ROLE OF INTERNATIONAL ORGANIZATIONS

IN

THE DEVELOPMENT OF A LEGAL ORDER IN SPACE

by

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P R E F A C E

The purpose of this study is to explore the possibility of developing a legal order in space through the technique of an international organization. The motivation for this study springs from the words of the United Nations General Assembly in that body's desire "to avoid the extension of present national rivalries into this new field" which holds the promise of unique benefits for all mankind. In this sense, it is a study of the strategy of interdependence in the space age.

In a world of group research, the study is essentially the work of an individual. Yet no man works alone. My obligations are numerous and extensive. The concepts on which the structure of my analysis is built represent an eclectic selection from the important and highly relevant body of theory and studies developed by the scholars in recent decades who are cited both in the body of the thesis and in the bibliography in general. Many others have influenced my thoughts on this subject over the years, in particular, Professor Peter Sand of McGill University, Dr. G. Fitzgerald of the ICAO Legal Bureau, Professor Oliver Lissitzyn of Columbia University, and Mr. A.H. Abdel-Ghani, Chief, Outer Space Affairs Group, U.N.

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Finally, I dedicate this work to my Father who has taken a great deal of interest in my educational work and has through the years been a great source of inspiration and encouragement.

The present paper was written before the writer joined the United Nations Secretariat. The views expressed here are those of the author in his personal capacity.

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GENERAL INTRODUCTION:

A Perspective for a Legal Order in Space.

It may seem strange that man should strike out in a new venture in peaceful co-existence on the Moon, Mars or Venus, before learning to live peacefully on earth. But now that we have reached another world, it is time to look beyond the sparkle and glamour of the adventure to the sobering reality of what these advances mean. For, 'none are so blind as those who will not see.'

The challenges of space are many and by virtue of its nature it is a logical arena for co-operation among men and nations. However, it also entails new problems both in its military potentialities and in the power of space technology to affect man's physical environment. In his conquest of space man also seeks to ascertain the law governing his astronautical activities - both on earth and in space.

This challenge has fired the imagination of many legal scholars and has resulted in a flood of literature. The law always has had as its object the reconciliation of divergent and conflicting interests. The problem today is that human ingenuity has created forces of tremendous power, and the need for their control is both urgent and indispensable for the very existence of man. Similarly, the need for a more effectual system of international law has become a necessity. Hence, it is up to the lawyers and jurists to balance the conflicting interests in space among the peoples of the world, by working towards a more effective form of International Order instead of Inter-National Order.

Since time immemorial man has dreamed of rising above the atmosphere which surrounds his planet and exploring the vastness which lies beyond.

It is a magnificent dream, compounded of his inherent spirit of adventure and thirst for knowledge.[1]

Full realization of the dream is not yet in sight but those now living in this era of expanding technology are privileged to witness the early steps towards the goal. Some man-made objects are this moment orbiting about earth as companions to natural moon which has been circling the planet for millions of years while others have been launched to roam the solar system forever, mute testimony to human capabilities for fulfillment of the great dream.

Our solar system consists of nine planets in a galaxy (the Milky Way) perhaps 100,000 light years in diameter (each light-year being equal to about 6 trillion miles). Within this galaxy embracing billions of stars, millions of which like the sun, are the center of a planetary system. Beyond our galaxy millions of other galaxies, with their stars and planetary systems. Man's telescopic observable universe extends at least two billion light years from us in all directions. The cosmos appears infinite.

The nearest neighbour outside our solar system is Proxima Centauri, a star about 28 trillion miles away. Assuming travel by spaceship at the speed of light of 186,282 miles per second were possible, travel one way to Proxima Centauri would exceed four years.

Thus it appears that inter planetary travel for the foreseeable future will be limited to our own solar system.[2] Some of the planets such as the

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[1] For an historical review of the evolution of the speculations from ancient times see Ley, W. Rockets, Missiles and Space Travel; N.Y. 1957.

[2] US Congress House Select Committee on Astronautics and Space Exploration, Space Handbook - Astronautics and its Applications; Staff Report, H.Doc. 86, 86th Cong.; 1st secs.; ñ959, pp.17 and 18. See also - Adams, Carsbie, C., "Space Flight", 1958, Levitt, I.M., "A Space Traveller's Guide to Mars" 1956

Earth, have natural satellites of their own such as the Moon situated about 240,000 miles from the Earth which is one of the oldest objects in the solar system. Because of its lack of any appreciable atmosphere, it remains to this day in essentially its original state, and for this reason it is an important object of study in space research. Among the planets, Venus and Mars naturally have been the first to receive close study by means of space probes. The solar system we hope to explore is tiny in relation to the universe as a whole, but an area of tremendous magnitude in Earth terms.[3]

Viewed in man-terms of time and distance, the challenge might seem insuperable. Yet one has only to review the technological accomplishments of mankind in the twentieth century and the 'impossible' becomes merely 'difficult'. "In our present situation we are reminded to some extent of the situation created by the successful adventures of Christopher Columbus in the year 1492. Then new continents which had hitherto only been dimly imagined were discovered and became realities."[4]

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[3] "Assuming that we have a Spacecraft which can travel at a constant speed of 25 miles per second (90,000 m.p.h.) in any direction in space, it would take this vehicle to travel from the earth to various destinations in space:

Destination	Duration of Trip	
The Moon	2.9	hours
Mars (nearest approach)	16.0	days
The Sun	43.0	days
Uranus	780.0	days
Pluto	4.5	years
Alph Centauri (nearest star)	30.000	years
Center of Milky Way (our galaxy)	560 million	years
Andromeda Nebula (nearest spiral galaxy)	15 billion	years

DuBridge 'Space Exploration: How and Why?' Cited by McDougal Lasswell and Vlasic, in "Law and Public Order in Space" Yale, 1963, p.41., hereinafter referred to as "Law and Order in Space."

[4] Fr. W. Von Rachhaupt - First Colloquium on Law of Outer Space, The Hague, 1958, p.1.

Wilbur Wright in 1908 said "I confess that in 1901 I said to my brother Orville that man would not fly for fifty years. Two years later we ourselves made flights." Who foresaw the Commercial and Military developments of modern aeronautics in those early days of flight?

However, now that in defiance of the law that what goes up must come down, Man has gone there and stayed there; it is necessary to take a lesson from history and learn to view things more realistically than was the case before. "Although the problems are many, the currently contemplated space missions are technically possible, and even the hazardous new environment of outer space presemts no conditions which are impossible to counter in modern technology."[5]

There is more involved in space exploration than satisfaction of man's natural curiosity; his objectives have been comprehensibly identified by the distinguished authors of "Law and Public Order in Space" (Power and Security, Wealth, Enlightenment, Skills, Well-being, Respect, Loyalties and Rectitude).[6]

The scientific data to be gained can be translated into benefits to man's peaceful existence on his own planet. Those are specific applications which already are obvious: expanded and improved world communications through the use of artificial satellite relays; intercontinental television; advances in meteorological science; navigation, geodesy, mapping.

Astronautics, although a new industry, already has an important impact on the government private industry and employment. According to some forecasts,

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[5] Prof. H.G. Stever - Chairman of NASA and the Institute of Aerospace Sciences in "Outer Space Prospects for Man and Society" ed. Bloomfield N.Y. 1962, p.29.

[6] "Law and Order in Space" op. cit. supra note 4, at 66

within the next decade, it may well become the largest industry in terms of employment, with every scientific and engineering field partaking in its expansion.

Andrew G. Haley predicted that: "From the astronaut's efforts will arise the greatest industrial complex in the history of the world. The combined number of production workers in the automatic field of the entire world and the dollars spent on the automative industry will soon, in each case, be equal to only a fraction of the astronautics industry. During the next 10 years the peoples of the Earth will finally be faced with an industrial revolution never before realized - even on a prorated basis and taking into consideration all elements of finance, population and industry."[7]

The long term benefits are less tangible. They lie in knowledge. The modern world in which we live is the product of the accumulated knowledge of centuries. Solution of the mysteries of the universe cannot fail to elevate man's status on Earth and bring a world standard of existence beyond anything we can now imagine.[8]

However, the opportunities afforded by space exploration should not blind us to the corresponding problems it will present us with. There is a great tendency to hope that the conquest of space will solve a host of present problems. The facts of recent history demonstrates to us that instead it will more implacably confront us with them.[9]

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[7] "The Next Ten Years in Space (1959-69)" Staff report H.Doc. 1115; 86th Cong. 1st sess: 1959, p.67.

[8] Ibid, and "The Practical Value of Space Exploration; House Report, No. 1276, 87th Cong; 1st sess. 1961.

[9] Bloomfield op. cit., supra note 5 at 31-63.

A question that is most intriguing concerns the problem of sovereignty - what is the extent of sovereignty outward or upward of a sovereign nation. We know that sovereignty of a coastal state extends over its territorial sea. We know that the juriscistion of the subjacent sovereign extends over its airspace. Does sovereignty extend beyond the airspace? If so, how far? If not, where does airspace end and outer space begin?

Other questions may be more immediately practical; but this question of sovereignty in space has been more thoroughly discussed and disputed than any other.[10] Within limitations, it is generally agreed that outer space is a different entity from airspace, and some where there lies a dividing line between the two. Most writers agree that "at some point there is a limit to the extension of terrestrial sovereignties, and that in due course practical international necessities will lead to its definition."[11] Apart from this general agreement in the principle, there is the widest variation in the proposed application, and for every suggested legal opinion there appears to be some astronomical opinion to back it up.

Outer space is utilized by artificial satellites intended to advance scientific knowledge, by military spacecraft and missiles, and by interplanetary craft. These diverse types of craft and activities in outer

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[10] Vide: "Public Order in Space" 267-81; Andrew G. Haley, "Space Law and Government"; N.Y. 1963, p. 77-116; hereinafter referred to as, "Space Law and Government."

[11] Jessup and Taubenfeld, Controls for Outer Space, N.Y. 1959, at 209.

space provoke equally diverse problems.[12]

Now that manned space flight has been accomplished, it will, we may suppose, be but a matter of time until men are placed on other planets, and this achievement will lead to problems of jurisdiction and sovereignty which may dwarf in seriousness the present problems of an upper limit to the area in which national sovereignty may be claimed. The jurisdictional problems will be transferred to the areas through which the men will travel, and on which they alight. First among the problems encountered thereby will be the legal status of space itself. Whether it should be res omminum communis, on the anology of the high seas and therefore being extra commercium, it will be incapable of appropriation or it should be res nullius, capable of appropriation. The proposed legal status of the moon and other stellar bodies, is like space itself either res omminum communis or res nullis.[13]

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[12] No definite public objection has until now been made to the overflight of national territory by artificial satellites. The USSR has made no objection to the launching of any satellite, even of those which cross Soviet territory and a United States Deputy Secretary (Quarles) has stated that his country would have no basis for objection if the Soviet Union put into orbit in outer space a reconnaissance satellite capable of observing the United States. (see Becker, C. "Major Aspects of the Problem of Outer Space" 367). This statement on behalf of the United States exceeds explicitly the position which is no more than implicity in the Soviet Union's silence. The USSR in making no objections, may either have adopted a view similar to Quarles', or it may in fact have objections which have remained unvoiced for some good reason and as such we may venture to say that it is perhaps an initial stage of the development of a principle of customary international law permitting the orbiting of satellites not designed to infringe the sights of other states or inflict injury or damage. However, it still remains a problem that is far from being settled.

[13] The United Nations General Assembly resolution 1721 (XVI) of Dec.20, 1961, and resolution 1962(XVIII) of Dec. 13, 1963m declared that outer space will be incapable of appropriation but will be open to exploration and exploitation of all States for peaceful purposes. However, problems are still many. For a discussion see Jessup and Taubenfeld, op. cit., supra note 11; Kenneth A. Finch - Terrestrial Claims to Celestial Bodies; 2nd Colloquium on Law of Outer Space, London 1959 and Public Order in Space, op. cit., supra note 4, p. 85-94.

Concerning the problem of the status of artificial satellites and spacecraft themselves, it has been suggested that the solution will be found with reference to the status given to the space in which they are moving to determine the claims relating to competence to counter nationality to such craft, symbolizing the acceptance of a rule of international law which states that a special relationship exists between a particular state and the transport instrumentality which has the nationality of that state.[14]

Some of the problems arising from space flight have more immediate importance and more immediate effect, than the legal status of stars or of space - the problem of damages caused by space activity, both to objects on the surface of the earth or above it.[15] Another example of a practical problem which cannot await a more rational world order is the cluttering of radio channels with signals to and from satellites on frequencies which impinge on those used for work day activities on earth, a problem which will predictably intensify as communication satellites become operational.[16]

Problems relating to pollution and contamination, and appropriation of cosmic rays in addition to more remote contingencies of regulating the relationships between the existing communities which may be found to exist on other planets or their satellites have to be faced. But beyond all this

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[14] For further discussion vide: Law and Order in Space" pp.541-543 and 550-565.

[15] See Cooper, J.C. Memorandum for an International Convention on Third Party Damage Caused by Space Vehicles, Third Colloquium on the Law of Outer Space Stockholm 1960; Bresford, S.M. - "Liability for Ground Damage Caused by Space Craft", "Legal Problems of Space Exploration" symposium, staff report Doc.No. 26, 87th Cong. 1st sess. March 1961; hereinafter referred to as "Symposium". vide: Infra Ch.I.

[16] International Telecommunications Organization ITU is making great efforts to resolve this problem within its framework. See also Andrew G. Haley, "Space Age Presents Immediate Legal Problems", 1st Colloquium of the Law of Outer Space; The Hague 1958, p.5. Vide: Infra Ch.II, and Ch.III.

lies the realm of military security, and it is here that the most profound issues of law and order will increasingly arise.

Legal problems that relate to activities in outer space are therefore already numerous and will grow in volume as space activities unfold.[17] "Gradually and inexorably (flight) traffic will increase, new propulsive systems will be found which will reduce the cost of construction and operation, commercial enterprise will demand access to space, emigration will commence, meteorite mining will become an industrial objective, and all the ancient problems of law will be re-asserted under vastly more complicated circumstances."[18] As the problems accumulate, the statesmen of the world face the ardous task of bringing space technology within a framework of international order.

However, none of these and related problems can be resolved in space. Their solution must be sought on earth through statesmanship, rational military policies, diplomatic negotiation and above all in creative and imaginative planning in the fields of international law and international organizations.

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[17] "Again there will arise in a new frame of reference problems of neutrality and belligerency, of neutrality, domicile, statelessness, interment, asylum, sequestration, blockade, hovering extra territoriality, embargo, repraisal, boycotts, expropriation, piracy, contraband, customs, prize proceedings, emigration, immigration, mandates, colonies, tortions, violations, civil claims, venue jurisdiction and so on." The list could be extended many times over - See Hogan, John, C., St. Lewis University Law Journal, Spring (1952) p.79 for a complete list.

[18] Haley, A.G. - "Space Law and Metalaw - A Synoptic View" Harvard Law Record Nov. 8, 1956.

It is with this task that we are concerned here. This paper therefore does not attempt to discuss the myriad of foreseeable legal problems,[19] rather it is limited in the main to the more general consideration of the development of a legal order in space, through the technique of international organization. We are here therefore not concerned with prophecy but an exposition of the legal and political trends that are already taking shape.

The legal order that is envisaged here is not confined to the process of enumerating rules of international law for the conduct of space activity. Our task is a much wider task of establishing a system of controls within which exploration of outer space will take place in an orderly fashion. Many people envisage law as a kind of itany of prohibitions and permissions. What is generally overlooked is the creative function of the legal system as a factor in the complex process of mobilizing community action to deal with situations which require positive and sustained measures. Mr. Schacter says:

> Law in the U.N. (or elsewhere for that matter) is not to be approached as a set of autonomous norms which dictate decisions but as a process through which states and peoples pursue their interests and undertake joint action in accordance with felt necessities and values."[20]

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[19] On background material on legal problems relating to outer space, vide: a compilation entitled "Legal Problems of Space Exploration: A Symposium" Galloway (ed.) prepared for the use of the Committee on Aeronautical and Space Sciences, US Senate, 87th Cong.; 1st sess.; March 22,1961. For outer space documentation generally, vide: a compilation entitled "Documents on International Aspects of the Exploration and Uses of Outer Space, 1954-62," Staff Rept. prepared for the Committee on Aeronautical and Space Sciences, US Senate, 88th Cong. 1st sess.; Doc. No. 18, May 9, 1963.

[20] As stated by Mr. Oscar Schacter, Director of the General Legal Division, U.N. Secretariat, in his lectures on "Law Politics and Action in the United Nations," delivered at The Hague Academy of International Law, The Hague, in July 1963, which the writer was priviledged to attend. Vide: Hague Academy of International Law Lectures, Vol. 109 (1963) Part II 169-256, Leyden (A.W.) Sijthoff, 1964.

In discussing the development of a legal order in space we therefore, are concerned with a far wider function than the drafting of principles in the "well-worn language of legal conceptualism." A legal order in which the community action will be mobilized through international organization to deal with the situations which require positive and sustained measures in the whole complex of outer space activity.

It is our thesis, therefore, that legal order in space has to grow but not grow wild. It should be seeded and nourished in the light of knowledge, framed within legal principles established by world agreement through international organizations, and thus develop and flower as science unravels the mysteries of space.

As we proceed, we will identify this process as it is taking shape today. In the next two chapters we will examine the role of international organizations responsible for the new process and in the final chapter we will attempt to evaluate their role and conclude with an examination of the role that an international organization could play in the development of a legal order in space.

CHAPTER I

CO-OPERATION IN THE UNITED NATIONS AND THE DEVELOPMENT OF A LEGAL ORDER IN SPACE

Examining the implications of the organizations and general principles that govern international space activities should help to identify the ways by which desired regulation may be accomplished. If the purpose and degree of present methods of regulation can be determined, the result should contribute toward a more specific awareness of some of the details involved in ascertaining the process that would help evolve a legal order in space.

Various international organizations interested in space activities have by their charters or constitutions and recommendations or resolutions containing general principles for guidance in the use and exploration of outer space have contributed to the development of a legal order in space. It is our purpose here to examine the work of the United Nations in order to determine its role in the process of developing such an order.

Whatever the merits of the political realism of Dumbarton Oaks and San Francisco, with its emphasis on security rather than law, it has since become clear that there can be no security without a framework of international legal order. This fact has been evidenced by the persistent efforts within the United Nations to apply more effectively existing precepts of International Law.

Although relatively little recognition has been accorded to legal decisions and opinions scattered throughout the records of meetings, Secretariat memoranda, press releases, and other miscellaneous documents, it is, nevertheless clear that these acts are gradually adding to the body of International Law. Indeed in some fields such as outer space affairs it is clear that when welded

together they will form a coherent and useful system of law. It therefore is imperative that we examine how the contending interests in the field of space have been given legal accommodation in the United Nations, so that we may ascertain the impact of a contemporary process that is building legal order in outer space.[1]

The ground on which the activities of the United Nations in the field of outer space rest is the provision in Article 1, paragraph 4, of the Charter stating that the United Nations shall be a center for harmonizing the actions of its Members in attaining their common ends, and the pledge given by Members in Article 56 "to take joint and separate action in co-operation with the Organization for the achievement" of solutions of international economic, social, health, cultural and educational problems. The General Assembly, the Economic and Social Council, and their subsidiary organs, as central organs for harmonizing the actions of Members, have developed international co-operative activities in fields with a scientific interest. The Secretary-General has similarly used his functions to promote co-operation among Governments.

The question of a legal order in outer space was first thought of in 1957 when it was introduced into formal disarmament negotiations by the United States at a meeting of a Sub-Committee of the United Nations

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[1]Oscar Schacter, The Development of International Law Through the Legal Opinions of the U.N. Secretariat, B.Y.I.L. 1948 (Vol.25), p.92.

Disarmament Commission. To a large extent, though not completely as we shall see, it has remained enmeshed in the problem of arms control.[2]

Many of the differences between the two major parties involved in the United Nations activities with respect to international co-operation in space have revolved around the question of what constitutes legitimate space activity. And this, of course, has turned on the kinds of space programmes that each has wanted to place under an arms control agreement. The test of legitimacy for the Soviets is whether an activity is military or non-military. For the United States it is a question of whether the activity is peaceful or aggressive. Both these distinctions have invited difficulties. United States argues that the Soviet distinction is unworkable from the technical point of view since almost every kind of space activity at this early stage may have military applications. The US distinction is based on the motives[3] plus acts. Taken to its logical conclusion the motives

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[2] In the General Assembly (XIV) debate on the question of "The Peaceful Uses of Outer Space," Cuba stressed this point: "The missiles and rockets with which the Soviet Union and the United States have launched artificial satellites into outer space are far from being purely and simply scientific instruments for exploration. This is recognized by all Powers, especially by the two great Powers which have opened the way to the era of outer space. In submitting this item at the last session of the General Assembly, the Soviet Government warned us that the danger for humanity did not lie in such rockets and missiles, but in the atomic and hydrogen bombs that they might carry. In the explanatory memorandum submitted by the United States delegation with regard to this item, it is stated 'the potential uses of outer space for destructive purposes are only too apparent.'
"So far as the Cuban delegation is concerned, this is the most important aspect of the entire question . . . . We cannot divorce these powerful missiles from the armaments race because they have put into orbit satellites and planets, and have even reached the moon. If nuclear arsenals were destroyed and if we succeeded in prohibiting the manufacture of nuclear weapons, then the missile would be an instrument for scientific exploration only and space ships would be reduced to the concept of Jules Verne, that is, to vehicles for peaceful travel in outer space." (UN Doc. A/C.1/PV.1079, 11 December 1959).

[3] US, Congress House, Committee on Science and Astronautics, US Policy on the Control and Use of Outer Space, 86th Congress, 1st Session, 1959.

of the United States are all peaceful; therefore, all of its activities in space even those carried on by the military, are peaceful activities.[4] US motives are doubted by the Soviet Union as there is no precise way of determining motives, and so in practice no agreement that would help evolve a legal order in space was possible based on these distinctions except the instances of co-operation concerning such activities as weather and communications satellites whose military utility is sufficiently minimal to avoid any serious objections.

