portugal.

This raises another legal problem to which the Legal Subcommittee might give its attention: what is considered customary international space law? Answers to this question vary from considering the whole or part of the 1967 Treaty on Outer Space as customary international law to those who think only States are bound by each treaty they ratify. We are in the anomalous situation of having formulated a substantial body of international space law which has not been ratified on a worldwide basis and yet the practice of nations has been to abide by some principles recognized as customary international space law. Although the Legal Subcommittee should have some items on its agenda which are not being pressured into assuming treaty form, nevertheless it is a treatymaking body and should have continuous summary records of its proceedings. It is important to have the history of treaty negotiations in order to interpret provisions, and it is essential that delegates, particularly when they are newly assigned to the Legal Subcommittee, be able to inform themselves of the past history and status of current

[14]The Byelorussian S.S.R. and Ukrainian S.S.R. are listed separately as ratifying the space treaties, but the United States considers that they have been covered by U.S.S.R. ratification.

negotiations on each agenda item. It is fortunate that the summary records, abandoned during 1980 in an attempt to reduce costs, will be restored in the future.[15]

The paramount priority should be accorded to continuing and maintaining outer space for peaceful purposes. Control of armaments and the settlement of outer space disputes should be high on the list of objectives to attain in the future. The foresight we exercise for the future should equal and go beyond that with which we so successfully approached the opening of the outer space frontier.

[15]Budget Committee Votes in Favor of Restoring Services of Summary Records to Seven Subsidiary Organs of Assembly. Thirty-fifth General Assembly, Fifth Comm. U.N. Press Release, GA/AB/1980, (Oct. 24, 1980).

INTERNATIONAL SPACE LAW AND DOMESTIC LAW: PROBLEMS OF INTERRELATIONS

V. S. Vereshchetin *

1. Interaction of International Space Law and Domestic Law in Space and Time

The activities associated with the exploration and use of outer space are carried on not only in outer space proper, but also on the Earth. While these activities such as the development of facilities of rocket-space technology along with launching sites and operations related to the launching of space vehicles take place within the confines of a state territory they are governed, in the main, by the rules of national law. Upon emerging into outer space, these activities come, primarily, under the rules of international space law. This "geographical" delimitation of the spheres of operation of national law and international space law, however, is valid only to the extent to which we can speak about a predomination of one or another system of law.

International space law regulates the relationships among states and among other subjects of international law in connection with their activities in outer space not only subject to the place of the said activities, but also subject to their nature and time of performance. A combination of the three mentioned factors, namely place, nature and time, directly influences the sphere of operation of definite rules of international space law. Thus, the provisions of the Outer Space Treaty[1] in Article IV, prohibiting any military activity on the moon and other celestial bodies, strictly determine the place and nature of the activity. The obligation, provided for under Article IX, to avoid harmful contamination of outer space and celestial bodies and adverse changes in the environment of the Earth resulting from the introduction of extraterrestrial matter is primarily associated with the nature of activities both on the earth and in outer space. Operations related to the rescue and return of cosmonauts in distress and recovery of space objects regulated by the Rescue Agreement[2] provide for the activity on the Earth. Space objects come under international space law, as a rule, beginning with their launching into outer space.

Thus, we see that rules of international space law are space, function and time oriented and are designed for application not only in outer space but in aerospace and on the surface of the Earth. Naturally, when these rules are to be applied on a territory

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[1]Treaty on Principles Governing Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, January 27, 1967, 18 UST 2410, T.I.A.S. 6347, 610 U.N.T.S. 205. (effective Oct. 10, 1967). For the Russian text, see: Reports of the Supreme Soviet of the U.S.S.R., 1967, No. 44, at 588 (hereinafter cited as the Outer Space Treaty).

[2]The 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. 6599, 672 U.N.T.S. 119 (effective Dec. 3, 1968). For the Russian text, see: Reports of the Supreme Soviet of the U.S.S.R., 1969, No. 6 at 31 (hereinafter cited as the Rescue and Return Agreement).

of a sovereign State, questions arise about the interrelation of international and national legal orders and the legal force of international rules within the framework of a national legal order.

To a certain extent, the rules of domestic law which govern the activities in outer space also are characteristic of the spatial and the functional approach. Though these rules are primarily designed for operation within a country and in terms of territory do not extend to outer space proper, their sphere of operation covers people and objects in outer space.

In other words, there is a reciprocal "penetration" of international space law and domestic law into areas which may be the appropriate spheres of their primary regulation. This, however, is not a spontaneous process, rather a deliberate one, necessitated by the complexity of interrelationships of national and international space activities.