A new impetus toward creating a legal order in space through the United Nations was initiated by the launching of the Soviet Sputnik in 1957 which resulted in a reassessment of the policies of the space powers. However, it seems unlikely that the new approach was intended to bear concrete results. It appears rather to have served as a propaganda move on the part of the US to counter the Soviet success in space. The original proposal by the US President, which was later submitted to the Disarmament Sub-Committee, had been presented in the context of the old American demand that any agreement required adequate inspection procedures.

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[4] Abraham Chayes, then Legal Adviser to the US Department of State says, "it is well to be precise about what is meant when we talk of peaceful uses of outer space. It is perfectly clear that the dividing line cannot be drawn on the basis that a particular space activity has military applications or is carried out by military personnel. A navigational satellite can guide a naval vessel as well as a merchant ship. A communications satellite can serve a military establishment as well as civilian communities. Photographic observation from space may be used for mapping or for military planning. The instruments which guide a space vehicle on a scientific quest may also guide a space vehicle on a military mission. American and Russian astronauts have been members of national armed forces, but this has afforded no reason to challenge their activities." International Organization and Space; proceedings of the Conference on the Law of Space and of Satellite Communications, Chicago, May 1963, p.58.

The Soviets had consistently rejected this requirement as simply an American attempt at espionage, and it should have been evident that the Soviets would not accept inspection in an area where they had apparent superiority.

Then, on January 12, 1958, the President sent a proposal to Premier Bulganin which in effect called for the banning of ICBM's from outer space. The Soviets saw this as an attempt by the United States to gain a military advantage. Any Soviet retaliatory attacks on the United States would involve the use of rockets and these would have to go through outer space in the course of their flight to the target. The Soviets had by this time decided to focus on rockets as a major component of their strategic force, and without them that force would be considerably weakened. On the other hand, the United States had a strategic force, made up to a great extent of long-range bombers and medium-range missiles, located on the periphery of the Soviet Union.[5] If the Soviets had agreed to ban ballistics missiles from outer space they would have been helping to create order in space, but would in the process eliminate a major part of their strategic force. As the original Soviet text puts it: "One cannot fail to see that in raising the question of banning the use of cosmic space for military purposes the United States is making an attempt, through a ban of the inter-continental ballistic rocket, to ward off a retaliatory nuclear blow through cosmic space while maintaining its numerous military bases on foreign territories intended for attacking with nuclear weapons the Soviet Union and peaceful states friendly to it."[6]

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[5]Raymond L. Garthoff, Soviet Strategy in the Nuclear Age (New York: 1958), p. 227.

[6]United Nations General Assembly, official records, 13th session, Annexes, Doc. A/3818, 1959, p.3.

The Soviets answered the American proposal with one of their own. It accepted the American proposal that military rockets be banned from outer space, but also stipulated that at the same time all foreign military bases be liquidated.[7] This old demand had been rejected many times by the United States on the grounds that it would significantly weaken the military position of US vis-a-vis the Soviet Union. It may be relevant to point out at this stage that it was the United States which first introduced the question of attempting to create a legal order in outer space in the context of disarmament and arms control.

These early attempts were made very cautiously by the space powers, for it was possible otherwise to have approached it from a different direction, from that of disarmament, if at that stage they were interested in creating a legal order in outer space.

The next stage in the attempts within the United Nations to create legal order in outer space was centered round the question of establishing an independent agency to regulate space activity. We will postpone the discussion of this question for a later chapter that deals specifically with this question. Suffice it to say, therefore, that the United States first conceived of the idea of creating an agency but the US Administration was advised that the time was not yet ripe for it and consequently the Soviet Union took the honor of introducing the idea for the first time in the United Nations in March 1958. United States rejected the proposal on the ground that not enough is known as to how space would affect international political systems. Subsequently, however, the United States

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[7] Soviet memorandum of May 5, 1958, Dept. of State Bull. July 7, 1958, p.19

agreed to a study of the question of the feasibility of such an organization by a Committee, which, in its report, rejected as inappropriate any attempt to establish a United Nations space agency.[8]

Proposal of the Soviet Union to set up a United Nations agency for international co-operation in research and cosmic space and to serve as a clearing house and co-ordinator for national research[9] and the counter proposal of the United States to set up a committee to study the very same question by an Ad Hoc committee of the U.N. resulted in the decision of the 13th session of the General Assembly to include both items under the title 'Question of Peaceful Uses of Outer Space.'[10] The US proposal suggested:

". . . that the committee should study the following:

(a) the activities and resources of the United Nations, its specialized agencies, and other international bodies relating to the peaceful uses of outer space;

(b) the scope of international co-operation in the peaceful uses of outer space and programmes which could appropriately be undertaken under the United Nations auspices to the benefit of everyone;

(c) the future United Nations organizational arrangements to facilitate international co-operation in the peaceful uses of outer space; and

(d) the nature of legal problems which may arise in the carrying out of programmes to explore outer space.[11]

At a minimum this proposal meant that any international action under the aegis of the United Nations to develop a legal order in space would not be

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[8] Vide infra Ch. 3

[9] U.N. Doc. A/3818. See also official records of the General Assembly 13th session, Annexes, Agenda Item 60.

[10] "The Peaceful Uses of Outer Space," United Nations Review, January 1959, p.10

[11] Statement by Mr. Lodge in the U.N., Dept. of State Bull. December 15,1958,p.976

organized for a year, since the Ad Hoc Committee was requested to report its findings at the 14th session of the General Assembly. The United States proposal was eventually accepted by the General Assembly. It was at this point that the question of disarmament was finally segregated in a meaningful sense from the question of international co-operation in space. Thus the two major Powers had committeed themselves to the notion of creating a legal order in space under the aegis of the U.N.

The major problem became the composition of the Ad Hoc Committee, or, as it is usually referred to, the question of parity. The problem arose from the Soviet demand that it have as many representatives on the Committee as the West. This was only one in a series of moves by the Soviets to claim equal representation in international organizations. The desire was to express itself in COSPAR and the IAF and finally in the demand for Troika in the U.N. Secretariat. It is interesting that, although the Soviets had viewed itself as leading one of the three major blocs, only after the success in space did they start to demandthat international organizations reflect this perspective.

Specifically, the original American proposal had suggested a nine-Member committee on which the Soviet bloc would have one vote. The Soviets demanded a committee with equal representation from each of the three blocs. The Soviets felt they could hardly be expected to consent to a committee on which they had only one vote, since they were without question the leading space power. The United States rejected the Soviet view of the world and argued that the two criteria for membership on the Committee should be: demonstrated ability or interest in space, and accurate reflections of the geographic membership of the General Assembly.[12]

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[12]Statement by Mr. Lodge, Dept. of State Bull., January 5, 1959, p.26

These differences were impossible to compromise for two reasons: first, the United States was unwilling to accept what it saw as an exaggeration of the Soviet lead in space. Second, the American delegation had no desire to weaken its voting position in the United Nations.[13] The Soviets, probably for much the same reasons, remained adamant in their demands. The United States then determined it would go ahead with its intention of setting up an Ad Hoc Committee according to its own criteria, over Soviet objections. Under US leadership a twenty-nation group sponsored a revised draft resolution calling for an eighteen-nation committee composed of fifteen Western and neutral nations and three Soviet bloc States.[14] In December the General Assembly created the eighteen-nation Ad Hoc Committee.[15] The three Soviet bloc States plus the United Arab Republic and India refused to participate in the Committee's work.

The Ad Hoc Committee divided itself into legal and technical sub-committees and prepared a report for the 14th session of the General Assembly.[16] Given the fact that the Committee was to a great extent a creation of the United States, the fact that the United States was the only real space power participating in its deliberations, and the fact that all of the participating members were in varying degrees sympathetic to the United States, it seems reasonable to assume that the United States

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[13] Lincoln Bloomfield, "The Prospects for Law and Order" Outer Space, Ed., Lincoln Bloomfield (New Jersey: 1962), p.164

[14] Dept. of State Bull., January 5, 1959, p.26.

[15] The Committee was composed of Argentina, Australia, Belgium, Brazil, Canada, Czechoslovakia, France, India, Iran, Italy, Japan, Mexico, Poland, Sweden, USSR, UAR, UK, and USA.
The Committee elected Dr. Koto Matsudaira (Japan) as Chairman, Dr. Mario Amadeo (Argentina) as Vice-Chairman, and Joseph Nisot (Belgium) as rapporteur. Two sub-committees were established; a technical sub-committee with Prof. Antonio Ambrosini (Italy) as Chairman. These sub-committees held a total of twenty-five meetings in which working papers were discussed and their deliberations served in large part as the basis for the final report, which was unanimously adopted on June 25, 1959. (U.N. Doc. A/4141, 1959)

[16] U.N. General Assembly Official Records, 14th session, Annexes, Agenda Item 25.

could have exercised imaginative leadership if it had so desired. A study of the report leads to the conclusion that that was not the case.

The report rejected, as stated before, suggestions to establish a United Nations space agency as inappropriate.[17] The two positive steps suggested in the report were that the General Assembly set up a special committee to deal with questions relating to space, and that a small expert group within the Secretariat be made responsible for acting as a "focal point" for assisting international co-operation in space.

The Committee's specific recommendations with respect to space law were equally conservative. In brief, its position was that it was too early to determine what the law will be; developments in space exploration should necessarily preceed legal prescriptions. However, it was one of the earliest exercises of the United Nations which probed the question of a legal order in outer space. The Committee agreed that since it seemed impossible to define all the legal problems that might arise, it would proceed to identify and classify certain problems on a priority basis, and to distinguish between those which seemed amenable to early solution and those whose solution appeared more remote. The Committee recommended the following general principles: (1) The United Nations Charter and the statute of the International Court of Justice are not confined to the earth, and their provisions can be extended to include activities in outer space. (2) Extensive study of the principles and procedures which apply to the sea and the air space is necessary in order to determine their relevance to space regulation. (3) It is neither practicable nor desirable at the present time to create a comprehensive code of space law. The Committee held that "the rule of law is neither dependent upon, nor assured by comprehensive codification and ...

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[17] Vide "International Space Agency," infra, Ch.III

premature codification might prejudice subsequent efforts to develop the law based on a more complete understanding of the problem involved."[18] At the same time, however, it recognized that it is necessary for the law to keep pace with the situation it regulates.[19] The report was, as

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[18] U.N. General Assembly Official Records, 14th session, 1959, Annexes, Agenda Item 25.

[19] The Committee listed six priority problems as being amenable to early solution:

(1) Whether the satellite programmes of IGY, in which satellite vehicles were launched which travelled over other nations, had in fact established that outer space is freely available for exploration and use by all in accordance with existing or future international law or agreement.

(2) What type of injury any kind of conduct should establish liability for injury or damage caused by space vehicles, and who will determine liability and ensure payment for damages. In this connection the Committee recommended studies of a proposed agreement providing for compulsory jurisdiction of ICJ, and of the experience of the ICAO with the "convention on damage caused by foreign aircraft to third parties on the surface."

(3) Allocation of radio frequencies to space vehicles.

(4) Prevention of interference between space vehicles and aircraft.

(5) Identification and registration of space vehicles and co-ordination of launchings.

(6) Problems resulting from re-entry, descent, and landing of space vehicles in other than launching countries. In this connection, the Committee recommended consideration of the possibility that the rules of international law which now apply to aircraft landing in distress be applicable.

Other problems ranked lower in order of priority were:

(1) Official definition of air space and outer space, which were deemed premature at the time. The Committee noted that the problems to which it had given highest priority did not depend for their solution on establishing this boundary. Two possible approaches were suggested establishing the boundary as a range rather than a line, or using the type of space activity rather than its location as the basis for legal control.

(2) Exploration of celestial bodies. Although this problem was not considered pressing at the moment, the Committee suggested "the sovereignty should not be claimed by a nation over celestial bodies; that such areas should be used solely for mankind's benefit; and that an international administration might handle such matters."

(3) Interference of space vehicles with each other. The Committee believed that there was not much present danger of such interference, but noted that it was a future possibility and suggested that the rules now applying to air traffic might be related to space traffic.

Bloomfield termed it, ". . . a fairly rudimentary exercise, and one which was extremely inhibited, both by the absence of the Soviet Union, and it must be said, by the politically incomprehensible conservatism of the United States."[20]

The rather hesitating approach of the Committee to co-operation in space was, it appears, if not a mirror of the American approach, at least parallel to it. Whenever faced with a choice regarding co-operation in space, the US had in the past always taken the wait and see option, and the Ad Hoc Committee's report reflects that attitude. The American position, reflecting as it did the conservative approach, was of course the one which involved the least immediate gamble, although, if there ever is to be any genuine international co-operation in creating a legal order in space, action must be taken before the contours of space power politics have hardened. The US was, in practice, following a policy which assumed that any firm action by the U.N. with respect to space co-operation was premature until clear evidence of what changes space would effect on politics became available. The Ad Hoc report nonetheless "represented the first concerted inter-governmental assault at the political level on outer space as an international problem area."[21]

The Ad Hoc Committee's report was submitted to the General Assembly in July of 1959. This gave rise to another debate mainly centered round the question of establishing a permanent United Nations Committee on the Peaceful Uses of Outer Space, which is to attempt to create legal order in space; the one recommendation of the Ad Hoc Committee that resulted

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[20] Bloomfield, op. cit., supra note 13 at p.164

[21] "Outer Space and International Co-operation," Lincoln P. Bloomfield, to be published in International Organization

in action. Even here, however, the Committee's report was never mentioned, apparently because of the Soviet boycott. The major point of contention was once again the question of parity, with the USSR still claiming equal representation with the West.[22]

Eventually the United States and the Soviet Union were able to work out a draft resolution which both could support, and it was submitted to the General Assembly.[23] The major stumbling block, parity, had been overcome by setting up a committee of twenty-four[24] which included twelve Western States, seven Soviet bloc States, and five neutrals. Under the old Soviet parity formula, a twenty-four member committee would have been divided into three groups of eight each. Under the compromise the Soviets got within one of their eight, while the West presumably still had a veto in the twelve Western members.

The purpose of the Committee was to review the area of international co-operation and study practical and feasible means of giving effect to programmes in the peaceful uses of outer space which could appropriately be undertaken under the United Nations auspices; and to study the nature of

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[22] On September 22, 1959, the General Assembly without objection included the Ad Hoc Committee report as Item 25 on the Agenda of its fourteenth session. This report was subsequently considered by the First Committee (Political and Security) during December 11 and 12, 1959, when twelve nations submitted a draft proposal on outer space. These 12 nations were: Brazil, Czechoslovakia, France, India, Japan, Poland, Rumania, Sweden, UK, USSR, UAR, US.

[23] See supra note 22.

[24] Albania, Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Czechoslovakia, France, Hungary, India, Iran, Italy, Japan, Lebanon, Mexico, Poland, Rumania, Sweden, UAR, USSR, UK, and the USA. U.N. Doc. A/AC.105/5, Annex I.

legal problems which may arise from the exploration of outer space.[25]

The purposes of the Committee are interesting because of what they leave out. In the draft resolution setting up the Ad Hoc Committee, it had been specified that the Committee look at the activities and resources of the United Nations which were available for promoting co-operation in space, and to study the need for any new organizational arrangements - a U.N. agency. The possibility of a U.N. space agency that had at one time been widely popular had apparently been allowed to die from inaction. Further, the resolution made no mention of the Ad Hoc Committee's recommendations that an expert group be set up within the Secretariat to act as a focal point for scientific co-operation and exchange of information. This insured that there would be no permanent group within the U.N. with a responsibility for promoting co-operation.

The one rather positive note in the draft resolution was the call for an International Scientific Conference which was supposed to take place in 1960 or 1961. It is difficult not to view this as a substitute for more substantial proposals.[26] In view of the limited scope of this resolution it is difficult to understand the enthusiasm of Ambassador Lodge who said:

> From the standpoint of the ability of the Soviet Union and the United States to reach an agreement, the resolution creating the new United Nations Committee on Outer Space is, I believe, the most substantial achievement in the 14 years of the United Nations existence."[27]

This agreement seems to indicate little more than that the US and the USSR both felt a need to go through the motions of proclaiming their desire

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[26] Vide note 144 infra, for subsequent ramifications of this seemingly harmless proposal.

[27] Henry Cabot Lodge, "Accomplishments of the 14th Session of the U.N. General Assembly," Dept. of State Bull., January 18, 1960, p.99

to see space used for peaceful purposes, while at the same time both apparently wished to postpone any real action that would help to create a legal order in outer space.

This draft resolution was passed by a unanimous General Assembly in December of 1959. Although the vote was an impressive endorsement of the new Committee, it was followed by two years of inactivity. The scientific conference was to suffer the same fate. The Soviet Union had been willing to compromise on its demand for parity in membership, but it was remaining adamant in its demands that it have a veto power over Committee activities. The Soviets wanted either unanimous consent or, at a minimum, a two-thirds majority for passage of any measure. The United States stood for passage by a simple majority, the usual voting procedure in committees of the General Assembly. Further, there were differences over who should be chairman of the Committee and over the make up of the sub-committees.[28]

The United States was unwilling to see the area of space co-operation as distinct from other activities in the U.N.; therefore, it was unwilling to accept voting arrangements which were different than those used in other bodies of the U.N. Yet if space were to hold out any hope of a political breakthrough, both sides had to see it as somehow distinct from other areas in the cold war confrontation. The Soviet Union for its part was unbending in its demand that the United States recognize its superiority in the space field, which the US would do symbolically - at least in its own mind - if it accepted the Soviet terms.

This confrontation is most accurately reflected in the negotiations which took place concerning the proposed scientific conference. The Soviets proposed that an arrangements committee of three Soviet bloc and three

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[28] U;N. General Assembly Doc. 16th session, First Committee, Agenda Item 21, A/C.1/857, 15 November 1961.

Western members chaired by Soviet citizen be set up. The Soviets punctuated their demands for recognition by urging that the Secretary-General of the scientific conference be a Soviet citizen, and they reminded the United States that they had recognized its preeminence at the 1955 United Nations Conference on the Peaceful Uses of Atomic Energy by agreeing to an American Secretary-General. The United States rejected this Soviet proposal both on the grounds of the arrangements committee and the Secretary-General of the Conference. Although the Soviets were willing to compromise on the membership of the arrangements committee, the United States still continued to demand that the chairman be a neutral. However, it is interesting to note the words of Ambassador V. Zorin of the USSR in his letter of 14 November 1961 in which he stated that "for this office the United States has put forward a representative of the Western military blocs and has rejected the Soviet Union's proposals for the nomination of candidates from an unaligned country, in particular India or the United Arab Republic,"[29] which indicated that the disagreement was due to the inability of the two parties to agree as to which is a neutral or unaligned State, for they seem to have obviously spoken the same language.

Lincoln Bloomfield, after recognizing the need for the United States not to exaggerate the Soviet lead in space or to abandon its advantageous voting position in the U.N., nevertheless argues it would only be ". . . reasonable and even graceful to suggest that a Soviet scientist chair the scientific conference on space."[30] It can be said that through 1960 the

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[29] U.N. Doc. A/C.1/857, p.3

[30] Bloomfield, op. cit., note 13, at p.167.

United States demonstrated little willingness to attempt any new approaches to create order in outer space through international co-operation, for American policy remained cautious in the extreme.[31]

However, a change in American policy was seen when the initial remarks by President Kennedy indicated a new desire to pump life into the U.N's attempt at international co-operation in space. He mentioned support of space co-operation in both his Inaugural Address and his State of the Union message. The original appointments to the U.N. Committee on the Peaceful Uses of Outer Space had been for two-year terms, and these were to expire on December 31, 1961. The United States launched an effort to revitalize the Committee with the earliest overt move being the President's September 25th speech to the United Nations General Assembly when he said, ". . . that the United States would present a proposal to extend the United Nations co-operate in a world-wide weather prediction and satellite communications system."[32]

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[31] In this connection it is interesting to note the words of Ambassador V. Zorin of the USSR who said:

> It is obvious . . . that the failure of the U.N. Committee on Outer Space to commence its work is entirely the fault of the United States for trying to put the Soviet Union in an obviously unequal position. The attempts of the United States to gain for itself predominant position in the United Nations Committee on the Peaceful Uses of Outer Space are quite unjustified both politically and from the standpoint of scientific achievements in the conquest of space. They prove that the United States would like to pursue a policy of dictation in the organizing of co-operation in space activities through the U.N., and to infringe the legitimate rights of the Soviet Union and other peace loving States. This approach, however, is quite unrelated to the tasks of developing genuine international co-operation in outer space. It goes without saying that the Soviet Union, though interested in establishing co-operation among States in the conquest of space, nevertheless cannot acquiesce in such conditions for that co-operation. (Letter dated 14 November 1961 from the Soviet Ambassador addressed to the Acting Secretary-General. A/C.1/257, p.3)

[32] U.N. Doc. A/4980, December 31, 1961.

On 27 November 1961, all 24 members including Soviet bloc and neutralist members, did attend the meeting of the U.N. Committee on the Peaceful Uses of Outer Space, when the United States successfully took the initiative in getting majority of the members of the Committee to request the Secretary-General to convene a meeting. It lasted for two hours and resulted in the submission of a list of officers and speakers as a report to the General Assembly. This, however, initiated a set of events that took place with dazzling speed when compared with the progress the U.N. had made in creating a legal order in space up to this time.

In December 1961, the Political Committee discussed the Space Committee report. Many members expressed regret at the inability of the Committee to make progress while several others made suggestions for arriving at decisions in the Committee. The USSR and Czechoslovakia representatives, for example suggested that experience in the Committee for Space Research (COSPAR) and the International Conference on Antartica illustrated the possibility of agreement on the basis of joint decisions of Powers principally concerned. It was in this context and only a week after the first meeting of the Space Committee that the United States and three sponsors submitted a resolution to the First Committee which was to result, in a period of slightly over two weeks, in the most comprehensive, positive and dramatic action ever taken by the United Nations in creating legal order by international co-operation in space.

At the end of the week, after slight changes, the United States and the Soviet Union had agreed on this resolution and it was passed by a unanimous vote in the First Committee, and on December 20, 1961 it passed the General Assembly also by unanimous vote. The United Nations resolution 1721 (XVI) is a significant achievement, for it includes the first governmental commitment to publicize satellite launchings, and a commitment to

study international organizational arrangements for certain specific space activities all of which laid the initial foundation for the development of a legal order in space.

Part one of the resolution includes a re-invitation to the Space Committee to study and report on the legal problems that will arise in space. The original resolution setting up the Space Committee had said essentially the same thing. The significant difference in part one was the section that laid down two fundamental principles having to do with space law. These were: first, that "international law, including the United Nations Charter, applies to outer space and celestial bodies;" and two, that "outer space and celestial bodies are free for exploration and use by all States . . . and are not subject to national appropriation." This agreement involved some movement away from an overly cautious position by the United States as well as by the Soviet Union. The declaration that space is not subject to national appropriation, although reflecting the present American and Soviet position on colonization, involved something of a gamble for those who believed that creating principles of law is premature until they had clear evidence of technical capabilities and what changes space would effect on politics. There has been recurring speculation among some people that the moon might turn out to be a useful military base. If it were discovered that the national security of State demanded such a base, most certainly such State would not allow the agreement to stand in its way, but it certainly will be an inhibiting element for both the United States and the Soviet Union.

Part two of the resolution renews the request that the Space Committee extend every effort to promote international co-operation in space. Its most

important section has to do with the establishment of a public registry for objects which are launched "into orbit or beyond." Perhaps this modest endeavour would contribute eventually to a system of international control of space traffic regulations akin to that of ICAO[33] standards and practices, which would contribute to the development of a legal order in space. At the moment, however, it is an action with primarily symbolic value since "bi-weekly submission to the U.N. space register calls for . . . inclination, apogee, perigee, and nodal period . . . but these items are presumably available to anyone with a good radar set."[34]

The registration of space launchings was mainly advocated by the United States probably to promote openness of space activities. However, when it comes to implementing this proposal the United States found itself in an awkward situation. Through lack of co-ordination between the Department of Defense and the Department of State the new proposal ran directly contrary to a Defense policy. "From its first days, Kennedy Administration has been whittling down on the flow of information about military space exploits."[35] The result apparently of this was that the two Departments tried hard to reconcile the position. "The solution agreed upon by the agencies concerned is this: the first satellite launched this year will be identified as 1962 Alpha, for the first letter of the Greek alphabet; and the second will be Beta and so on . . . only limited information will be made available on the launchings. In this way, the world will be kept informed of the launchings but will not know which ones have military purpose . . ."[36]

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[33] For a further discussion see Ch. II and III

[34] Space Notes: Soviet Guests, "Restrictions on Military Developments; West Ford," Science, April 20, 1962, P.247.

[35] Space Notes: op cit., note 34 at P.246

[36] New York Times, February 5, 1962, P.1.

At the same time the United States was to give the agreement a very narrow legal construction, which meant that they would register only those objects in orbit at the time of or after the passage of resolution 1721. These actions meant that "the US, which has long contended that the Soviets do not divulge enough data on their space flights, found itself in the embarrassing position of providing less data to the U.N's space registry than the USSR."[37]

An interesting outcome of this was the debate on the Glenn flight, which according to the above requirements were not registerable. This caused much comment and consternation, since the US was particularly proud of this flight and had reported it around the world. As a result it registered the Glenn flight and the papers reported that the US has reversed its position. These reports, however, "erroneously stated that the United States had reversed its position and had submitted the data from the Glenn flight to the register. What actually was involved, however, was a hair-splitting operation of great delicacy: data on the flight was submitted to the U.N., but the submission was not to the register."[38]

The Department of State justified this exclusion and subsequent submission using the legal distinction given above. The attitude of the United States cast its sponsorship of this section of the resolution in questionable light as to whether the United States was really interested in the development of a legal order in space through the U.N.

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[37] George Alexander, "US, USSR to Continue Space Discussions," Aviation Week and Space Technology, April 16, 1962, P.91.

[38] "Space Accord: NASA's Enthusiasm for East-West Co-operation is not Shared by Pentagon," Science, April 13, 1962, P.137.

This created a fertile climate for charges such as those made by Karoly Castorday of Hungary who accused the United States in the U.N. of having up to twenty unreported satellites which the US was using for military purposes.[39] It is difficult to understand why the United States took this costly series of actions when a liberal construction of the resolution would have involved no serious security loss. Certainly the Soviets have been willing to provide similar information on their space vehicles. The United States seem to have demonstrated bad faith and, it did this after initiating the idea of the registry. Nevertheless, the registry is in existence with both sides apparently reporting all launchings to it.[40] More recently Italy became the third country to register its launchings with the U.N.[41] This part of the resolution, however, must be considered one of the tangible achievements in the development of a legal order in space.

Part three of the resolution 1721 called for a study of the kinds of organizational and financial arrangements which are necessary to carry out suggested weather services. This study is to be done by the World Meteorological Organization (WMO) in consultation with the other specialized organizations of the U.N. and other non-governmental bodies.

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[39] New York Times, December 5, 1962, P.2

[40] However, it is interesting to note that the Aviation Week and Space Technology says "the Soviet Union for the last year (1964) has kept the United States under regular surveillance by photo reconnaissance satellites. Reconnaissance satellites of the Soviet Union amounted to 40% of the 36 satellites put into orbit last year. In contrast, United States expanded only 14% of its satellite effort - 10 out of 69 - on payload for surveillance." Aviation Week and Space Technology, February 22, 1965.

[41] Italy registered the launching of three St. Marco satellites on December 15, 1964. U.N. Doc. A/AC.105/INF.91.

Practical activities and their results will be discussed in the next chapter.

Part four of the resolution recommends that the same kind of study be made with respect to an international satellite communications system. This study is to be made by the International Telecommunications Union (ITU) in consultation with other specialized agencies of the U.N. and various governmental and non-governmental bodies. We shall discuss this part of the resolution too, in the next chapter.

Part five of resolution 1721 confines the U.N. Space Committee beyond its December 31, 1961 expiration date and requests it to carry out the mandate of resolution 1472 (XIV) - the resolution which set up the Committee in 1959. This part also provides that the Committee meet not later than March 31, 1962 and review and report on the activities provided for in the current resolution. The resolution further enlarged the Committee to twenty-eight members. Two of the four new ones were nominated by the US and two by the USSR. This expansion was justified on the ground that the Committee should reflect the enlarged membership of the U.N. As an interesting sidelight on how other political issues get involved in the functioning of the Space Committee - the importance of which we shall indicate later in the chapter - is the fact that, "South Africa, which has long co-operated with the United States in satellite tracking operation, protested that it was offended by the failure of the United States to put it up for membership. The United States privately replied that it was offended by South Africa's racial policies."[42]

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[42]"Space Co-operation: Agreement at U.N. Leaves out Some Key Points," Science December 22, 1961, P.2028.

During the next two years the Space Committee was stymied on the question of Committee procedures. The US had been able to get the Committee revitalized by asking the members to pass over the procedural questions for the period necessary to extend the life of the Committee. Some agreement now had to be made, however, if the Committee were to achieve any success on substantive questions. The ground work for the answer to the procedural questions had been laid by the arrangements made in COSPAR and the IAF. In general terms the procedure adopted by the Space Committee and already adopted by the other two Organizations was that of consensus. The United States. exhibiting greater flexibility, had apparently decided that any hope of international co-operation in the United Nations must include the Soviet Union. In effect the US gave in on its demand that normal General Assembly Committee voting procedures apply in the Space Committee. The Soviet Union found it acceptable to have the procedure adopted termed that of consensus. According to an observer, ". . . the agreement means that the Soviets will honour the prevailing attitude of Committee members or determined by private conferences and, in turn, the US will not push for public showdowns."[43] Nevertheless, it seems evident that the Soviets had, in fact, received the power to veto Committee decisions. The United States saw the agreement as follows: "Both the sub-committees should take note of the understanding voiced by the Chairman at the beginning of these sessions to the effect that it will be the aim of all members of the Committee and its sub-committees to conduct their work in such a way that the Committee and each sub-committee will be able to reach agreement in its work without the need for voting."[44]

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[43] George Alexander, "US and USSR to Continue Space Discussion," Aviation Week and Space Technology, April 16, 1962, P.87.

[44] U.N. General Assembly, Doc.A/AC.105/PV.8, March 27, 1962, P.37.

The Soviets did give up their demand for the chairmanship of the Committee.

The Committee's organizational meetings took place in March. At that time, the Committee created two sub-committees: a Scientific and Technical Sub-Committee and a Legal Sub-Committee. The Committee did relatively little substantive work at these sessions.[45] The substantive work was taken by the sub-committees in their meetings in Geneva which started in May.

The proceedings of the two sub-committees lend support to the oft-stated view of the scientists that they know how to co-operate, for the Scientific and Technical Sub-Committee[46] had considerable success in agreeing on a U.N. programme, while the Legal Sub-Committee had little success. The illusion is shattered when it is recognized that the Scientific Sub-Committee dealt with only the most modest kinds of arrangements. The summary of the sub-committee's recommendations to the Outer Space Committee is as follows:

1. An exchange, on a voluntary basis, of information relating to national, regional and international programmes of peaceful space research, and of information on governmental and non-governmental international bodies active in space research;

2. That United Nations Specialized Agencies and member states support the programme of scientific co-operation during the International Year of the Quiet Sun (1964-1965) to be undertaken by the International Council of Scientific Unions (ICSU), and the programme sponsored by the same Organization for a world-side magnetic survey; and

3. The establishment under the U.N. auspices of a sounding rocket launch facility, or vadilities, on the geomagnetic equator in time for the IYQS.[47]

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[45] The Committee met from 19 March to 29 March 1962. Vide UN Doc. A/AC.105/PV.2-9 for proceedings.

[46] D.F. Martyn, F.R.S.(Australia) served as the Chairman. It had eleven meetings from 28 May to 13 June, 1962.

[47] U.N.Doc. A/AC.105/5.

The contributions of the Scientific Committee for international co-operation are quite substantive[48] although its direct contribution is limited toward creating a legal order, and necessarily so by the very nature of its relm of interest. Nevertheless, international co-operation obviously tends to create order by avoiding chaos which would result by non-co-operation in the scientific field and thereby inviting legal regulation.

The legal sub-committee attempted to deal with the much more general problems of international co-operation rather than the development of a legal order in space and as a result dealt with the cold war issues. The result was that it had no success in arriving at any recommendations.[49] Although the United States was unwilling to make any dramatic proposals

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[48] The first recommendation is of significance because it revives the notion of using the U.N's Secretariat as a clearing house for information. Presumably the more channels available for information exchange, the better, as long as they do not duplicate each other.
Recommendation two has little meaning in practice. Since these scientific endeavours follow in the footsteps of the now sanctified IGY, it is safe to assume that perhaps all of the bodies referred to would have supported these endeavours without this urging from the U.N's Space Committee.
The third recommendation is perhaps the first in importance. India expressed immediate interest in furnishing the facility for rocket launchings on the geomagnetic equator, and is not in the process of building it. It is to be used for purely scientific purposes and will be available to any country on what is essentially a rental basis, since there is not at present a launching facility on the geomagnetic equator, and since a facility in this location is of great scientific interest, it is likely that the facility will be used by several countries. This could perhaps result in the Soviet Union and the United States using the same facility, which should have some symbolic meaning. Here is a facility sponsored by the United Nations, available for the use of any country. More recently a U.N. expert group visited the project at Thumba and now Brazil is looking for U.N. sponsorship of a similar project and the U.N. exploring the possibility of giving its sponsorship for the French Guiana launching site for sounding rockets. See U.N. Doc. A/AC.105/17, 20 February 1964.

[49] The Legal Sub-Committee held fifiteen meetings in Geneva between 28 May and 20 June with Mr. Manfred Lachs (Poland) as the Chairman. U.N. Doc. A/AC.105/6, 9 July 1962.

and certainly unwilling to make any major concessions with respect to international agreement, it did demonstrate a real willingness to focus on those areas where agreement seemed possible. United States policy in the United Nations had moved a considerable distance from its original conservative position to one that at least showed signs of being influenced by a more dynamic approach. In attempting to implement this new approach, the United States proposed two limited agreements.[50] One proposal called for a U.N. resolution which would recommend to "the States that they render assistance to personnel of space vehicles who might be the subject of accident or experience conditions of distress, and that they return space vehicles and personnel that might land otherwise than as planned."

The second proposal called for the Secretary-General to constitute a panel of legal experts to draft an international agreement covering the question of liability for space accidents. These proposals seemed to be as far removed from the cold war as any legal agreements could be, and given the congenial climate that had existed at the March meetings of the full committee, it seemed quite likely that agreement could be reached on these.

The Soviet Union, however, was taking an entirely different approach to the proceedings of the Legal Sub-Committee. Rather than attempting to find specific areas where agreement might be reached, the Soviets proposed accession to a broad "Declaration of Basic Principles" and a formal international agreement on assistance to and return of wayward astronauts rather than the simple U.N. resolution requested by the US.[51] We shall discuss the rationale of these two approaches later in the final chapter and will

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[50] U.N. Doc. A/AC.105/6, 9 July, 1962.

[51] A/AC.105/C.2/L1.

limit ourselves here to the practical results thereof. The US felt that it had no alternative to rejecting these proposals when it looked at their language. The Soviets apparently had come to the meetings with no intention of reaching any agreement unless the United States was willing to make major concessions. Although the United States had become somewhat less cautious in its approach to the development of a legal order in space through the U.N. during late 1961 and 1962, it was not willing to make concessions which it felt were potentially detrimental to its security.

One of the concessions would have been for the United States to give up its programme of reconnaissance satellites, a programme which military planners in the US felt absolutely necessary in light of their experience with the U-2 aircraft. This conclusion was drawn from the Soviet desire to include in their international agreement on assistance and return a stipulation that the agreement was void if the space ship was found to include equipment for use in intelligence collection. The United States opposed the Soviet proposal that the use of artificial satellites for reconnaissance is incompatible with the objectives of mankind in its conquest of outer space on the grounds that international law imposed no prohibition on the observation of the earth from outer space.

There are four major points in the Soviet declaration of basic principles that the United States found particularly objectionable. Richard Gardener has stated the US objectives in the following way:

> The Soviet draft would prohibit the use of outer space for 'propagating war, national or racial hatred, or enmity between nations'. The United States is understandably skeptical about the futility of discussing this

> subject in the context of outer space in view of the fact that the Soviet Union, after initiating a lengthy negotiation on war propaganda in the 18-nation disarmament conference in Geneva, refused in the end to sign the declaration which was unanimously agreed upon.
>
> The Soviet draft also calls for prior discussion and agreement on any measures to be undertaken by a given date which 'might in any way hinder the exploration or use of outer space for peaceful purposes by other countries'. While this provision might appear innocent at first glance, it is clearly intended to give the Soviet Union a veto over US space projects such as 'West Ford' an experiment to place hairlike copper filaments in a short-lived orbital belt around the earth to determine the feasibility of using such filaments as passive reflectors for the relay of communications.
>
> Another plank in the Soviet draft of 'Basic Principles' declares that space activities shall be carried out 'solely and exclusively by States'. This provision, which would rule out the participation of private enterprise in space activities, is a blunt attempt to impose socialist principles on an important sector of human activity - an obvious attack on Telstar and US communications satellite legislation.[52]
>
> Still another Soviet 'principle' declares the collecti on of intelligence from space to be 'incompatible with the objectives of mankind in the conquest of outer space'. The fact, of course, is that observation and photography from outer space are consistent with international law, as are observations and photography from the high seas. Moreover, space photography can contribute to the reduction of the risk of war by accident or miscalculation inherent in dealings with a closed society. And it is a use of space, which may prove important some day in monitoring disarmament agreements.[53]

The first objection seemed to be clearly unreasonable and it is safe to assume that the United States objected to this as part of the negotiation process and that it would have dropped this essentially spurious objection had the Soviets been willing to drop the alleged objectionable language in the other three. The Soviets, however were unwilling to do this, and they were also unwilling to consider the American proposals until there was

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[52]This aspect will be discussed at a later stage; see infra Ch.II and III.

[53]Richard N. Gardener, "Co-operation in Outer Space," Foreign Affairs, January 1963, pp. 5-7.

agreement on their 'Declaration of Basic Principles'. The result was that the sub-committee adjourned without reaching any agreement. The United States and the Soviet Union agreed on the desirability of providing for assistance to space vehicles and their crews and their return, but they disagreed on the principles relating to this subject and the form of the instrument to be used, the US favouring a simple declaration by the U.N. General Assembly and the Soviet Union favouring the drafting of a treaty or international agreement.[54]

The recommendations of the Technical Sub-Committee and the proceedings of the Legal Sub-Committee were sent to the full committee for its consideration in September.[55] The reports of the two committees were reviewed by the full committee in New York[56] and it forwarded these to Committee I

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[54] Vide U.N. Doc. A/AC.105/C.2/SR.1-15

[55] Report of the full committee. U.N. Doc. A/5181

[56] During the discussion of the U.N. Committee on Peaceful Uses of Outer Space on September 14, 1962, the US representative, Ambassador Francis T.P. Plimpton, dramatically exhibited a metal object which landed on a street in Manitowoc, Wisconsin, on September 5. Ambassador Plimpton explained that a laboratory analysis of the object showed that it was man-made and not a meteorite. It was of alloy steel and it had been in outer space for a considerable time. He pointed out that from its satellite tracking, the Smithsonian Astrophysical Laboratory calculated that Sputnik IV, launched by the Soviet Union in May, 1960 would decay and re-enter the atmosphere about September 5, 1962, and that Manitowoc lay on one of its probable re-entry paths. A noon-watch team accordingly made observations in the area on the night of September 4-5 and observed the re-entry of a number of objects. The object found on a street in Manitowoc weighed about 20 pounds. Ambassador Plimpton added that this was not the first space vehicle fragment to return to earth, since parts of the United States vehicles have also re-entered the atmosphere and landed on more than one occasion in the past. Ambassador Plimpton noted that the tangible evidence he submitted showed the practical need to work out agreed rules and procedures for dealing with injury or damage caused by objects launched into outer space. U.N. Doc.A/AC.105/PV.14, pp. 56-57.

with no significant changes.[57] Since no agreement on legal questions was reached in either the sub-committee or the full committee, five proposals on legal matters before the committee were forwarded to the General Assembly.[58]

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[57] Two of these were submitted by the Soviet Union, two by the United States and one by the United Arab Republic. The two from the Soviet Union were a draft declaration of Basic Principles Governing the Activities of States Pertaining to the Exploration and use of Outer Space, and a Draft International Agreement on the Rescue of Astronauts and Spaceships Making Emergency Landings. The two from the US were a draft proposal on Assistance to and REturn of Space Vehicles and Personnel, and a draft proposal on Liability for Space Vehicles Accidents. The proposal of the UAR was a draft code of International Co-operation in the Peaceful Uses of Outer Space. For the texts, see Annex III of U.N. Doc. A/5181.

[58] In the Committee I, Senator Albert Gore led off the debate on the space committee report. His speech, which was billed as a major policy statement, was a summary of the American position regarding the development of a legal order in space through the U.N. at the end of 1962. Gore said: ". . . United States policy in outer space is . . . to be guided by the U.N. for the establishment of a regime of law in outer space, and to negotiate an extension of those principles by international agreement, to conclude a treaty banning immediately the testing of any more nuclear weapons in outer space; to preclude the placing in orbit of weapons of mass destruction; to take all reasonable and practical steps to avoide space experiments with harmful effects; to conduct an open programme; and to press forward with the establishment of an integrated global satellite communications system for commercial needs and a comparative weather satellite, both with broad international participation."
As this policy statement indicated, the US position on the development of a legal order in space through the U.N. has taken no drastic turns since its beginning. Yet there is now an indication that an evaluation has been taking place. Senator Gore summed up the 1962 session on an optimistic note, referring to the challenge of the space age:

> "Yes, Mr. Chairman, we shall work to make this great age of space - in its 6th, it 16th, its 60th year - the age in which man at last escaped from his sectarian earthly quarrels and went forth to create his universal destiny - and open and co-operative system of world order." (U.N. Doc. A/C.1/PV.1289/pp.7-32.

It was largely on US initiative that the U.N. General Assembly at its 1962 session adopted unanimously the resolution 1802 on outer space[59] on December 14, calling for further action in four general areas:

1. The resolution asked the Committee on Peaceful Uses of Outer Space to continue its work on the further elaboration of basic legal principles governing the activities of States in the exploration and use of outer space, on liability for space vehicles, and on other legal problems. The General Assembly referred to the Committee as a basis for this work on legal proposals submitted thus far for consideration.[60] It was recognized that the Committee would in turn refer these drafts to its sub-committee on legal questions to be convened in 1963.

2. The resolution endorsed the basic recommendations of the report of the Committee on the Peaceful Uses of Outer Space.

3. The resolution recommended an expanded programme to strengthen meteorological services and research in the atmospheric sciences.

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[59] Res. 1802 (XVII) U.N. General Assembly, 17th session, Official Records, Supp. No. 17 (A/5217), p.5.

[60] Viz: the two drafts of the Soviet Union, the two drafts previously submitted by the United States, plus an additional US draft declaration of principles relating to the exploration and use of outer space (U.N. Doc.A/C.1/881), the draft code submitted by the UAR and a draft declaration of basic principles governing the activities of States pertaining to the exploration and use of outer space submitted by the United Kingdom (U.N. Doc.A/C.1/879).

4. The resolution emphasized the importance of international co-operation to achieve effective satellite communications to be available on a worldwide basis.[61]

This was the twenty-four-power draft resolution on international co-operation in the peaceful uses of outer space, dealing with the legal as well as with the scientific and technical aspects of outer space

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[61] During the discussions in the U.N. Committee on the Peaceful Uses of Outer Space in March 1962, the representatives of the United States and the Soviet Union circulated the texts of letters between President Kennedy and Chairman Khrushchev concerning projects for common action in the exploration of outer space. (U.N. Docs. A/AC.105/1 and 2).