The general treaties on space, in a number of instances, provide directly for the operation of rules of domestic law in outer space. In keeping with the rules of national law we see the exercise of the jurisdiction and control over space objects and "over any personnel thereof" while in outer space or on a celestial body. Ownership of space objects launched into outer space and of their component parts can also be regulated by national law.[3]

A specific feature of the interaction of international and national legal orders in outer space is the link-up with the law of the State where the space object is registered. This important provision of the Outer Space Treaty reduces, though it does not completely exclude, the probability of collisions of national legal orders of different States in outer space. In keeping with the mentioned Article VIII of the Outer Space Treaty, a State on whose registry an object launched into outer space is carried retains jurisdiction and control over such object and over any personnel thereof: *i.e.* the jurisdiction of the State of registry becomes thereby exclusive and prevailing over all other possible legal bases, for instance, nationality of crew members or the right of ownership of the space object.

Though prior to the flight and upon its completion, space objects and their crews may be under the jurisdiction and control of other States, rather than the State of registry, for instance, when the flight is performed by an international crew, while they are in outer space, the exclusive rights of jurisdiction and control belong to the State of registry. This State, however, should assure that the operation of the space object and of its crew towards which it exercises its jurisdiction and control should be in full compliance with the requirements of international space law. Hence the registration of a space object is not a voluntary act; it may be exercised only by the State which stands in real relation to the space object and its crew and which can effectively control and regulate their actions.[4]

Since outer space is mainly a sphere of activities of international rather than of national orders, the terms "jurisdiction and control" rather than sovereignty are used in treaty rules of international space law when identifying rights and powers of States towards space objects and their crews. It is understood that the scope of rights and

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[3]Outer Space Treaty, art. VIII.

[4]For greater detail, see Vereshchetin, "Legal Status of International Space Crews", 3 Ann. Air & Space L. 546-552 (1978).

powers ensuing from jurisdiction is not as broad as the rights and powers inherent in sovereignty as a whole. It is, however, indubitable that jurisdiction and control, which are spoken of in space treaties, represent an aspect of sovereignty and incorporate the rights and powers to exercise legislative, judicial and administrative authority towards personnel and objects in outer space, including celestial bodies. As it is properly pointed out by a well-known U.S. specialist in international space law, S. Gorove, "traditional aspects of territorial sovereignty are the ones that have been abolished in relation to outer space; but the functional aspects of sovereignty, the exercise of sovereign rights and similar manifestations, continue to be recognized."[5]

The problem of competing national jurisdictions in outer space has not been fully resolved. The problem could become very pressing in the future if several states contribute to the development of large-size assembled structures in outer space and subsequently of international space communities. However, the link-up with the law of the State of registry makes a positive solution rather easy at the present level of exploration and use of outer space. The situation is more complex in the event of an emergency landing of a space object and its crew beyond the territory of its own State. In a given situation the law of the State of registry is no longer the sole national law covering the space object and its crew.

It is not without interest in this connection to see the alteration of the legal status of a space object and its crew subject to the factors of time and place, and also to the nature of interaction of international space law and the national law of different states.

Before the launching of a space object the activity related to its development and the preparation for launching is, as a rule, completely in the sphere of national regulation of the given state. Its legal status is determined by the rules of domestic law. However, even in this stage, the state is obliged to observe a number of requirements of international space law, for instance, not to install weapons of mass destruction on objects designed to orbit the Earth, and to ensure, whenever necessary, certain measures are taken to avoid harmful contamination of a celestial body. Besides this, in case of a joint development or launching of a space object, its legal status for instance, ownership relations, may be largely determined by an appropriate bilateral or multilateral agreement of the collaborating states.

Beginning with the launching of the space object or its construction in outer space including celestial bodies, it comes, primarily, under the rules of international law. The Liability Convention[6] in Article I clarifies that the term "launching" includes attempt launching. This means that in case of damage, as it is provided for by the Convention, even in case of an unsuccessful launching, the relations of international legal liability arise.

While in outer space, including celestial bodies, a space object does not sever its legal relationship with its State, provided one important condition is observed: it has to be on the registry of the given State. All other possible legal bases, for relation to the space object, besides registry, while the object and its crew are in outer space have a

[5]Gorove, "Sovereignty and the Law of Outer Space Reexamined", 2 Ann. Air & Space L. 321 (1977).

[6]Convention on International Liability for Damage Caused by Space Objects (hereinafter "Liability Convention"), March 29, 1972, [1973] 24 U.S.T. 2389, T.I.A.S. 7762 (effective Oct. 9, 1973). For the Russian text, see: Collection of operative treaties, agreements and conventions concluded by the U.S.S.R. and foreign states. 29 M. Mezhdunarodnye Otnosheniya Publishers 95-101 (1975).