As a follow-up of this exchange of letters, representatives of the two countries, Dr. Hugh L. Dryden, Deputy Administrator of the National Aeronautics and Space Administration (NASA), and Dr. A.A. Blagonravov of the Soviet Academy of Sciences met in Geneva during the first session of the Scientific and Technical Sub-Committee of the U.N. on June 8, they signed a memorandum which was approved in August 1963 - outlined procedures to carry out a co-ordinated weather satellite programme, a world magnetic survey and satellite telecommunications. During the co-ordination of the outer space item in the U.N. General Assembly, United States and Soviet Union on December 5, 1962 jointly submitted documentation to the Secretary-General reporting the agreement. (U.N. Doc. A/AC.105/C.1/C.2/Rev.2, Annex III, and U.N. Doc. A/C.1/880). The US Mission to the United Nations issued a statement on Movember 6, 1964 announcing that a second memorandum of understanding had been approved covering and refining substantially the same areas for US-USSR co-operation.

For statements of the US and USSR in the U.N. on this programme of co-operation, see U.N. Doc. A/C.1/PV.1292, pp.36-37. See also: NASA News Release, 63-186 of August 16, 1963; Aviation Week and Space Technology, October 12, 1964; Missiles and Rockets, November 30, 1964, and New York Times, 18 February, 1965, p.13.

activity, which was adopted unanimously both in the First Committee and the General Assembly. It represented a resolution which lacked any substance due to the fact that there was no agreement between the two big Powers. It is regrettable that no appreciable progress was made in the constitution of a body of law. The two principles laid down by the General Assembly in its resolution 1721 (XVI) were of a general character and the time was ripe at the 1962 session to work out a set of rules that would develop a legal order in space and form the foundation of a body of space law. That was why the Soviet Union had proposed that a declaration to that effect should be adopted as soon as possible. It is difficult to understand why the United States was opposed to that proposal, especially as it had itself submitted proposals on specific questions covered by the Soviet draft declaration which it would be illogical to examine apart from that declaration. However, the idea of an international declaration appeared to be gaining ground, since the United States itself had announced its intention of submitting a draft, and the UK had already submitted one. When the session closed there appeared to be ample scope for constructive legal work in the Outer Space Committee especially with the co-operation agreement which had been concluded between US and USSR scientists,[62] which indicated that there was already some degree of mutual confidence between the two powers.

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[62] Ibid.

The favourable atmosphere in which the 1962 session concluded was further consolidated and the stage was set for co-operation in the development of a legal order in space when President John F. Kennedy addressed the 1963 session of the U.N. General Assembly. He stated:

> . . . in a field where the United States and the Soviet Union have a special capacity - in the field of space - there is room for new co-operation for further joint efforts in the regulation and exploration of space. I include among these possibilities a joint expedition to the moon. Space offers no problems of sovereignty; by resolution of this Assembly, the members of the United Nations have foresworn any claim to territorial rights in outer space or on celestial bodies, and declared that international law and the United Nations Charter will apply: Why, therefore, should men's first flight to the moon be a matter of national competition? Why should the United States and the Soviet Union, in preparing for such expeditions, become involved in immense duplications of research, construction and expenditure? Surely we should explore whether the scientists and astronauts of our two countries - indeed, of all the world - cannot work together in the conquest of space, sending some day in this decade to the moon, not the representatives of a single nation, but the representatives of all of our countries." [63]

At this time, therefore, in addition to the favourable climate created by the treaty signed by over a hundred nations, prohibiting the testing of nuclear weapons in outer space, in the atmosphere and under water,[64] there was further evidence of a shift in American policy. This was indicated when Ambassador Adlai Stevenson during the discussion of international co-operation in the peaceful uses of outer space in Committee I, stated on December 2 that President Johnson had instructed him to

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[63] U.N. Doc. A/PV.1029, pp.21-33; Department of State Bulletin 530 (1963)

[64] Signed at Moscow, August 5, 1963; in force October 10, 1963; registered with the United Nations, October 15, 1963. Resolution 1910(XVIII), adopted by the General Assembly on November 27, 1963, noted this meeting with approval and called upon all States to become parties to it and abide by its spirit and provisions. Vide: 57 AJIL 1026 (1963) and 49 Dept. of State Bull. 239/1963 for further discussion.

reaffirm the offer of President Kennedy to explore with the Soviet Union opportunities for working together in the conquest of space, including the sending of men to the moon as representatives of all countries.[65] Ambassador Stevenson quoted the statement made by President Johnson when he was a member of the Senate and appeared before Committee I of the General Assembly on November 17, 1958, to speak in support of the resolution creating the Ad Hoc Committee on the Peaceful Uses of Outer Space. At that time President Johnson stated:

> To keep space as man has found it and to harvest the yield of peace which it promises, we of the United States see one course, and only one, which the nations of the earth may intelligently pursue. That is the course of full and complete and immediate co-operation to make the exploration of outer space a joint venture.[66]

It was this climate that made possible, during the Eighteenth Session of the U.N. General Assembly, the adoption of two important resolutions; resolution 1962 of December 13 as a declaration of legal principles governing the activities of States in the exploration and use of outer space[67] and resolution 1963, which outlines the future work of the U.N. Committee

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[65] U.N. Doc. A/C.1/PV.1342, pp.6-27.

[66] U.N. Doc. A/C.1/PV.986, pp.16-25.

[67] Res. 1962 (XVIII), U.N. Press Release GA/2910, December 17, 1963, pt.II, p.8. On the discussion of this resolution in the General Assembly, see U.N. Docs. A/C.1/PV.1342-1346, A/5656 and A/PV.1280.

for the Peaceful Uses of Outer Space in relation to the development of international peaceful space activities.[68]

Early in the year, from February 25 to March 18, the U.N. Space Committee met in New York, to discuss the implementation of the recommendations contained in resolution 1802 unanimously approved by the Seventeenth Session of the U.N. General Assembly in December 1962.[69] To perform its assignment, the Committee decided to proceed, as in the previous year, by dividing the subject matter between the sub-committees. The Legal Sub-Committee was convened in New York from April 16 to May 3, despite some strong objections by the Soviets, while the Scientific and Technical Sub-Committee met in Geneva from May 14 to May 31.[70]

The Scientific and Technical Sub-Committee was able to reach unanimous agreement on several important matters in a business-like atmosphere. Several semi-political issues introduced by the Soviets, such as the request for admission of Red China to the World Weather Watch System and for veto

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[68] Res. 1963 (XVIII), U.N. Press Release GA/2910, December 13, 1963, pt. II, p.11. On the discussion of this resolution in the General Assembly, see U.N. Docs. A/C.1/PV.1342-46, A/5656 and A/PV.1280.

[69] Vide: Note 59 supra.

[70] A/AC.105/PV.19, p.23. Soviet Union accepted the change decided by the Committee to convene the Legal Sub-Committee in New York as a compromise proposal of Canada to the deadlock that faced the Committee when the United States desired to convene both sub-committees in New York and not Geneva as was done in the previous years only with the reservation that "USSR delegation stated that it did not object to the convocation of the Legal Sub-Committee in New York in 1963 as an exception and that this should not constitute a precedent for the future."

power over potentially harmful space experiments, were dropped in the final stage of the discussions, in order to have unanimity in preparation of the final report. The recommendations forwarded to the full committee fell under five main headings: exchange of information; encouragement of international programmes; international sounding rocket launching facilities; education and training; and potentially harmful effects of space experiments.[71]

While the Scientific and Technical Sub-Committee meeting in Geneva was able to prepare a list of unanimous recommendations, the work of the Legal Sub-Committee was stalled in New York by basic differences of opinion which prevented the presentation to the full committee of a unanimous report. However, its lengthy discussions of all aspects of the legal problems posed by the exploration and use of outer space were very useful and, in a way, constructive in that they eventually succeeded in bringing about a substantial rapprochement between the positions of the two groups of States led by the Soviet Union and the United States, respectively.

The sub-committee continued to deliberate in order to find a consensus on the various drafts before it which were introduced at the previous session.[72] On the question of general principles governing the activities of States relating to exploration and use of outer space, agreement was reached, that they should take the shape of a declaration. However, no agreement was reached as to the character of the document in which these principles were to be embodied, some delegations favouring a treaty-type document, others a General Assembly resolution.

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[71] U.N. Doc. A/AC.105/14

[72] See U.N. Doc. A/5549, Annex III. There were eight proposals before it for consideration: USSR, 2; USA, 3; UAR, 1; UK, 1; and Belgium, 1.

As to the particular principles proposed for inclusion in the suggested declaration and the manner of their formulation, there were principles to which there has been certain rapprochement and those to which differences of view remained. As to two specific issues, namely: rescue of astronauts and space vehicles making emergency landings, and liability for space vehicle accidents, a certain rapprochement and clarification of ideas was recorded and agreement was reached that the relevant instruments should take the shape of international agreements.[73]

In September, the full committee met once more to review the findings of its two sub-committees and prepare a report for submittal to the Eighteenth Session of the General Assembly. The meeting took place in an exceedingly friendly atmosphere, as indicated before, and as a result, the Committee in its report rapidly endorsed the recommendations of the Scientific and Technical Sub-Committee, but was somewhat reluctant to report on the failure of the Legal Sub-Committee to reach unanimous agreement on legal affairs since there was a strong feeling that the improvement in East-West relations might lead to such an agreement.

For this reason, the Space Committee's report, while based on the rather unsatisfactory results of the work of the Legal Sub-Committee, at the same time noted "that as a result of the work of its Legal Sub-Committee and subsequent exchanges of views, there has been a narrowing of differences, which has been reflected in the Committee,"[74] and invited all member States, and especially the Soviet Union and the United States, to intensify their private contacts, with the aim of reaching an agreement on legal matters by the time late in November when the space item would come up for consideration in the General Assembly.[75]

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[73] U.N. Doc. A/AC.105/12

[74] U.N. Doc. A/5549, p.9, para.20.

[75] Ibid.

The decision turned out to be a very wise one, because in a few weeks the conciliatory attitudes of the two great space Powers led to an agreement on the formulation of a set of legal principles in the form of a draft declaration.

This was approved unanimously at a special meeting of the Space Committee, just in time to be incorporated as an Addendum to its original report to the General Assembly.[76]

In a parallel move, the First Political Committee of the Assembly had already approved by acclamation resolution 1884, prohibiting the stationing in outer space and on celestial bodies of any kind of weapons of mass destruction. The Political Committee considered the reports of documents before it[77] and on December 5 adopted by acclamation the draft declarations submitted to it by the Committee on the Peaceful Uses of Outer Space and recommended to the General Assembly the adoption of the Draft Resolutions I and II.[78]

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[76] U.N. Doc. A/5549/Add.1, 27 November 1963. The Committee considered and adopted the Working Paper on "Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space."

[77] The Committee had the following documents before it: (a) A letter dated 22 August 1963 transmitting the memorancum of understanding of 8 June 1962 by NASA and the Soviet Academy of Sciences (A/5482); (b) Second Report of the ITU on Telecommunications and the Peaceful Uses of Outer Space (E/3770); (c) Report on the Committee on the Peaceful Uses of Outer Space (A/5549 and Add.1); (d) Second Report of the WMO, on the Advancement of Atmospheric Sciences and their Applications in the light of the Developments in Outer Space (E/3794 and Corr.1); (e) Report of the ECOSOC (Ch.VII, Sec. IV), (A/5503); amd (f) A draft declaration of legal principles submitted by the Committee on Peaceful Uses of Outer Space (A/5549/Add.1, Para.6).

[78] A/5656; A/C.1/L.331 and A/C.1/L.332; and U.N. resolution 1962 (XVIII) and 1963(XVIII). See also A/C.1/SR.1342, 5 December 1963.

It was thus possible for the General Assembly to approve by acclamation at its Eighteenth Session [79] the Declaration on Legal Principles Governing the Activities of States in Outer Space.[80] Resolutions 1884 and 1963, directing the Space Committee to increase its efforts in the development of a legal order and international co-operation in outer space.[81]

Resolution 1962 spells out certain basic principles previously approved by the General Assembly, resolves some of the conflicts encountered earlier in the Committee on the Peaceful Uses of Outer Space, and deals with two issues in a general preliminary manner with a view to further consideration by the Committee.[82]

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[79] It also had before it the report of the Fifth Committee on Administrative and Budgetary Questions approving the sum of $12,800 involved in accepting draft resolution A/C.1/L.332 in order that a scientific group visit Thumba, India to approve U.N. sponsorship to a rocket launching site (U.N. Doc. A/5663, Annex)

[80] For the report of the Committee on the Peaceful Uses of Outer Space concerning this resolution on legal principles and the comments of members of the Committee, see U.N. Doc. A/5549/Add.1. For new drafts and revisions considered by the Legal Sub-Committee, see U.N. Doc. A/AC.105/C.2/L.6 and L.7. The proposals before the sub-committee were reproduced in Annex I of its report, U.N. Doc. A/AC.105/12 and Annex III of the report of the Committee, U.N. Doc. A/5549. For summary records of the sub-committee session, see U.N. Docs.A/AC.105/C.2/SR.6-28.

[81] Pursuant to rule 62 of rules of procedure, it was decided not to discuss the report of the First Committee (U.N. Doc. A/PV.1280, 13 December 1963, p.7)

[82] See generally on resolution 1962, Richard N. Gardner, "Outer Space: A Breakthrough of International Law," 50 A.B.A.J. 30 (1964).

This resolution contains nine legal principles as a declaration to guide States in the exploration and use of outer space. The first four principles elaborate on section A of resolution 1721 (XVI) of December 20, 1961: (1) The exploration and use of outer space shall be carried on for the benefit and in the interests of all mankind; (2) Outer space and celestial bodies are free for exploration and use by all States on a basis of equality and in accordance with international law; (3) Outer space and celestial bodies are not subject to national appropriation by claim of sovereignty, by means of use or occupations, or by any other means; and (4) The activities of States in the exploration and use of outer space shall be carried on in accordance with international law, including the Charter of the United Nations, in the interest of maintaining international peace and security and promoting international co-operation and understanding.[83]

In elaborating the remainder of the resolution, three particularly contentious issues were resolved as follows:

First, the Soviet Union proposed that the use of outer space for propagating war, national or racial hatred or enmity between nations be prohibited. The United States would not agree to the inclusion of such a statement as a legal principle in the resolution. This issue was resolved by including a statement in the preamble of resolution 1962 to recall resolution 110(II) of November 30 1947, which condemned propaganda designed to provoke or encourage any threat to the peace, breach of the peace, or act of aggression, and to declare that this resolution 110 is applicable to outer space. Under resolution 110 each State is asked to take appropriate steps relating to this subject "within its constitutional limits."

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[83] Res. 1721 (XVI), General Assembly, 16th session, Official Records, Supp. No. 7 (Doc. A/5100), pp. 6-7.

Second, the United States would not agree to the Soviet Union proposal that all activities of any kind pertaining to the exploration and use of outer space be carried out solely and exclusively by States. The fifth principle in resolution 1962 resolves this issue by stating that States bear international responsibility for national activities in outer space, whether carried on by governmental agencies or by non-governmental entities. Authorization and continuing supervision by the State concerned over the activities of non-governmental entities is called for. In addition, under the fifth principle, when space activities are carried on by an international organization, responsibility for compliance with the principles in resolution rests with the international organization and the States participating in it.

Third, the United States would not agree to the Soviet Union proposal which would require prior discussion and agreement on any measures to be undertaken by a State "which might in any way hinder the exploration or use of outer space for peaceful purposes by other countries." This proposal would have introduced the veto into outer space. The sixth principle in resolution 1962 resolves this issue by providing that a State which has reason to believe that an outer space activity or experiment planned by it or its nationals would cause potentially harmful interference with the activities of other States shall undertake international consultations before proceeding with any such activity or experiment. No veto, however, is provided for. The United States reiterated[84] during the discussion of this subject that it considered the consultative group established by the Committee on Space Research (COSPAR) of the International Council of Scientific Unions (ICSU) as an appropriate forum for such consultations.[85]

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[84] See statement of US representative, Francis T.P. Plimpton in the main committee discussions, U.N. Doc. A/5549/Add.1, p.7. See: Contra, Eldon Kash, "Is Good Science Good Politics?" Bull. of Atomic Scientists, March 1965, p.34

[85] [illegible] their discussion

In addition, United States continued to oppose the Soviet Union proposal that "the use of artificial satellites for the collection of intelligence information in the territory of foreign States is incompatible with the objectives of mankind in its conquest of outer space." The United States repeatedly noted that international law imposed no prohibition on the observation of the earth from outer space.[86] No reference is made to this subject in the resolutions adopted.

The seventh and ninth principles provide for assistance to and return of astronauts and space vehicles. The eight principle in the resolution provides for liability for damage done by an object launched into outer space. Recognizing that these matters are dealt with in only general preliminary terms, the General Assembly in resolution 1963 asks that the Committee on the Peaceful Uses of Outer Space, when it convenes in 1964, arrange in particular for the prompt preparation of draft international agreements on these subjects.

Resolution 1963[87] on international co-operation in the peaceful uses of outer space, approved unanimously by the General Assembly, endorses the recommendations of the Committee on Peaceful Uses of Outer Space concerning the exchange of information, encouragement of international programmes, international sounding rocket facilities, educational and training and potentially harmful effects of space experiments.[88] The resolution welcomes

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[86] On this subject, see Leonard C. Meeker, Legal Adviser to the Dept. of State, entitled "Observation in Space," Dept. of State Bull. 746 (1963).

[87] Loc. cite. note 68 supra. (Resolution 1963)

[88] For details of the recommendations see U.N. Doc. A/5549.

the decision of the Committee to prepare a number of background informational papers and to establish, at the request of the Government of India, a group of six scientists to visit the sounding rocket launching facility at Thumba, India, and to advise the Committee on the eligibility of this facility for United Nations sponsorship in accordance with the basic principles endorsed by the General Assembly in resolution 1802.[89] In addition the resolution invites member States to give favourable consideration to requests of countries for training and technical assistance; notes the agreement between the Soviet Union and the United States looking toward co-operation in satellite meteorology, communication and magnetic field mapping,[90] and expressed the belief that international co-operation can be beneficial in furthering the exploration of the solar system.

Resolution 1963 also noted with appreciation (a) the second report of the WMO on the advancement of atmospheric sciences and their application in the light of developments in outer space,[91] and (b) the organizational and financial steps taken by the Fourth Congress of WMO in 1963 in response to resolution 1721 and 1802 on outer space approved by the U.N. General Assembly the previous two years. Member States were urged by resolution 1963 (a) to extend their national and regional meteorological

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[89] For the principles for the creation of such international facilities under U.N. sponsorship, see report of the Committee of Peaceful Uses of Outer Space U.N. Doc. A/5181, p.12. Resolution 1802 (XVII) of Dec. 14, 1962, endorsed these principles. For two documents on the Indian sounding rocket launching facility, see U.N. Docs. A/AC.105/8 and 10.

[90] For the text of the agreement, See U.N. Doc. A/5482.

[91] U.N. Doc. E/3794. This report was initially considered by the ECOSOC at its 36th session. See Res. 980 CII (XXXVI) adopted by the Council on August 1, 1963, Doc. E/3816, p.12 and report of the Council, Doc. A/5503, pp.48-49. See infra for further discussion.

efforts to implement the expanded programme of the WMO, (b) to co-operate in the establishment of the World Weather Watch proposed by the WMO and (c) to increase research and training in the atmospheric sciences. Resolution 1963 also welcomed the decisions of the Extra-ordinary Administrative Radio Conference held under the auspices of the ITU in October and November 1963, on the allocation of frequency bands for space communications. The second report of the ITU on outer space was noted with appreciation.[92]

Considering the work of the U.N. in 1963 along with that of ITU and WMO and the Dryden-Blagonravov agreement, it may well be said that very good progress has been made towards the objectives of keeping the exploration and use of outer space on a free, peaceful, and orderly basis and thereby helping the development of a legal order in space.

The third session of the Scientific and Technical Sub-Committee was convened in Geneva on 22 May 1964, and concluded on 5 June 1964. The Sub-Committee had before it the following:[93] a number of draft papers prepared by the Secretariat in compliance with the recommendations of the Committee contained in its report to the Eighteenth Session of the General Assembly;[94] a Secretariat working paper outlining the manner in which the Sub-Committee's 1963 recommendations could be implemented;[95] the

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[92] U.N. Doc. E/3770. This report was initially considered by the ECOSOC at its 36th session. See res.980 CI (XXXVI), adopted by the Council on August 1, 1963, Doc. E/3816, pp.11-12, and report of the Council, Doc. A/5503, pp.48-49. See infra for further discussion.

[93] U.N. Doc. A/AC.105/C.1/WP.22, 23, 24 and 25.

[94] U.N. Doc. A/5549, Paras. 11, 12, 13 and 17 and resolution 1963(XVIII), Pt.II.

[95] U.N. Doc. A/AC.105/14

report of the scientific group, established by the Committee, which visited the sounding rocket launching site at Thumba, India;[96] and the progress reports of ITU and WMO[97] in response to the Assembly resolution 1963 (XVIII). The Sub-Committee heard statements by representatives of UNESCO, ICAO, WMO, and COSPAR. It then considered the above-mentioned documents as well as working papers, draft resolutions and draft recommendations submitted by delegations. The Sub-Committee adopted a number of recommendations under the following topics: exchange of information, encouragement of international programmes; educational training; international sounding rocket facilities; and potentially harmful effects of space experiments. It also adopted certain recommendations of a general nature.

The Sub-Committee's recommendations,[98] contained in the report on the work of its third session, were submitted to the Committee on the Peaceful Uses of Outer Space which met in New York from 26 October to 6 November 1964. The Committee had also before it the revised and up-to-date papers presented to the Sub-Committee.[99] In addition, the Committee

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[96] U.N. Doc. A/AC.105/17.

[97] U.N. Doc. A/AC.105/L.10; A/AC.105/L.11

[98] U.N. Doc. A/AC.105/20 and Add.1

[99] U.N. Doc. A/AC.105/L.12, 13 and 14; A/AC.105/20 Add.5

received from the representatives of the USSR and the USA the text of a second memorandum of understanding to implement the bilateral space agreement of 8 June 1962.[100] The memorandum covered the exchange of conventional and satellite weather data over a special communication link between Moscow and Washington.

The Committee took up the recommendations of its Sub-Committee, and with the exception of the Sub-Committee's recommendation regarding the organization of a space conference in 1967 under the United Nations sponsorship, its recommendations received the support of the general membership of the Committee. The recommendations adopted on the topics afore-mentioned were similar to the earlier recommendations relating to those subjects.[101] The only new recommendation was in regard to the potentially harmful effects of space experiments. The Committee took note of the resolution adopted by COSPAR in May 1964 on the basis of the report by its consultative group on potentially harmful effects of space experiments and requested the Secretary-General to circulate to member States the resolution of COSPAR,[102] the report of the consultative group and its four appendices,[103] and urged that all member States proposing to carry

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[100] U.N. Doc. A/5779 and A/C.1/880 of 1 June 1962.

[101] U.N. Doc. A/5785.

[102] U.N. Doc. A/5785, Annex II.

[103] U.N. Doc. A/5785, Annex III.

out space experiments should give full consideration to the problem of possible interference with other peaceful uses of outer space, as well as to possible harmful changes in the natural environment and, where appropriate, seek a scientific analysis of the qualitative and quantitative aspects of such experiments from the COSPAR consultative group, without precluding other recourse to international consultation, as provided in General Assembly resolution 1962 (XVIII).

As regards a space conference, opinion was divided as to the usefulness of holding such a gathering. A number of members including Austria, which initiated the proposal, the UAR and the USSR strongly supported the idea. They maintained that such a conference would provide an opportunity for assessing the work done in the field of peaceful uses of outer space in the first ten years of the space age. Another group of members, including the United States and United Kingdom, expressed the belief that the holding of a special space conference under U.N. sponsorship in 1967 would duplicate the work already being carried out at present by international governmental and non-governmental institutions and would be wasteful in time and resources. They held that the first ten years of the space age could be appropriately celebrated by the holding of a special commemorative meeting of the Committee on the Peaceful Uses of Outer Space at which, in addition to its normal business, the Committee could hear reports of experts on the past achievements of the space age and the potentialities in the future.

Finally, there was a third group, headed by Italy, which in principle supported the idea of holding a conference but maintained that the question required a thorough study by a special group whose views could be laid before the Committee for a decision. It was on the basis of this suggestion that the Committee finally agreed to set up a working group composed of its entire membership which was to examine the desirability and objectives

of an international conference on the peaceful uses of outer space to be held in 1967 and to report to the next session of the Committee.[104]

There was one further substantive change by the Committee in the Sub-Committee's recommendations, namely, the addition of a provision put forward by Austria whereby the Sub-Committee was invited, in co-operation with the Secretary-General and in consultation with the appropriate specialized agencies, to study and report on the possibility of setting up a world-wide navigation satellite system.

In the course of 1964, discussion of the legal problems involved in the exploration and use of outer space, which took place in the Committee on the Peaceful Uses of Outer Space and its legal sub-committee, again centered on the following three issues: (1) Legal principles governing the activities of States in outer space; (2) Assistance to, and return of, astronauts and space vehicles; and (3) Liability for space vehicle accidents.

The Legal Sub-Committee held the first part of its third session in Geneva, between 9 and 26 March 1964[105] and the second part of that session in New York from 5 to 23 October 1964.[106] The Sub-Committee recognized as its terms of reference the provisions of Assembly recommendation that consideration should be given to incorporating in international agreement form legal principles governing the activities of States in

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[104] Vide infra note 144 for political ramifications surrounding the problem of the space conference.

[105] U.N. Doc. A/AC.105/20, 24 August 1964.

[106] U.N. Doc. A/AC.105/21, 23 October 1964.

the exploration and use of outer space, and requested the Outer Space Committee to continue to study and report on legal problems which might arise in the exploration and use of outer space, and in particular to arrange for the prompt preparation of a draft on international agreements on liability for damage caused by objects launched into outer space and on assistance to and return of astronauts and space vehicles.

The Sub-Committee decided to continue the two working groups established at its previous session, each consisting of the whole membership of the Sub-Committee, to deal with the proposals and amendments on assistance and return and on liability for damage, respectively. More conspicuous results were achieved in Working Group I where preliminary agreement was reached on the preamble and on certain of the operative provisions of the draft agreement on assistance to, and return of, astronauts and space vehicles. Working Group II completed the first reading of the articles of the drafts on liability for damage caused by space vehicles.

The report of the Legal Sub-Committee covering both parts of its third session was considered by the Committee on the Peaceful Uses of Outer Space at its sixth session. The Committee noted with satisfaction that substantial progress was made in the course of the Sub-Committee's third session, although there had been insufficient time to draft the international agreements on assistance to and return of, astronauts and space vehicles and on liability for space vehicle accidents, and decided that work on the two conventions should be resumed as soon as possible.[107]

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[107] U.N. Doc. A/5785, P.19, 13 November 1964.

The abortive Nineteenth Session of the U.N. General Assembly did not consider the report of the Committee on Peaceful Uses of Outer Space and is expected to do so when it resumes its suspended Nineteenth Session in September 1965.[108]

In 1964, the consideration of the question of the legal principles governing the activities of States in the exploration and use of outer space took place during the first part of the third session of the Legal Sub-Committee of the Outer Space Committee. The exchange of views on this subject continued at the meeting of the Outer Space Committee.

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[108] The 19th General Assembly centering about the application of Article 19 of the Charter to the Soviet Union, France and a few other members, was ill-fated and was adjourned without considering the Committee report or even without going into the Committee stage so that the first Political Committee could consider it. Article 19 provides that a member who is two years in arrears with payments shall have no vote in the General Assembly. It was contended by the Western bloc that the Soviet Union was more than two years in arrears because of its failure to meet the assessments of the General Assembly against it for UNEF and UNOC peace keeping operations. The I.C.J. in an advisory opinion on which its members were sharply divided, nine to five, had found the assessments valid and binding under the Charter. The General Assembly at the 18th session voted to accept the opinion. The Soviet Union and France have taken the position that only the Security Council under the Charter can impose binding obligations. The 19th session failed to meet with any workable formula and charged a committee of 33 countries to find a formula and report by 15th of June 1965 and it adjourned until September 1965. (A/RES.2006(XIX) Rev.1.). It is hopefully working to formulate a plan to "review the whole question of peace-keeping operations in all their aspects, including ways of overcoming the present financial difficulties of the organization." (See: A/AC.121/PV.1-20). On the success of this committee depends to a large extend the success of the U.N's effort to create a legal order in space.

The question of the legal principles was discussed mainly in the light of Assembly resolutions 1963 (XVIII) which recommended that consideration should be given to incorporating in international agreement form, in the future as appropriate, legal principles governing the activities of States in the exploration and use of outer space. There were diverse views expressed in the Sub-Committee[109] as to the desirability of such an agreement and the form which it should take. The Eastern bloc[110] emphasized the urgent need for the elaboration of the legal principles governing the outer space activities of States in an instrument with the legally binding force of an international treaty and that the drafting of such an instrument could be started at the third session of the Legal Sub-Committee. Other States especially of the Western bloc[111] preferred to defer such elaboration

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[109] U.N. Doc. A/AC.105/C.2/SR.29-37, 24 August 1964.

[110] The representatives of Bulgaria, Czechoslovakia, Hungary, Mongolia, Rumania, Poland and the USSR. They ascertained that the international situation was ripe for such action and cited a resolution adopted by the 52nd Conference of Inter-Parliamentary Union in September 1963, which urged the conclusion at the earliest possible date of agreements on space law problems including an international agreement on basic principles which should govern the activities of States in outer space. (Vide. U.N. Doc. op. cit., supra note 18.

[111] The representatives of Australia, Belgium, Italy, Mexico, Sweden, the U.K. and the United States. In their opinions it would be unwise to hurry with embodying the Declaration of Legal Principles in an instrument with the force of international treaty, for the principles should remain flexible so that they could be adjusted in the light of later experience. (Vide. U.N. Doc. op. cit., supra note 18).

until after agreement on more urgent problems such as the assistance to, and return of, astronauts and space vehicles and on liability of damage caused by space objects, have been agreed upon and they would prefer more caution to be taken in elaborating general principles.

In this connection the representatives of the UAR and Japan maintained that the adoption of the Declaration represented a first important step towards the formulation of the law of outer space, which in the opinion of the Hungarian representative, in adopting the Declaration of legal principles, the Assembly had set the United Nations on the path toward the codification of the law of outer space. The representative of Brazil pointed out that the Assembly itself was apparently aware of the shortcomings of the Declaration, since in resolution 1963 (XVIII) it had recommended that consideration should be given to incorporating the legal principles governing the activities of States in outer space in international agreement form.[112]

Also discussed during 1964 was the question of assistance and return of astronauts and space vehicles. The consideration of this question took place in the Legal Sub-Committee during the first and second parts of its third session, and began on the basis of two draft agreements submitted by the USSR and the United States, respectively.

The USSR proposal was a revised version of the draft agreements submitted at the first session of the Legal Sub-Committee in 1963, as indicated earlier.[113] When the discussion of the question of assistance to

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[112] Vide. U.N. Doc. op. cit., supra note 18

[113] Vide. Supra note 51 and 60.

astronauts was resumed at the second part of the Sub-Committee's third session, the USSR submitted another revised draft agreement on assistance which, as it was stated by the USSR representative, took into account many of the observations made by other delegations during the first part of the session.[114] In particular, as distinguished from a previous draft, this draft agreement provided that contracting States should foster international co-operation in salvaging space objects launched in accordance with the Declaration of Legal Principles and that they should return the crews of foreign spaceships, spaceships themselves, satellites and capsule concerned in accordance with this Declaration.[115]

As distinguished from its proposal in 1962 presented as a General Assembly[116] resolution, a new United States proposal was submitted in the form of an international agreement.[117]

In the course of discussion Australia and Canada submitted a proposal,[118] later twice revised, which was based on a number of provisions of the USSR and USA drafts and various amendments made during the debates,

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[114] Vide. U.N. Doc. op. cit., Supra note 18

[115] Vide. U.N. Doc. A/AC.105/19; A/AC.105/20; and A/AC.105/21

[116] Vide. Supra notes 50 and 60.

[117] U.N. Doc. A/AC.105/C.2/L.9.

[118] U.N. Doc. WGI/17/Rev.1.

and, in its author's opinion, was intended to cover only those provisions on which they felt that there appeared to be a substantial measure of agreement within the sub-committee.[119] The three proposals were inserted in a comparative table prepared by the Secretariat.[120]

When introducing the revised draft agreement, the representative of the USSR said that there were two guiding principles underlying the draft.[121] First, the humanitarian duty of all States to extend assistance to astronauts in distress, and second, the respect of the principle of the sovereignty of States. Thus, while it was the duty of a State on whose territory a space ship made a force landing to lend every possible assistance to its crew, the principle of sovereignty meant that search and rescue operations must primarily be the responsibility of the State.

Drawing attention to the United States draft, the U.S. representative said that an agreement of such a character could help to foster international co-operation in the peaceful uses of outer space by the development of agreed standards and procedures for dealing with every eventuality. He felt that one of the first standards to be considered should be one establishing a duty of States to lend all possible assistance to astronauts in need of assistance, as there was general humanitarian concern in this regard. Since there was a shared scientific interest in the examination of space vehicles or their parts returned from outer space the draft agreement was also designed to facilitate the return of such objects.

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[119] U.N. Doc. A/AC.105/20.

[120] U.N. Doc. A/AC.105/C.2/W.1./Rev.1 and Rev.2.

[121] For statements made by representatives in the following discussion, reference should be made to U.N. Doc. op. cit., supra note 24.

With respect to the authority and control over rescue operations, the representatives of Austria, Canada and India expressed concern regarding a possible limitation on a contracting State's right to conduct assistance and rescue operations on its own national territory. In the opinion of the Austrian representative, the search and rescue of astronauts in the territory of a contracting State was fundamentally a prerogative of that State. If that State obtained assistance from the launching State provisions would have to be made to ensure that all search and rescue operations were conducted under full control of its own authorities, and that States would reserve their own authorities the sole right of search in certain prohibited areas. It was pointed out that search and rescue operations conducted by the launching State could involve the deployment of parties of military or para-military character, and that the implications of that situation, especially for neutral countries, were obvious.

In regard to the search and rescue operations on the high seas or in any other place not under the jurisdiction or control of any State, the representative of the United States said that the draft agreement should clearly establish that instrumentalities of a State participating in the assistance - - for example, elements of its armed forces - - would be subject to the direction and control of the government of that State and not of another State.

The representative of Italy expressed an opinion that it would be wrong to permit, by virtue of the agreement, the launching State to reserve the exclusive right to carry out, by its own means and with its own personnel, rescue operations in a zone of the high seas designated by itself, since this, among other things, would interfere with the legislature of certain States and maritime law obliging private persons and captains of ships to take efforts to rescue anyone in distress at sea.

Views were also expressed concerning the problem of identification of space objects. The representative of Japan drew attention to the desirability of establishing an effective system of registration of launchings with the Secretary-General of the United Nations and to make the launching States legally obliged to supply data on the specific purpose of the launching as well as other characteristics of the object launched which might be necessary for its identification. The representative of Lebanon pointed out that since the draft agreements under consideration required States in whose territory a space object landed to notify the launching State concerning the occurrence, provision should be made requiring advance international registration of all launchings and the furnishing of any further information necessary for the identification subsequent to the launching.[122]

The representative of France proposed that instead of setting forth the obligation to return the personnel of a spacecraft to the launching State, the article should only provide that a contracting party would not oppose the astronaut's departure from its territory and would do its utmost to assist them in making travel arrangements. This article should not be construed as preventing juridical or administrative proceedings, or the enforcement of measures resulting from such proceedings, instructed by reason of the deeds or words of such astronauts after completion of rescue operations.

The representatives of Argentina, Austria, Canada and Japan, among others, believed it important to make provision for the duty of the launching State to remove space devices from a foreign territory when they involved a hazard to the State in whose territory they were found.

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[122] On identification and generally on assistance and return of space vehicles, Vide. Law and Public Order, op. cit., supra Intro. note 3 at, pp.520-25, 579-82.

The representative of Argentina felt that the law applying to navigation by sea and air which had already been developed, and in particular to the law governing the assistance to aircraft and ships in distress,[123] might be considered applicable to the preparation of an agreement on assistance to astronauts. He pointed out that if one were to proceed from principles of the maritime and air laws, the agreement in question should provide that States rendering assistance were entitled to the reimbursement of any expense incurred. In the opinion of the representative of Japan, the launching State should reimburse the expenses incurred by a contracting party not only in respect to the recovery or the return of a space object but also in respect to the rescue or return of the personnel of a space object.

The representatives of Canada, Italy and the UK felt that the launching State should not defray the expenses arising out of operations conducted to assist or rescue astronauts, whose safe recovery and return would be analogous to air and sea rescue operations, since the general rule in such cases was not to claim for the cost of rescue operations in so far as they related to assistance to distressed person.

The representatives of Argentina, Australia and Japan maintained that the agreement on assistance should contain provisions covering compensation for damage caused by a space object in the State of landing, which would specify that the obligation to return the space object did not become legally effective until satisfactory arrangements had been made for compensation in respect to the damages.

The representative of Sweden suggested that a provision should be worked out concerning the necessity of dealing promptly with claims for reimbursement

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[123] Vide. ICAO, "International Standards and Recommended Practices," Search and Rescue Annex 12; and Article 25, Convention on International Civil Aviation, Chicago, December 1944.

which would also stipulate that costs be paid in the currency of the rescuing State.

Different views were expressed concerning a procedure for the settlement of disputes arising from the application of the agreement on assistance and return.

Several representatives, among them representatives of Argentina, Czechoslovakia, and Mongolia considered it unacceptable a provision in the US draft providing for the compulsory jurisdiction of International Court of Justice (ICJ) for the settlement of disputes. The representative of Mongolia stated that many States were reluctant to have recourse to the ICJ because geographical representation in the court was heavily biased in favour of Western jurists and systems and they preferred to chose freely among the peaceful means of settlement of disputes mentioned in Article 33 of the United Nations Charter.

The representatives of Argentina and the USSR proposed to amend a corresponding article of the US draft so that disputes might be referred to the ICJ only with the consent of all the parties to the dispute.

In the opinion of the representatives of Canada and the UK, an article providing for the compulsory jurisdiction of the ICJ should also provide for the recourse to other peaceful means of settlement prior to reference to the ICJ.

The representative of Japan proposed that in case of a difference as to the identification of an object returned to earth from outer space any State concerned might request the Secretary-General of the U.N. to designate experts to render an advisory opinion on the matter.

Different opinions were also expressed with regard to the clause concerning the States which could become parties to the agreement on assistance.

A group of representatives, among them the representatives of Australia, Sweden and the UK, considered the formula used in the US draft acceptable. In their opinion, it was in conformity with recent UN practice in this field and moreover it was not within the terms of reference of the Sub-Committee to take decisions on the matter. Others, among them the representatives of Czechoslovakia, Hungary and Mongolia, maintained that the formula concerning the parties to the agreement contained in the US draft was unacceptable. According to the representative of Mongolia, this formula was of a discriminatory nature, incompatible with the provisions of the Declaration of Legal Principles proclaiming that outer space was free for exploration and use of all States and that States should regard astronauts as envoys of mankind in outer space; it might also create practical difficulties when an astronaut made an emergency landing in the territory of a State denied possibility to participate in the agreement and hence under no treay obligation to rescue or to return the astronauts.

When commenting on this proposal to incorporate the agreement on assistance to astronauts an accession clause similar to that appeared in the Moscow Test-Ban Treaty of 25 July 1963, the representative USSR emphasized that it was of vital importance to governments which launched space vehicles that an agreement on assistance should be of truly universal application. The representatives of Czechoslovakia, Hungary, India, Poland and Rumania, speaking in favour of the Soviet proposal, pointed out that a universal application of the agreement on assistance was necessitated by a humanitarian nature of this agreement. The representative of Italy believed that the Soviet proposal might contribute to the working out of a successful agreement on this issue.

At the end of the third session of the Legal Sub-Committee the draft agreements and various amendments to these agreements were discussed in the working party and preliminary agreement was reached on the preamble and on certain of the operative provisions of the agreement. These provisions, in brief, are the following:

1. Each contracting party which discovers that the personnel of a spacecraft of another State has suffered accident or is experiencing conditions of distress, or that they have made an emergency landing in territory under the jurisdiction of the contracting party, on the high seas, or in any other place not under the jurisdiction of any State, does its utmost to notify the State which has announced the launching, and notifies the Secretary-General of the United Nations.

2. If, as a result of accident, distress or emergency landing, personnel of a spacecraft are in territory under the jurisdiction of a contracting party, it takes all possible steps to render the personnel the necessary assistance; it keeps the States which had announced the lannching, and the Secretary-General of the United Nations, informed of the steps so taken.

3. The assistance to be furnished when necessary by the contracting party to the personnel of a spacecraft of another State in no way differs from the assistance which it would furnish to its own personnel.

4. If the contracting party considers that the assistance of the State which had announced the launching would contribute substantially to the effectiveness of its search and rescue operations, it requests this State to co-operate with it with a view to the effective conduct of such operations, under the direction and control of that contracting party.

5. A contracting party which discoveres that a space object has landed in territory under the jurisdiction of the contracting party, or on the high seas or in any other place not under the jurisdiction of any State, does its utmost to notify the State which had announced the launching, and notify the Secretary-General of the United Nations.

6. A contracting party which finds that a space object discovered in territory under its jurisdiction or recovered by it elsewhere having a hazardous or deleterious nature might so notify the State which had announced the launching, which thereupon takes steps, under the direction and control of the contracting party, to remove it from territory under the

jurisdiction of the contracting party or otherwise render it harmless.

7. If a space object which has landed on territory under the jurisdiction of a contracting party might be of a hazardous or deleterious nature, the State which had announced the launching immediately so notifies the contracting party, if the contracting party so requests, the State which has announced the launching takes steps, under the direction and control of the contracting party, to remove it from the territory under the juristiction of the contracting party or otherwise render it harmless.

8. If a contracting party considers that the assistance of the State which has announced the launching would contribute substantially to the effectiveness of recovery or return operations carried out by it in territory under its jurisdiction, it requests the State which had announced the launching to co-operate with it with a view to the effective conduct of such operations, under the direction and control of that contracting party.

9. The State which had announced the launching of a space object and has requested its return, if requested by the contracting party which has discovered the object, furnishes identifying data to the contracting party.[124]

Finally, the question of liability for damage caused by objects launched into outer space was also discussed in 1964. The debates took place mainly in the Legal Sub-Committee during both the first and second parts of its third session.

At the beginning of the debate the Sub-Committee had before it, in addition to a working paper on the unification of certain rules governing liability for damage caused by space devices introduced by Belgium[125] in 1963, two other drafts concerning liability for damage caused by the launching of objects into outer space; a draft convention proposed by the United States[126] and a draft agreement proposed by Hungary.[127] The

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[124] U.N. Doc. A/AC.105/21.

[125] U.N. Doc. A/AC.105/C.2/L.7/Rev.1.

[126] U.N. Doc. A/AC.105/C.2/L.8/Rev.1

[127] U.N. Doc. A/AC.105/C.2/L.10.

Secretariat prepared a comparative table of the provisions contained in the three proposals.[128]

During the consideration of the item of liability for space vehicles accidents a number of views and amendments were expressed and submitted.[129]

The representative of the USSR pointed out that the Declaration of Legal Principles had indicated the direction to be taken in drafting the agreement, by proclaiming that States were responsible for all types of national and international activity in outer space and that they allowed private companies or international organizations to engage in outer space activities in such a manner as not to endanger human life, health or property.

The representative of Rumania considered that the provisions of the agreement on liability should be based upon paragraph 8 of the Declaration of Legal Principles.[130]

The representative of Argentina was of the opinion that the matter of liability for the damage caused by space objects should be governed by the principles of objective liability, which placed the main emphasis on the results of the event that caused the damage.

The representative of Hungary saw the importance of the elaboration of rules on liability in the fact that the national legal systems differed from each other and did not guarantee an equitable solution, and that there were no appropriate precedents to be taken into account in deciding on the damage caused by space objects.

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[128] U.N. Doc. A/AC.105/C.2/W.2/Rev.1

[129] For statements made by representatives in this discussion reference should be made to U.N. Doc. op.cit., supra note 24.

[130] U.N. General Assembly resolution 1962 (XVIII). Vide. Supra note 67.

The representatives of Belgium and India considered essential to give full consideration to the question of terminology, which particularly important when the legal problems of liability for damage caused by space objects were being approached from the viewpoint of different legal systems.

Composing the different methods of assessment of compensation for damage as laid down in the drafts under consideration, the representative of Canada favoured a provision in the agreement specifying clearly the basis on which compensation would be paid in preference to leaving this matter to be determined by the national law of the injured person as was the case with the Belgium proposal.

The representative of the US said that a revised part of the US draft clearly ennunciated the principle of the absolute liability of the launching State, which was in conformity with paragraph 8 of the Declaration of Legal Principles.

The representative of Italy proposed to replace a provision in the US draft to the effect that a State was not liable under the agreement on liability for damage suffered by its own nationals by the provision that this agreement did not apply to damages sustained on the territory of the launching State.

With regard to the provision, originally contained in the US draft, that gross negligence on the part of the claimant could exonerate from liability, the representatives of Canada, Japan and Sweden considered the term "gross negligence" unacceptable and suggested that it should either be replaced by the words "willful and reckless conduct" or be accompanied by a definition. In the opinion of the Italian representative it was

preferable to omit the word "gross" so that it would be for the judge to decide the gravity of the negligence and its implications.

The representative of Czechoslovakia believed that force majeure, as a basis for this exoneration for liability, was a recognized legal principle referred to in many international conventions, which should not be omitted from the agreement on liability for space vehicle accidents.[131]

Concerning the provision in the US original draft that is the event of the collision of two space devices there was no liability as between the two launching States, the representative of Argentina said that this provision needed to be supplemented by specifying that liability subsisted in the event of damage to third parties resulting from the collision. The representative of the US pointed out that a later US draft did not contain provisions concerning the possibility of an accidental collision between objects launched into outer space, since such collision was extremely unlikely.[132]

The Canadian representative emphasized that where the launching State sought to rely on an exoneration from liability, then the burden of proof in that regard should rest upon the launching State.

The representative of Italy expressed the view that a State might not take advantage of the exoneration of liability, as provided for in the agreement, if it launched a space object without notifying the Secretary-General.

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[131] This and other problems discussed in this session were quite similar to that of air and maritime law problems in the following conventions respectively: Convention on Unification of Certain Rules Relating to International Coverage by Air (Warsaw) 1929; Convention on Damage Caused by Foreign Aircraft to Third Parties on the Surface (Rome) 1955; Convention of the Unification of Certain Rules Relating to the Coverage of Passengers by Sea (Brussels) 1957; and the Convention of Limitation of Liability of Owners of Sea-Going Ships (Brussels) 1924.

[132] ICAO is presently preparing a convention on aerial collisions.

The representative of Argentina and France were of the opinion that the relationship of cause and effect between damage and outer space activities should be governed by the law of the place where the accident occurred, while the Italian representative believed that this relationship should be determined in accordance with the national law of the person injured.

The representatives of Rumania and the USSR expressed the view that when more than one State was involved in the launching, the best method in such a case for the solution of the problem of compensation was to apply the principle of joint and several liability since it would clearly be to the advantage of a State involved. The State claiming compensation would not need to investigate the basis on which the launching States conducted their joint activities, that task would be incumbent upon the launching States, for it would be for them to decide among themselves what share of the liability fell to each. This approach would have also the advantage of encouraging States which proposed to engage in joint space activities to exercise greater care in carrying out their activities.

The representative of the USSR believed that international organizations engaged in outer space activities should assume liability for any damage caused by their space activities, since according to the Declaration of Legal Principles such organizations were responsible for complying with the principles of the Declaration. He considered as a serious omission, at variance with the Declaration, the absence of any reference to an international organization's liability for damage in an original version of the US draft. Commenting on a provision of the US draft stipulating that an international organization might, as a State, present a claim for compensation, the representative of the USSR and Rumania maintained that there was no justification for equating an international organization with a

State, for it had neither territory nor nationals which would suffer damage.

Arguing against the objections to making an international organization party to the agreement on liability on the same footing as the contracting State, the representative of Australia stated that the Declaration of Legal Principles placed such organizations on exactly the same footing as States with regards to liability and the agreement should do the same.

The representative of Argentina agreed that appropriate international organizations should be able to become parties to the agreement on liability, since the treaty making capacity of those organizations was recognized and since a number of them were already engaged in outer space activities.

The representative of Italy expressed the opinion that the agreement should provide for the limitation of liability as it existed in maritime and air laws, and the States engaged in outer space activities for the benefit of mankind should enjoy that privilege in a certain measure.[133] He considered that a guidance for the deciding on the limit of liability might be found in the existing conventions concerning liability for nuclear damage.[134]

The Japanese representative believed that it would be premature to set a limit on liability at that stage since there was not yet sufficient technical data available to determine the possible extent of damage.

The representative of India was of the view that compensation for damage to property should be commensurate to the damage and consequently, there should be no monetary ceiling for compensation in relation to each launching

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[133] Vide. Conventions op. cit., supra note 131.

[134] Convention on Liability of Operators of Nuclear Ships (Brussels) May 1962. Convention on Civil Liability for Nuclear Damage (Vienna) May 1963.

although the agreement on liability might prescribe a fixed amount for loss of life. These principles would significantly add to the usefulness and universality of the agreement.

An additional article to the Hungarian draft was submitted by the USSR proposing the inclusion of provisions to the effect that claims for compesation should not constitute grounds for the sequestration or the application of enforcement measures to a space ship of a foreign State.

The representative of Austria suggested that the agreement on liability should avoid curtailing in any way legal remedies available to claimants; it should rather provide them with additional protection. In his opinion, the establishment of a system of financial guarantees, to meet the situation which would arise when less wealthy States embarked upon the exploration of outer space, might be considered, particularly in view of possible requirements to pay compensation in a readily convertible currency.

The representative of Japan, Italy and the UK were of the opinion that a period of one year for the presentation of a claim would be too manifest itself for a number of years or it might not be possible immediately to identify the responsible State. The representative of Italy suggested to solve this problem on the lines of certain civil aviation conventions[135] which laid down a time limit of two years with a reservation not to apply it when the author of the damage could not be ascertained during this period. The representatives of Bulgaria and Japan proposed that a claim should be presented within one year or two years, respectively, of the occurrence of the damage or of the identification of the liable State, and if the applicant State did not know of the facts giving rise to the claim, the claim should be presented within one year of the date on which these facts had become known.

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[135] Vide. Conventions op. cit., supra note 131.

The representatives of Argentina, Czechoslovakia, Rumania and the USSR, among others, disagreed with a provision in the US draft concerning the settlement of disputes. The representatives of Rumania and the USSR expressed their surprise that the US delegation should advance a clause on the compulsory jurisdiction of the ICJ since similar proposals had invariably been rejected at certain international conferences held under the auspices of the U.N. in recent years and that even the optional protocols concerning the compulsory settlement of disputes were accepted by a very small number of States in each case.

The representatives of Sweden and the UK proposed a procedure for the settlement of disputes concerning the application and interpretation of the agreement on liability arising between contracting State and an international organization conducting space activities which undertook to comply with the agreement. Accordingly any such dispute which was not previously settled by other peaceful means of their own choice might be referred by either party to an arbitral commission of three members, two of them being each appointed by the contracting States and the international organization and a third member by the President of the ICJ. The decision of the commission was binding upon each party to the dispute.

Comments were also made on the question of the participation of States in the agreement on liability. Speaking in favour of the provision in the Hungarian proposal that the agreement should be open to all States, the representatives of the USSR, supported by the representatives of Czechoslovakia and Rumania, pointed out that the exclusion of certain States from the participation in the agreement on liability would have the practical drawback of making it impossible to claim compensation from the launching State so denied the right to be a party to the agreement.

It is interesting if not surprising to note that in the discussion relating to the agreement on liability for damage caused by objects launched into outer space little or no reference was made to the existing conventions in maritime and air law.[136]

At its third session the Legal Sub-Committee completed the first reading of the articles of the draft agreement on liability for damage caused by objects launched into outer space. However, due to the variety of opinions in the Sub-Committee on various articles no agreement was reached on any and it recommended that its work be continued at the next session.

In March 1965 the Chairman communicated to the members of the Outer Space Committee that due to the fact that a number of reports to be prepared by the Secretariat are not due until 1966, and considering the desirability of providing a longer period for the preparation of background materials by the specialized agencies concerned, the Scientific and Technical Sub-Committee will hold its next session in 1966. Thus there will be no meeting of the Sub-Committee in 1965 subject to the understanding that any matter of a scientific and technical nature may be put by any member before the Main Committee's session to be held in September 1965.

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[136] We shall have the opportunity to deal with this aspect of the question in the later chapters.

It was envisaged that the Legal Sub-Committee will meet not later than July 1965 to continue its work. It will have the two Draft Agreements on Liability for Damage caused by Objects Launched into Outer Space and Return and Rescue of Astronauts and Space Objects, awaiting further consideration. However, the exact date and place of the meeting is not yet determined in spite of long consultations by the bureau on the organization of the work of the Committee.[137]

The working group of the whole Committee will meet at Headquarters in September 1965 concurrently with the Committee to study "the desirability, organization and objectives of an international conference or meeting to be held in 1967" on the peaceful uses of outer space and to prepare appropriate recommendations for submission to the Main Committee.

The Committee will meet at Headquarters early in October 1965 to consider the report of the Legal Sub-Committee and the Working Group, as well as any reports which may be submitted by the specialized agencies and non-governmental organizations, and finally to prepare its report to the Twentieth Session of the General Assembly.[138]

There are discouraging trends that are taking shape which are responsible for the postponement of the meetings. The inability of the space

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[137] Since the work of this thesis was concluded it is learnt that at a bureau meeting on 14 July it was revealed that an informal note taken had indicated 11 in favour of New York, and 9 in favour of Geneva. After long deliberations the representative of the Soviet Union announced that it would agree to meet in New York this year without creating a precedent as a matter of goodwill. The Legal Sub-Committee is now scheduled to meet in New York beginning 20 September.

[138] Interim Report of the Bureau on the Organization of the Works of the Committee in 1965. U.N. Doc. A/AC.105/27, 21 April 1965.

powers to perceive their common interest is a serious obstacle to progress. We discussed the meeting of the Committee that met in February-March 1963 which spent three meetings to decide on the issue for the 1963 session.[139] Since then the matter has become a very serious problem that is facing the Committee. The postponement of the 1965 session of the Scientific and Technical Sub-Committee could entirely be attributed to this fact.

As far as the Legal Sub-Committee is coneerned this fact is again a formidable factor. The United States would like it to meet in New York while the Soviet Union is insisting that they meet in Geneva. Valid arguments have been adduced and a case for both sides has been eloquently advocated[140] with one result - lack of agreement. The Legal Sub-Committee is facing yet another difficulty because the space Powers seem to prefer postponing its meeting until the international climate improves.

Another source of delay is the fact that while the Soviet Union demands that any international agreement relating to outer space must be open to signature of all States, the United States takes the position that they are open to signature only by member States of the U.N. and its specialized agencies.[141] The Soviet Union argues that the requirement

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[139] Vide. A/AC.105/PV.17, 18 and 19; and the Soviet reservations etc. discussed in A/AC.105/PV.19.

[140] Vide. A/AC.105/PV.17,18 and 19; for details of the arguments for each side.

[141] Vide. A/AC.105/19 for draft agreements and amendments, for instance, the U.N. draft article XIII states: "that it is open to signature by members of the U.N. and its specialized agencies" and article XII of the Hungarian draft states that "it is open to signature by all states."

of being a member of the U.N. or its specialized agencies would deprive the rights of various democratic and people's republics[142] especially the People's Republic of China which will amount to a violation of the equality of States enunciated by the General Assembly resolution of Basic Principles Governing the Activities of States in the exploration and use of outer space.[143]

Meanwhile the Working Group of the whole now scheduled to meet early September will consider the proposal to hold an international space conference in 1967.[144] However, since such a conference may cost over a million dollars, its materialization in view of the present financial crisis of the United Nations is doubtful unless the Committee of 33 on Peace Keeping Operations emerges with a compromise formula regarding article 19 of the U.N. Charter, no valuable discussion could take place at the Working Group.[145]

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[142] Criticising the International Communication Satellite Consortium agreement it is said that "the provisions that it is open to all States is practically violated. The July agreements can be acceded to only by members of ITU, to which imperialist powers do not admit the German Democratic Republic, the Chinese People's Republic, the Korean People's Democratic Republic and the Democratic Republic of Viet-Nam" "International Affairs"(Moscow) 1964. P. 74.

[143] U.N. Resolution A/RES/1962(XVIII). December 13, 1963.

[144] International space conference has now acquired political ramifications. The United States feels that 1967 being the tenth anniversary of the Soviet Sputnik that if this conference takes place it would be of a great propaganda value to the Soviet Union as they would seek to tie it up with the tenth anniversary of the Sputnik. Under these circumstances the United States is leery of the U.N. conference on space which they are opposing. However, it may be said here that if the United States continues to oppose the conference it is very likely that it will be a greater blow to the United States than otherwise. First, the US will have the offence of opposing an international conference; second, the Soviet Union is likely to organize an elaborate conference to commemorate the first Sputnik on their own. In that case it is also likely to invite the United States to participate in such a conference. United States certainly will be dealt a propaganda blow, where as if the U.N. conference takes place the United States could take the initiative of organizing it.

[145] Vide. Supra note 108.

In March 1965 the Inter-Agency Working Group of the Administrative Committee on Co-ordination of Programmes and Activities Relating to the Peaceful Uses of Outer Space considered the joint action to be taken by the United Nations and the interested agencies in response to the recommendations made by the Committee on the Peaceful Uses of Outer Space at its sixth session. The working group's report was considered by ACC at its thirty-ninth session in April 1965 and is the subject of Chapter XII of ACC's thirty-first report.[146]

Among other things, the ACC welcomed the decision of the Committee on the Peaceful Uses of Outer Space to issue biennial reviews of the activities and resources of the United Nations, the specialized agencies, and other competent bodies relating to the peaceful uses of outer space. A concise, up-to-date survey of the interests and resources of the various agencies and organizations concerned with space matters could, it was noted, be of real value as a means both of encouraging needed action and of avoiding duplication.[147]

On the 27 May 1965 the Committee on Peaceful Uses of Outer Space held its thirty-sixth meeting in New York. At this meeting the Committee unanimously approved the appointment of Ambassador Kurt Waldheim of Austria as its Chairman in place of Mr. Franz Matsch, who had retired from service.[148] At its last meeting members expressed their concern at the inability of members to agree on convening the meetings of its sub-committee and urged that an agreement be reached as early as possible and the Legal Sub-Committee be convened without delay.[149]

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[146] U.N. Doc. A/4029.

[147] Ibid

[148] A/AC.105/PV.36, 27 May 1965.

[149] Vide: Statement of Canadian representative; ibid. at 27.

Work of the United Nations relating to the development of a legal order in outer space presently stands at that stage. While a commendable progress was achieved in many areas, there remain many unsolved problems and thus several neutral States have experienced strong disappointment over their failure to obtain the insertion of a clause in the Declaration of Legal Principles prohibiting all military activities in outer space. This proposal has been rejected by the majority of United Nations member States, including both the United States and the Soviet Union, because there is general agreement that the prohibition of all military activities in outer space is, in fact, a disarmament measure and, as such, cannot be divorced from the over-all negotiations in progress today on general and complete world disarmament.

Other problems will understandably be encountered in the spelling out of the legal principles of the Declaration; in establishing future practices relative to the exchange of information; in allocating funds in the field of space education and training; and in the practical implementation of the weather watch system.

Furthermore, considerable difficulties can be expected in the definition of a future global system of communication satellites. It can be said that the US and Soviet Union have generally agreed on space matters at the U.N. Soviet and American delegates normally wind up voting for the same resolution,[150]

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[150] The work of the Committee on Peaceful Uses of Outer Space and its two sub-committees is conducted on the basis of unanimity. Hence, no vote is taken. This practice of the space committee has resulted in the evolution of a legal principle in the conduct of the work of other organs. The new born Trade and Development machinery creates a precedent by providing in its constitutional arrangements for a technique of conciliation during debate; the aim being to avoid, whever possible, a vote that would be made meaningless by the defeated minority's refusal to accept the decision. The nineteenth session of the U.N. General Assembly arrived at this procedure to overcome the point where voting had to be avoided at all costs. The UNTAD seem to have consciously sublimated the non-voting method. Hence the practice of the space committee and its sub-committees have helped to formulate a new principle of legal procedure.

and it appears that the US and Soviet Union will eventually reach agreement on the international conventions previously discussed. However, the communications satellite system will be a major source of discord between the US and Soviet Union in the years ahead.[151]

From this consideration of past accomplishments, a clearly defined pattern of progress is beginning to emerge in the development of a legal order in outer space through international co-operation. This progress is generated by the U.N. Space Committee; it has lent prestige and authority to this body, and those who feared that it would become a puppet group, subject to the whims of the two great space Powers, have lately been radically revising their opinions.

In fact, all of the positive results achieved so far by the Committee are in equal measure due to the good wish of the United States and the Soviet Union and to the constant pressure exerted upon the two great Powers by the other members of the Committee.

It can now be asserted that, with the approval of the Declaration of Legal Principles; the ban of the stationing in orbit of weapons of war and dsstruction; the broad guidelines given on the exchange of information, space education, and training; and the endorsement of the World Weather Watch, the allocation of radio frequencies along with other developments such as the US-USSR bilateral agreements that very good progress has been made towards the objectives of keeping the exploration and use of outer space on a free peaceful and orderly basis has been achieved; and that the first and most important phase in the development of a legal order in space through international co-operation has ended.

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[151] Vide. Infra Ch. II and III for a detailed discussion of the position in this regard.

We might refer to this period as the "thinking phase" of co-operation in the development of a legal order in space, because it has been characterized by thinking, planning, and formulating guidelines for the future. The next few years will bring a new and equally important phase, centering on implementation of the recommendations of the space committee which have been approved by the General Assembly. This period will witness further elaboration of these guidelines in detailed rules and regulations.

This phase may also see in the area of implementation practical progress in the fields of satellite communications, meteorology, sounding rocket launch programmes, joint reconnaissance satellite programmes and other agreed joint enterprises such as manned expedition to the moon, the planets, and the stars. The implementation of all these joint ventures will have to be guided and regulated by rules and regulations that will be drawn up and implemented jointly by organizations of mutual interest.[152]

With every passing day there is an increasing feeling in the United Nations, and in many other international circles, that space may well become the "New Frontier" where mankind will be able to free itself from the bitter rivalries and bloody conflicts which, have too often characterized its history.

In concluding this chapter, it must be emphasized that our approach here is different from those which contend that there is no space law or that no law can be determined until a legal distinction is made between airspace and outer space and other such contentions. In contrast to these assumptions, the development of a legal order in space is examined on the premise that some rules have been agreed upon and are being observed, and that with the passage of time a body of control will develop for the orderly

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[152] We shall propose the desirable course for such mutual co-operation in the final chapter.

conduct of international space activities. In that connection our task here is to identify the already existing norms and the way in which they have developed.

In the foregoing chapter we have examined the trend in which the development of a legal order has taken shape within the United Nations. In the following chapter we shall further examine this as far as it has taken shape within the rest of the U.N. family and thereafter will proceed to outline in institutional terms the trend that is most condusive to further the development of a legal order in space, in the light of present discussions. Therein we will attempt to evaluate the reasons as to why international co-operation through the United Nations and related intergovernmental agencies is indispensable to the development of a legal order in space. In that regard we shall analyse the practical and legal effect of the work of the U.N. and the related agencies that we are presently discussing in order to ascertain the most desirable way in which such institutional arrangements as we would suggest in the final chapter could further the development of a legal order in space.

CHAPTER II

INTERNATIONAL CO-OPERATION IN THE SPECIALIZED AGENCIES AND THE DEVELOPMENT OF A LEGAL ORDER IN SPACE

Quite apart from the issue of political controls and institutional regimes to encourage and sponsor international co-operation in development of a legal order in space, there is a wide range of functional activities that lend themselves to international regulation. These include the fields of communication, meteorology, navigation and the like. Functional co-operation is actually taking place within the U.N. family of agencies despite the unedifying impasses and power struggles in political organs which continue to mirror the larger political differences of the Cold War.

Functional co-operation in the specialized agencies is of direct concern to our discussion relating to the legal order in space and this is borne out by the report of the U.N. Ad Hoc Committee when it reported the findings of its technical committee.[1] The latter spoke of the need for international arrangements for the orderly developments of scientific and technical problems of space. The Technical Committee said that "radio interference from terrestrial sources could cripple the conduct of space programmes."[2] It pointed to other areas where regulation and co-operative action is needed for the development of a legal order in space.

The emphasis laid on telecommunication in the Committee's report is understandable because reliable and uncluttered radio communications are a necessity for any successful scientific exploration of outer space and application of the results for peaceful uses thereof. Jamming radio signals which could deflect satellites from their course is an ever-present

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[1] United Nations General Assembly Official Records, 14th Session, Annexes Agenda item 25.

[2] Ibid.

danger at launchings or during re-entry, so that alternate control of radio transmission also presents a clear hazard to life and property of the general public.[3]

In the communications field three types of satellites can be mentioned for our discussion: 1) satellites for the collection and transmission of information for purely scientific purposes; 2) satellites for such applied purposes as meteorology, military reconnaissance, early warning of missile attack, etc; and 3) satellites for the transmission of information from person, or by broadcast.[4]

Communications satellites are widely considered as being capable of providing a new technological means of overcoming the natural physical barriers that separate man and make rapid, reliable and direct communication difficult and at times impossible. They would alleviate to a considerable degree the present problems of passing through third countries. They can encourage the geographic pattern of communication to become truly global. Accordingly, their impact will be international and the public they serve will be an international public.

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[3] "Report on Radio Frequency Control in Space Telecommunications," US 86th Congress, 2nd Session (Comm. Print, 1960), p.1.

[4] Smythe, Space Satellite Communications and Public Opinion (1961), p.4.

The meteorological satellite programme like the communication satellites need a great deal of international co-operation and participation to obtain maximum benefit from the project.[5]

It is clear that one thread that runs through this discussion is the need for judicious control of international activities. For instance the control of the radio spectrum and the international standardization of frequency allocation which is a prerequisite to the introduction of world-wide operational communication satellite systems. Therefore, it is not only reasonable, but necessary to work on the establishment and maintenance of effective legal measures to regulate and control these activities.

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[5] For convenience, the use of space radio communication may be grouped as follows: a) Aeronautical Mobile, b) Broadcasting, c) Meteorological, d) Navigation, e) Space Research and Guidance, Control and associated communications; including tracking and telementering, and f) Communication relay (both active and passive). Vide, Congressional Report, op. cit., supra note 3 at 15.
There is the passive satellite system in which signals are relayed by "bouncing" from reflecting satellites such as ECHO I active system in which signals are received, amplified, and re-transmitted by equipment in the satellite; multiple low-altitude systems employing numbers of passive or active satellites in orbit several hundred or a few thousand miles above the earth; and synchronous satellites, which orbit about 22,300 miles above the equator at a speed of the earth's rotation, so that they remain effectively "fixed" above one point on the earth's surface.
Score was the first successful attempt to use a satellite as a relay station for radio communication between two points on earth. It was used by President Eisenhower in December, 1958, to deliver a Christmas message to the world by telephonic transmission. Since that time there has been developments of the Echo satellite, which are of the "passive" type, the military courier satellites, the army Advent satellite (active synchronous) types and the Bell Telephone Repeaters. More recently the Early Bird satellites (active synchronous) of the International Communications satellite consortium and the Soviet Union's Molnya (Flash I) satellite. For further discussion vide: Busak, "Radio Communication in Outer Space," in Galloway, Legal Problems of Space Exploration in a symposium, S. Doc. No. 26, 87th Congress, 1st Session, 1281 (1961), p.1132; Hearings on Space Communication and S.J. Res. 32, Before the Communications Sub-Committee of the US Senate Committee on Commerce, 87th Congress, 1st Session (1961); and Hearings Before the House Committee on Science and Astronautics on Communications Satellites, 87th Congress, 1st Session (1961).

Some of these problems are being considered by intergovernmental organizations, while other remain to be dealt with. The discussion that follows is an examination of the role of the U.N. specialized agencies in the functional problems raised by the space age.

However, it is important to realize the difficulty of separating what is and what is not legal in the regulatory process of frequency allocation for outer space uses. The allocation of radio frequencies for space uses will involve a lot of negotiations which will have to be of scientific or political nature. As one writer puts it succinctly:

> The legal and political realms crisscross at virtually every point and any separation between them must necessarily be artificial. The problems of law are in important ways the subject areas for international control; the problem of international control is in a sense the application of legal principles through international agreements.[6]

We noted in the preceeding chapter that on December 13, 1958, the United Nations General Assembly established the Ad Hoc Committee on the Peaceful Uses of Outer Space, requesting a report on activities, resources, future organizational arrangements, and "the nature of the legal problems which may arise in the carrying out of programmes to explore outer space."[7] We also noted that among the problems listed in its report as susceptible to priority treatment was the allocation of radio frequencies for space activities.[8]

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[6]Bloomfield, op. cit., supra Ch. II note 13 at 152.

[7]General Assembly resolution 1348, 13th Session, A/4009, 1958.

[8]Vide. Supra note 1, text.

The U.N. Ad Hoc Committee has outlined the problem of the allocation of radio frequencies in this way:

> It was recognized that there are stringent technical limits on the availability of radio frequencies for communications. The development of space vehicles will pose new and increasing demands on the radio spectrum. It was emphasized that national allocation of frequencies for communications with and among space vehicles would be imperative. In this way, what might otherwise come to constitute paralyzing interference among radio transmission could be avoided.
>
> Attention was drawn to the fact that there is already in existence and operation an international organization suited to the consideration of problems of radio frequency allocation for outer space uses, namely ITU.[9]

The International Telecommunication Union (ITU), the oldest of international organizations, celebrating its centenary this year, has been the first of the United Nations specialized agencies to legislate on activities on space. Thus while the great debate continues on the whole question of space law, the ITU has demonstrated that in some cases, case by case development may not be the best solution to the development of a legal order in space.

The ITU is a world organization established by international agreement - the International Telecommunication Convention as revised in 1959.[10] Among the purposes of the organization are to maintain and extend international co-operation for the improvement and rational use of telecommunication services and to that end the Union affects the allocation of the radio frequency spectrum and registration of radio frequency assignments in order to

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[9] It continued further as follows: "A technical sub-committee of this organization has already issued a recommendation and a report which bear the following titles: 'Selection of Frequencies Used in Telecommunication with and between Artificial Earth Satellites and Other Space Vehicles' and 'Factors Affecting the Selection of Frequencies for Telecommunication with and Between Space Vehicles.' The findings contained in these two documents will be presented to the Administrative Radio Conference of ITU which will open in Geneva on August 17, 1959." (U.N. Doc. A/4141, 1959, 14th session).

[10] The constitutional document of the ITU - the convention signed at Geneva on December 21, 1959 - entered into force according to its article 52, on January 1, 1961, between the countries and territories whose ratification had been deposited before that date.

avoid harmful interference between radio stations of different countries,[11] so that orderly development of a regime could be fastened through international co-operation.[12]

The International Frequency Registration Board (IFRB) and the International Radio Consultative Committee (IRCC)[13] are two main organs of the ITU[14] concerned with the questions of space communications.

The essential duties of the IFRB are to effect an orderly recording of frequency assignments made by the different countries so as to establish, in accordance with the procedure provided for in the Radio Regulations and in accordance with any decisions which may be taken by competent conferences of the union, the date, purpose and technical characteristics of each of these assignments, with a view to ensuring formal international recognition thereof; to furnish advice to members and associate members with the view to the operation of the maximum practicable number of radio channels in those portions of the spectrum where harmful interference may occur,

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[11] ITU Convention, supra note 10, Article 4.

[12] Co-operative regulations were first undertaken by the Geneva Telegraphic Convention, signed at Paris in 1865, and subsequently modified and extended. In 1925 the International Telegraphic Conference and in 1927 the Radio-Telegraph Conference decided to combine their conventions and in 1932 at Madrid a new Telecommunication Convention was signed creating the ITU, and subsequently it was revised at the conference in Atlantic City, 1947, Buenos Aires, 1952 and Geneva, 1959.

[13] ITU Convention, supra note 10, Articles 5, 7, 12.

[14] The other essential organs of the ITU are these:
1) A Plenipotentiary Conference,
2) Administrative conferences,
3) An Administrative Council, composed of twenty-five members of the Union elected by the Plenipotentiary Conference, each member having one vote,
4) A general secretariat, with a Secretary-General elected by the Plenipotentiary Conference.
ITU Convention, supra note 10, Articles 2, 5, 6, 7, 9, 10.

to perform additional duties, concerned with the assignment and utilization of frequencies, prescribed by a competent conference of the Union, or by the Administrative Council with the consent of the majority of the members of the Union in preparation for or in pursuance of its duties.[15]

The duties of the CCIR are:

> to study technical radio questions and operating questions, the solution of which depends primarily on consideration of a technical radio character and to issue recommendations of them.[16]

The CCIR meets every three years, and in the interim periods, its work is carried on by study groups composed of representatives of numerous nations.[17] The power of CCIR has been increased by provisions in Article 13 paragraph 181 which makes it now possible for the

> Plenary Assembly of the International Consultative Committees . . . to submit to Administrative Conference proposals arising directly from their recommendations or from findings on questions under study.[18]

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[15] ITU Convention supra, note 10, Article 12.

[16] ITU Convention supra, note 10, Article 13, 1.

[17] The CCIR previously studied propagation and reception characteristics in different parts of the world, has analysed the behaviour patterns of disturbances in the upper atmosphere that affect communication, and has prepared an atlas of thunderstorm activity to guide technical recommendations as a basis of frequency allocations. (Report on Radio Frequency Control. op. cit., supra note 3 at 22.)

[18] ITU Convention supra note 10, Article 13, 181

On the 28th of November, 1961, at the headquarters of the Union, a joint Study Committee on Space Questions was set up under the chairmanship of the Secretary-General of the ITU, Mr. Geral Gross to involve itself in the development of a legal order in space, sub-committee "A" dealing with juridical, economic and related aspects, under the chairmanship of the Deputy Secretary-General, Dr. M.B. Sarwate, and sub-committee "B" on technical aspects, under the chairmanship of Mr. A.H. Catai, a member of the IFRB. This committee and its sub-committees along with the IFRB and CCIR have dealt with space communications and have made significant contributions to the 1959 Geneva Radio Administrative Conference and to the 1963 ITU Extraordinary Radio Conference.

There were two major conferences convened by the ITU in Geneva during 1959: The Plenipotentiary Conference which concluded a new Convention abrogating the 1947 Atlantic City Convention of the ITU and the Ordinary Radio Conference which concluded the new Radio Regulations, which for the first time allocated the frequencies for space research.

Prior to the convening of the Ordinary Radio Conference, the two major space powers - the US and the USSR have selected frequencies for space research without any international regulations. Thus, it should be emphasized that it was only twenty-six months after the launchings of Sputnik I that provision was made in the International Telecommunication Convention for radio allocation to the Space and Earth/Space Radio Services.

For radio contact with Sputnik I and II the Soviet Union used 20.005 and 40.002 megacycles, contrary to ITU regulations. The frequency 20,005 megacycles is in the center of the frequency band. 19.900-20.010 megacycles which the ITU has assigned as the standard frequency service, station employing frequencies in this band conduct "radio communication service for the transmission of standard and specified frequencies of known

high accuracy, intended for general reception."[19] In fact, 20.005 megacycles is the exact frequency assigned to station PEN at Kootwiijk, The Netherlands.

Each nation, in agreeing to the International Radio Regulations adopted by an international conference, undertakes to adhere to the table of frequency allocations. Each nation has the right to depart from allocations set by the table, but in doing so, assumes the obligation to hold free from harmful interference those operations of other nations which are in accordance with the table.[20]

Needless to say, the Russian Sputnik did cause interference to terrestrial radio communication in at least three countries - England, The Netherlands and the United States. In 1952, the Soviet Union entered a reservation to the Buenos Aires Convention of 1952 - revising the 1947 Atlantic City Charter of the ITU - thereby refusing to register its allocated frequencies with the IFRB. Although the Soviet Union challenged the competence of the IFRB, she was still bound by her general undertaking not to operate any of her stations, mobile or otherwise, in such a manner as to result in harmful interference to other members.[21]

A fundamental question had arisen as to whether the Soviet Union, in view of the fact that there were no regulations regarding allocation of frequencies in space, was violating an international agreement. The Soviet

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[19] Radio Regulations, Additional Protocol adopted by Administrative Conference of ITU, Chapter I, Article 1 (1959).

[20] Further discussion of the effect of the ITU regulations and resolutions is postponed to a later chapter.

[21] Aaronson, "Space Law" in Legal Problems of Space Exploration - A Symposium, op. cit., supra introduction, note 8 at 228.

Union answered the question in the negative. Yet, insofar as the launching of the Sputniks and their frequencies caused harmful interference to the radio uses of other nations, it is clear that an international agreement - the ITU Radio Regulations - was being violated. However, it has been argued that the International Geophyzical Year (IGY) waived some of these international radio obligations and that thus the Soviet Union did not violate the ITU regulations.[22]

Events following the Soviet use of unallocated frequencies may have been responsible for the strong United States stand for adequate allocation of radio frequencies for space uses. The United States had completed scientific studies together with various international scientific bodies including the CCIR before introducing its proposal requesting allocations for space uses. The main objection to the US space frequency proposals come from the Soviet bloc.

Dr. Jan Busak of Czechoslovakia, reflecting the position of the Soviet Union and his government, criticized the provisional allocation of frequency by the 1959 Geneva Conference. While aware of the desirability of legal

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[22] Reasons to explain why the Russians selected the above-mentioned frequencies have been suggested: "Why the Soviets chose the frequencies is open to speculation. They may have already have had equipment constructed prior to the IGY agreements, or they may have found from subsidiary studies that these channels had optimum propagation characteristics. Although the apparently illicit frequency selection by the Russians has been widely discussed and criticized, there must have been a strong desire on the part of the Soviets to select a channel for reception of Sputnik signals free of interference from existing terrestrial stations. The cost of experimental launchings is so gigantic and the risks of losing scientific data so unnerving, it is doubtful that any launching team would choose a channel which might vitiate success of an experiment by being occupied, and which would cause serious interference with other transmission." (Report on Radio Frequency Control in Space Telecommunications, op. cit., supra note 3 at 40).

regulations for the use of radio frequencies, objected to the allocation of frequency for space uses at a time when technical knowledge of the art is limited. He concluded his argument by stating:

> The International Telecommunication Union is thus the first organization attempting a legal regulation on an international level of some problems connected with the penetration into space. We must, however, bear in mind, that an international legal regulation can have practical importance only if all (and especially the technical) problems were solved, if it does not hinder further development and if it expresses the will of all interested parties.[23]

Questions have been raised as to why the Soviet Union, a major space Power, should want to prevent radio frequency allocation for space uses. Here again the answer is suggested:

> Two major factors appear to be involved: the difference in geography and the differences in political alliances throughout the world. The great land mass of the USSR and the exercise of the rigid internal discipline over emissions within its borders permits the Soviets to control use of the airwaves and thus to prevent harmful interference over a much greater portion of a satellite traverse than is possible with the more compact continental boundaries of the United States. That is, orbiting satellites are simply over Russian territory a longer time than over the United States. Both data reception centers and tracking stations can be more widely separated than is possible in our country. Thus, through domestic control over spectrum use, the Soviets can be relatively well assured of freedom from interference, at least in certain bands.[24]

As stated before, the Ordinary Radio Administrative Conference, in spite of considerable Soviet bloc opposition, established the two new

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[23] Busak, "Radio Communication in Outer Space, in Legal Problems of Space Exploration - A Symposium," op. cit., supra note 8, 1132.

[24] "Report on Radio Frequency Control in Space Telecommunications," op. cit., supra note 3 at 50.

services - and allocated thirteen frequency bands for research in those services. The allocation became available May 1, 1961 to the countries which have approved the Geneva, 1959, radio regulations.[25]

In view of the rapid development in space communications, the plenary meeting of the Ordinary Radio Administrative Conference adopted a recommendation (No. 36) relating to the convening of an Extraordinary Administrative Radio Conference during the latter part of 1963, with an agenda including the following basic items:[26]

> to examine the technical progress in the use of radio communication for space research and the results of technical studies by the International Radio Consultative Committee and other interested organizations,
> to decide in the light of such an examination, on the allocation of frequency bands essential for the various categories of space radio communication,
> to adopt, if such action is considered desirable, new provisions revising the Radio Regulations to provide for the identification and control of radio emissions from space vehicles, taking into account possible recommendations of the CCIR.[27]

The recommendation also invited members and associate members of the Union, which launch satellites during the period preceeding the Extraordinary Administrative Radio Conference, to keep the Administrative Council and the relevant technical organs of the Union, informed of the frequency used and the technical progress achieved in the use of radio communications for space research purposes.[28]

Even though the ITU took important steps in regulating activities in space so that the development of a legal order in space could be furthered, much remained to be accomplished following the 1959 conference.

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[25] Of the thirteen frequency bands, twelve were assigned for space research and one for astronomical research.

[27] "Report on Radio Frequency Control in Space Telecommunications" op.cit., supra note 3 at 82.

[28] Ibid.

The 1959 Radio Regulations define "earth-space-service" as a radio communication service between earth stations by way of a space vehicle on earth-space service, or is it a terrestrial service using an artificial propagation mode? What if the space vehicle be passive? What if the artificial propagation medium be dispersed? What if it consists of a modified ionosphere? These are some of the legal and administrative questions which were left to be resolved.

Besides allocating frequencies for space research the ITU was concerned at Geneva in 1959, also with the needs of radio astronomy. Although astronomy is not classified by the ITU as a space service, frequencies from astronomical studies were agreed upon.

New duties were assigned to the IFRB in the light of the new developments in outer space, which is called upon to facilitate the use of maximum number of radio channels in those parts of the spectrum where harmful interference may occur while paying particular attention to the needs of the new and developing countries.

The Plenipotentiary Conference of the ITU, held in Geneva from 14 October to 21 December 1959, drew up the new International Telecommunication Convention, which on 1 January 1961, replaced the previous ones established at Buenos Aires in 1952. The new Convention was signed by eighty-six members and one associate member of the ITU.[29]

The Plenipotentiary Conference was interested in the general aspects of outer space telecommunication, and in resolution 34, entitled "Telecommunications and Peaceful Uses of Outer Space Vehicles," considered "the

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[29] It was attended by delegates of eighty-eight members and one associate member of the Union and by observers of the United Nations and several specialized agencies (General Secretariat of ITU, Report, 1959).

importance of the role that telecommunications and, in consequence, the ITU will necessarily play in this sphere." It also requested the Secretary-General of ITU to keep the United Nations informed of the steps already taken by ITU in the fields of space telecommunications and further progress in that direction.[30]

In general, it may be said that the Administrative Radio Conference of 1959 had as its basic task an orderly international apportionment of the frequency bands in the spectrum between the various services. It had to undertake a most thorough overhaul of frequency band allocations, making due allowance for the extraordinary expansion of certain services while providing for the requirements of radio astronomy and of the organizations which need communications for research purposes in connection with outer space. Successfully carrying out these tasks helped to further the development of a legal order in space.

Preparatory work for the 1963 Extraordinary Administrative Radio Conference was carried out by the CCIR and IFRB. Study groups of the CCIR met in Washington in March 1962, and in January 1963, and a number

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[30] In accordance with the UN General Assembly resolution 1721 (XVI) ITU submits reports of its activities in the field of outer space to the UN General Assembly at each session through the ECOSOC. The first report was submitted in 1962 covering the period up to then and the latest is for the period May 1964 to April 1965, submitted for the 20th Session of the U.N. General Assembly.

of important new recommendations were drafted by the group on technical questions concerning space telecommunication.[31]

In accordance with the U.N. General Assembly Resolution 1721[32] and the resolution adopted by the Administrative Council of the ITU during its 18th session, the Extraordinary Administrative Radio Conference (EARC), was convened in October 1963 in Geneva.[33] The purpose of the

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[31] Its report stated that "recent experiments have confirmed that the land situated between 1 and 10 GO/s is the most suitable for the development of radio communications between the earth and vehicles in space. It is however, precisely this frequency range which is the most used for terrestrial radio-relay systems, and so it appeared inevitable that this band of frequencies will have to be shared between the two services." (Second Report by ITU on Telecommunication and the Peaceful Uses of Outer Space, Geneva 1963). Meanwhile a report prepared by the United States in preparation for the Conference proposed to allocate a total of 2975 mc/s of spectrum space communication satellites service in the bands between 1,000 and 10,000 mc/s. (Hearings on Space Communications and S.J. Res. 32, op. cit., supra note 5 at 271).

[32] Following the report of the Committee on Peaceful Uses of Outer Space which studied the reports of the ITU, the UN General Assembly has adopted two important resolutions dealing with the space in which communication satellites were specifically mentioned as well as this Extraordinary Radio Conference. In resolution 1721 of 1961, the General Assembly recognized the common interest of mankind in furthering the urgent need to strengthen international co-operation in regulating this field, and in resolution 1802 of 1962 the importance of international co-operation to achieve effective satellite communication on a world-wide basis was emphasized. The ECOSOC at its July 1963 session adopted resolution 980 c(XXXVI) noting the steps taken by the ITU, in the peaceful uses of outer space and its response to the above two General Assembly resolutions 1721(XVI) and 1802(XVII) and called upon the member States to participate in the ITU Conference.

[33] Four hundred delegates from seventy ITU member countries attended and the Final Act was signed on November 8, 1963.

Conference was to allocate frequency bands for space radio-communications and revise such provisions of the International Radio Regulations as are essential for the effective implementation of its decisions. Its agenda was adopted prior to the meeting by the Administrative Council of the ITU and included the recommendations made by the Ordinary Radio Conference of 1959 in its recommendation No. 36.[34]

The conference successfully discharged the tasks entrusted to it. In the first place it allocated, on a shared or exclusive basis, frequencies totalling 6,076.462 MC/S for the various kinds of space services.[35] Apart from the allocation of bands totalling 2,800 MC/S in width for communication satellites on a shared basis with other services, provision was made for space telecommand, telemetry and trackings, meteorological-satellites, radionavigation-satellites, space research and radio astronomy; for the use of space techniques with aeronautical communication and radio navigation services and for the use of artificial satellites by amateurs.[36]

Thus, the 1959 allocation which was made only for research pusposes was considerably extended by the 1963 Conference in order to meet the requirements not only of space research but also of the practical uses of outer space. While at the 1959 Conference only one per cent of the frequency spectrum was made available for outer space, about fiften per cent has now been made available.

The Conference also adopted a number of revisinns and additions to other parts of the Radio Regulations; mainly concerned with general rules for the assignment and use of frequencies; notification and recording of frequencies in the Master International Frequency Register which is maintained

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[34] Vide P.14 supra. text of note 27.

[35] U.N. Doc. A/AC.105/26.

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by the IFRB: the identification of station; service documents; terms and definitions; and special rules relating to particular services. These revisions and additions were necessitated to make provision for the space services.

In addition, the Conference adopted a number of important resolutions and recommendations.[37] One of these deals with the action to be taken by ITU in the light of future developments in space radio communications. It recommended that members and associate members of the Union make data available to the appropriate permanent organs of ITU; that the Administrative Council should annually review the progress of Administrations in space radio communications and should, in the light of this review, recommend the convening of an Extraordinary Administrative Conference at a future date to work out further agreements for the international regulation of the use of the frequency bands allocated by the present conference and that notification and registration of frequency assignments to space services shall, until revised by a future conference, be effected in accordance with the procedures adopted by the present conference.[38]

Another resolution[39] deals with space vehicles in distress or emergency, noting that the frequency of 20,007 KC/S had been set aside by the Conference for this purpose and resolving that for the time being the distress signal used by ships or aircraft (SOS in radio telegraphing and MAYDAY in radio telephony) should also be used by spacecraft.

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[37] Vide: Third Report by the ITU on Telecommunication and the Peaceful Uses of Outer Space, Geneva 1964.

[38] Resolution 9A, EARC, Geneva, 1963.

[39] Resolution 2A. EARC, Geneva, 1963.

A recommendation [40] was also addressed to the CCIR, pointing out that "the use of satellite transmissions for direct reception by the general public of sound and television broadcasts may be possible in the future" and urging the CCIR to expedite its studies on the technical feasibility of broadcasting from satellites.

A further recommendation [41] called on the forthcoming ITU Aeronautical Conference to provide high frequency channels (bands between 2,850-22,000 KC/S) for communications for the toutine flight of transport airspace vehicles flying between points of the earth surface both within and beyond the major part of the atmosphere.

Finally, a recommendation [42] was adopted recognizing:

> that all Members and Associate Members of the Union have an interest in and right to an equitable and rational use of frequency bands allocated for space communications

and recommending to all ITU members and associate members

> that the utilization and exploitation of the frequency spectrum for space communication to be subject to international agreements

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[40] Resolution 5A, EARC, Geneva, 1963.

[41] Resolution 6A, EARC, Geneva, 1963.

[42] Resolution 10A, EARC, Geneva, 1963.

> based on principles of justice and equity permitting the use and sharing of allocated frequency bands in the mutual interest of all nations.[43]

One cannot emphasize too much the importance of the decisions taken by the Extraordinary Administrative Radio Conference which has laid down the first elements of international law specifically referring to outer space and thereby contributed to the development of a legal order in space. It is to be noted that these decisions entered into force on 1 January 1965 and will be binding for all the members of ITU, that is, practically all the countries of the world. It is important to note in this connection that a proposal to consider the decision of the Conference as interim agreements were defeated in committee by an informal vote of 18 to 4, the minority view being taken by the USSR and three Soviet bloc countries.[44]

At the extraordinary Administrative Radio Conferences held in 1959 and in 1963, the ITU reviewed the allocation of frequencies in light of

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[43] It is worth noting also how an attempt by the U.N. to establish the position of international organizations as operating agencies in the fields of space telecommunications failed. The United Nations Secretariat sponsored a draft resolution which took note of the General Assembly resolution 1721 (XVI) which elaborated the interest for a world-wide communication satellite system on a world-wide basis and its operative part read as follows: "All administrations participating in the establishment and/or operation of space communication facilities should take into account the requirement of the United Nations, and that United Nations enjoy the same privileges as regards access and wage as those accorded to governments." As it was felt that it went beyond the agenda adopted for the conference that saw its main task in distributing parts of frequency spectrum between different services and not between different operators it was later withdrawn on the understanding that a subsequent ITU Conference, or the ITU Plenipotentiary Conference, would be well qualified to adopt such a resolution. Vide: (Draft resolution U.N. and Space Communication; ESRAC, Geneva 1963, and the statement made by U.N. delegation at the ITU Conference, UNVOC. OR.43/ITU (6)).

[44] We shall postpone further discussion of the legal effect of these decisions to a later chapter. Vide: Ch. III.

drastically increased demands upon radio spectrum to permit space research, and eventually global space commercial uses. The limited allocations which were made at the conferences are not currently adequate to meet the existing need, and with each passing day they become more inadequate.[45] Consequently, the CCIR has directed its energies to solving some of the pending problems; and, as a participant in the work group Mr. Andrew Haley puts it, "no simple solutions exist. Long and laboured hours of negotiation and discussion by scientists, lawyers, and government officials are required to arrive at equitable and evantual solutions."[46]

Entirely separate from the question of the adequacy of frequendy allocations for space research is the problem of enforcement of violations of international agreements directly concerned with radio usage. To date,

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[45] It is to be noted that, apart from the Extraordinary Administrative Radio Conference, other ITU organs have, during 1963 and after, been considering problems relating to space telecommunications. Plan Committee of the Development of the International Telecommunication Network, met in Rome from 25 November to 11 December 1963. CCIR has made extensive reports relating the past conference activities to space telecommunications. In order to meet the responsibilities entrusted to it by the Final Acts of the EARC, Geneva 1963, the IFRB gave preliminary consideration to the administrative procedures for the treatment of frequency notices and for the recording of frequencies in the Master International Frequency Register. It also reviewed the technical standards recommended by the EARC on the basis of reports received from the CCIR, required for the determination of the co-ordination distance, with a view to the treatment of frequency notices. All organs of the ITU are presently involved in such and other matters relating to space telecommunications. Vide: 3rd and 4th Reports of the ITU on Telecommunication and the Peaceful Uses of Outer Space, Geneva, 1964 and 1965.

[46] Andrew G. Haley, "Legal Problems of a Satellite Communications System;" lecture delivered on November 9, 1964, at the International Congress of Aeronautical and Space Law, University of Maron, Argentina.

violations of international agreements have been committed by several countries, especially in space radio activities; arguably, these actions are based upon national security interests and necessity. Since no more effective santions for violations are available than the irate letters of protest exchanged between Foreign Offices, the current system of legal regulation of international radio and television practices is largely ineffective with regard to curbing violations.

An important latent factor that prompted and guided the two radio administrative conferences and the regulations resulting therefrom, had an important link to the events that preceeded the newly formed International Satellite Communication Consortium, which we shall have the opportunity to examine more fully in a later chapter.

In August 1962, the United States Congress passed the Communication Satellite Act[47] and Communication Satellite Corporation (COMSAT), was formally organized as a private United States corporation in February 1963.[48] Though a two-year period elapsed between passage of the Satellite Act and the issuance of the corporation's first stock, activities were by no means confined to organizing the domestic financial structure of the

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[47] "Communications Satellites Act of 1962, " 87th Cong.H.R. 1140, Aug.31,1962.

[48] Toward the beginning of 1965, and in accordance with Resolution No. 1A of the Space Radiocommunication Conference, Geneva, 1963, IFRB received the general description of a planned communication satellite system, together with a certified copy of the corresponding agreements. The information together with copies of the agreement, was forwarded by the United States Administration on behalf of the signatories to the ITU (4th Report by the ITU on Telecommunication and Peaceful Uses of Outer Space, Geneva, 1965).

new private enterprise. Some essential pre-conditions for operation had to be provided, most important of which was the necessity of interference - free channels.

Securing interference-free channels is an international matter under the control of the ITU as observed before. It therefore, is a foreign affairs matter as far as the United States government and the Comsat are concerned. A close relationship between the corporation and the US Department of State is established by the Act:

> Whenever the corporation shall enter into business negotiations with respect to facilities, opeations or services authorized by this Act with any international or foreign entity, it shall notify the Department of State of the negotiations and the Department of State shall advise the corporation of relevant foreign policy considerations . . . and render such assistance as may be appropriate.[49]

Accordingly, long before COMSAT became a functioning business, the United States government began to concern itself with securing radio frequencies for space communications. As early as 1959, the administration sought and received tentative approval, from the 1959 Radio Administrative Conference for its proposal to use specified channels for space communications. For the next four years the United States government and private experts drafted papers that were embodied in the official US position presented to the Extraordinary Radio Administrative Conference, convened in Geneva in 1963.

The United States delegation included representatives from Congress, members of FCC, the Department of Commerce, NASA, the Navy, the State Department, and the President of COMSAT, Joseph Charyk, and Leonard Marks, one of COMSAT's board of directors.

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[49]Section 402, Title IV of the Act, op. cit., supra id.

At this governmental Conference, COMSAT's position, at least on the surface, was strictly advisory. The United States sought and secured approval from the Conference to allocate immediately certain portions of the radio spectrum to space communications. It insisted, further, that the choice of channels be definitive, though many of the countries present argued that communications technology was still evolving and that only a provisional allocation should be made in 1963. As the leader of the US delegation put it:

> You can understand this because many of the countries here were not as prepared as perhaps some of the rest of us were[50] in the overall space communication field, and we had quite a little discussion about this problem.[51]

This discussion included an Israel resolution urging that "some form of space communication administration be entrusted with the responsibility for insuring the global interest . . . of all members . . . ."[52]

In the circumstances it is no surprise that the proposal to consider the decisions of the conference as international agreements was defeated as we observed before, in committee by an informal vote of 18 to 4, the USSR and three Soviet bloc countries taking the minority view.

Though, as often stated, the confused and wasteful allocation of frequencies for radio and television broadcasting in the United States emphasizes the wisdom of unhurried and considered development of new

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[50] Surprisingly a contrary position taken by the United States in the U.N. in regard to the "Declaration of legal principles" see supra Ch.I,p.38

[51] US Congressional Record, House, January 9, 1964.

[52] Proceedings of the ITU Extraordinary Radio Conference, Geneva, 1963.

communications media, the American delegation was inflexible in its will to consolidate and extend its technological lead in space communications. At the same time it asserted that its proposals were in the best interests of the developing as well as the developed states.

The Honourable Harlan Cleveland of the State Department acknowledged that "without the agreement . . . Dr. Charyk, for example, and his corporation would have been in great difficulty in moving ahead."[53] And Dr. Charyk's evaluation was that

> there is now a basis for, if you will, an investment based on some assurance the whole thing isn't going to be upset by another look at the matter in a few years without any positive decision having been taken here.[54]

The global communications programme of the COMSAT, in this view, could now proceed without endangering the private investment of COMSAT's stockholders, even if the directions should later prove unsatisfactory for technological or related reasons. Dr. Charyk phrased it this way, "who is there first has a priority, so to speak."[55] Whether this is a principle upon which to rest a durable international agreement is an open question.

It is therefore clear that as far as the ITU's interest in international co-operation in the development of a legal order in space is concerned, it has been confined to outer space communications, allocation of frequencies, to procedures and standards for their use and to the offering of scientific and engineering advice for those purposes from the CCIR and its other organs.

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[53] US Congressional Record, op. cit., supra note 51

[54] US Congressional Record, ibid.

[55] US Congressional Record, id.

While the ITU is not overly concerned with the policing of frequencies, a growing number of people have expressed the critical need for just such a function. This is because a satellite equipped with a radio transmitter operating on solar batteries could transmit in orbit for many decades. This continuous transmission could seriously interfere with communications that operate on frequencies on or near the transmission of the satellite. This has already led to the setting aside of specific frequencies for outer space purposes, but has been offset by the constant advance both in quality and quantity of the growing needs for such frequencies and of the increasing importance that such space communications may soon come to play.

All of these factors might necessitate a re-examination of the type of regulatory functions that ITU might desirably perform. The U.N. Ad Hoc Committee's report states that the ITU is not adaptable to performing a function for monitoring, policing or regulating outer space communications, and that the ITU does not possess adequate facilities for engaging in such operations. Moreover, the ITU depends on the co-operation and willingness of its membership to conclude formal agreements or recommendations for the development and maintenance of the orderly expansion and operation of international communications. Notwithstanding, the problems of regulation with all of its ramifications vis-a-vis outer space seems likely to become an increasingly significant and thorny problem. A decision will have to be made soon as to whether an existing or possibly a new international agency or combination of agencies would be best adapted to effectively handle such problems.[56]

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[56] We shall deal with this question in a later chapter. Vide Chap. III.

The other specialized agencies have not played as prominent a part as the U.N. itself and the ITU in the development of a legal order in space. Nevertheless some of them have contributed substantially to the orderly development of space activity and yet others have the potentiality of doing so.

The questions raised in the U.N. resolutions 1721 (XVI), 1802 (XVII) and 1963 (XVIII) involve the World Meteorological Organization (WMO),[57] in all its normal tasks. The World Meteorological Congress is the supreme body of the organization which meets at intervals of about four years.[58] Between sessions of the Congress, the Executive Committee which meets annually takes necessary action to execute the policy decisions of Congress.[59] The organization acts as a clearing house for the exchange of information among its members, and for the promotion of agreements among its members regarding both routine and exceptional transmission of meteorological data. it is not, however, an operational organization. As recommendations and agreements are carried out only through the co-operation of the meteorological services of the member States.

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[57] Established by the WMO Convention of 1947.

[58] Its main tasks are to determine the policy of the organization and establish the technical programme and fix the budget in order to carry out the objectives of the WMO. . Convention to further international co-operation in the field of meteorology.

[59] Technical work of the organization rests mainly with the following WMO technical commissions: Aerology, Aeronautical Meteorology, Agricultural Meteorology, Climatology, Hydrometeorology, Maniture Meteorology, Synoptic Meteorology and Instruments and Method Observations commissions.

WMO first considered its role in connection with outer space in 1958 when the tenth session of the Executive Committee[60] decided that WMO would accept responsibility for meteorological questions related to artificial satellites insofar as they call for action or study by a specialized agency of the United Nations.[61] The committee further requested the chairman of its technical Commission for Aerology to nominate a rapporteur to study the meteorological aspects of artificial satellites and to report to the eleventh session of the Executive Committee on any possible activities which might legitimately be undertaken by WMO in this field.

The report prepared by Mr. H. Wexler, was submitted in April 1959 to the Third WMO Congress, which laid down the following policy: The organization would encourage the development and use of artificial satellites as a means of providing valuable meteorological data, and collaborate as required with the U.N., other specialized agencies and scientific organizations, in particular COSPAR, in artificial satellite programmes of interest to meteorologists or on which the advice of meteorologists would be useful.

The eleventh session of the Executive Committee, which took place immediately after the Third Congress, took note of the latter's policy and directives.[62] It further arranged for an evaluation to be made of the above-mentioned report by the relevant technical commissions of WMO. The Executive Committee also set up a pahel of experts, including representatives from its commissions of Aerology and Synoptic meteorology, with the

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[60] Held from 29 April to 17 May 1958.

[61] Resolution 14(EC-X)

[62] Resolution P6 (EC-XI).

following terms of reference: a) to keep a continuing review of the possible uses of artificial satellites for meteorological purposes; b) to make suggestions as to how WMO can best assist in these activities; c) to present a report to the next session of the Executive Committee.

The organization is thus officially seized of the question of outer space activities insofar as they have meteorological aspects and applications. The Fourth SMO Congress, which was held in April 1963 in Geneva, formally accepted the responsibilities placed upon WMO by the resolutions of the U.N. General Assembly and established a number of new programmes. Congress also took bold and constructive steps on the whole question of outer space activities and established a number of organizational improvements[63] in order to carry out more efficiently its responsibilities in the field of meteorology as it concerns outer space.

By one of its principal decisions the Congress created a high-level WMO Advisory Committee with broad terms of reference in the fields of both research and operations of outer space activity. The committee, at its first session, held in Geneva in January 1964, discussed major operational problems and overall policies and plans for training and education.

The Congress also endorsed the concept of a World Weather Watch. This plan is proposed as an ultimate World Weather Service and will comprise the integration of national and international meteorological activities. A world magnetic survey was also approved. In addition to these activities

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[63] As regards technical work relating to activities in outer space carried out by the WMO, three of its Technical Commissions set up nine working groups to concentrate on outer space activity.

WMO presently co-operates with the U.N. Special Fund and Technical Assistance Board in various assistance programmes, education and training programmes and studies relating to atmospheric sciences under the new planning unit attached to the office of Secretary-General of the WMO authorised by the Congress in 1963. In pursuant to resolution 1963 (XVIII) of the U.N. General Assembly, WMO is now submitting reports each year on "The Advancement of Atmospheric Sciences and Their Application in the Light of Developments in Outer Space," through the ECOSOC to each session of the U.N. General Assembly. In this manner WMO has contributed greatly to the orderly development of international co-operation in outer space activity.

An agency which has not concerned itself too deeply in the development of a legal order in space, though it is most qualified and experienced to do so, is the International Civil Aviation Organization (ICAO). It was formally established on April 4, 1949,[64] after operating as a provisional organization, since August 1945.[65] Its machinery includes an Assembly representing all the member States, a 21-nation Council, an Air Navigation Commission, Air Transport and Legal committees and a secretariat headed by the Secretary-General. The basic objectives of ICAO are to develop the principles and techniques of international air navigation and to foster the planning and development of international air transport,

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[64] It succeeded the International Commission for Aerial Navigation, commonly known as the CINA, set up by the Paris Convention of October 1919.

[65] Convention on International Civil Aviation, Chicago, 7 December 1944.

on an orderly basis.[66] For this purpose it adopts international standards for the practice of States and thereby develops the legal order in air space.[67]

Although ICAO has so far carried out only few specific activities directly related to the field of outer space, a number of problems of outer space fall within the field of interest of the Organization.

In the functional fields it has been more active than in the regulatory field. The use of space communication techniques is of interest to international civil aviation for a number of reasons and in this respect ICAO has taken certain actions to determine the requirements insofar as they can be foreseen at the present time. This subject was discussed at a world-wide ICAO meeting (COSP II) held in Montreal in 1963,[68] for the purpose of determining the communication requirements of international civil aviation in connection with the ITU Extraordinary Radio Conference of 1963.

The ICAO COSP II Meeting recognized that the question of telecommunication aspects arising from developments in the field of earth satellites

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[66] In fulfillment of these objectives, ICAO encourages the use of safety measures, uniform regulations for the operation of air services, and simpler customs, immigration and public health procedures at international airports. It also promotes the use of more efficient and safe technical methods and equipment.

[67] Vide: Convention, op. cit., supra note 65 articles 12, 37 and 38, and fifteen annexes to the Convention.

[68] ICAO Special Communications Meeting, (COSP II) Montreal, April-May 1963.

and spacecraft needed to be divided into two parts namely:

a) Telecommunication support for the operation of spacecraft transports; in supersonic and hypersonic man-carrying vehicles intended for routine travel both within and beyond the major portion of the earth's atmosphere; and

b) The use of earth satellites as an extension of current techniques of communications with aircrafts and the radio navigation service for aircraft.[69]

With respect to (a) above, preliminary studies indicated that the telecommunication requirements for transport spacecraft would have many features in common with those associated with conventional aircraft, particularly with respect to the obvious requirement that the flight of spacecraft should be co-ordinated within the air traffic control environment appropriate for the area. While it was considered too early to specify in detail the nature of the telecommunication system to be used for the operation of transport spacecraft, such as the specific communication techniques, bandwidths required, etc., the COSP II Meeting did find it desirable to recommend that certain frequency bands allocated to the aeronautical radio-navigation service in the ITU Radio Regulations, should also be made available for the development of systems for communication with transport spacecraft, either by direct contact or through satellite relay. The orders of frequency bands were selected on the basis of present knowledge of the matter, recognizing that technical considerations indicated that the frequency bands at present allocated for air/ground communication would be unsuitable for that purpose.[70]

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[69] ICAO Doc. 8329, COSP II, Report of the Special Communications Meeting (1963) Montreal, agenda items 12 and 13, pp. 12/1-7 and 13/1-5; ICAO Doc. COSP II - WP/12, - 14/1/63 and attach 2. U.N. Doc. A/AC.105/26, and ITU Docs. No. 2759/CA17; 3058/CA18.

[70] Ibid.

With respect to the other aspect of the subject, i.e. the use of earth satellites as an extension of current air/ground communication techniques, the ICAO Meeting considered that after 1970 the potential capabilities of earth satellite relay could be of major significance for international civil aviation.[71] In order to meet these requirements and obtain the necessary result the ICAO Meeting recommended certain modifications to the ITU Radio Regulations which would permit the use of relay-techniques via earth satellites.[72]

The ICAO Council endorsed the recommendations of the COSP II Meeting and requested contracting states to incorporate these recommendations in their proposals for the ITU Extraordinary Radio Conference.[73] Results of the ITU Conference discussed before include the recommendations of ICAO. Therefore, as a first step and as far as the communication requirements of international civil aviation could be determined broadly at the present time, there now exists the possibility of development new communication techniques. However, there is little doubt that, in time, the communication requirements of international civil aviation for space techniques and

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[71] In this connection the meeting pointed out that "the trend in air/ground communications is toward the use of Very High Frequency (VHF). However, the range of communications on those frequencies is limited, in general, to line-of-sight distances. Although these distances can be improved upon to some extent by the use of special techniques, it will be appreciated that there are large areas of the world (e.g. over oceans, deserts or other uninhabited areas) where VHF alike cannot be used for air/ground communication. In such cases High Frequencies (HF) continue to be used which suffer from propagation deficiencies that make them much less reliable than VHF. It is envisaged that relay via earth satellites will permit VHF coverage over those areas where this is not possible now, thus greatly increasing the efficiency and reliability of air/ground communication. This, in turn, could be expected to bring about important improvements in the assurance of safe and expeditious flow of air traffic. (ICAO Doc. 8329, COSP II).

[72] ICAO and U.N. Docs: op.cit., supra note 69.

[73] ICAO Docs: 8352 - C/947, p.12; 8343 - C/945, pp.32-34; C-WP/3809.

for telecommunication support of transport types spacecraft, will further crystallize and will be developed in greater detail. For the future ICAO will have to follow closely the developments in frequency regulation i.e. application of the new regulations by the ITU and the IFRB.

In other functional fields, especially in meteorology ICAO has been interested. ICAO is keenly interested in meteorological satellites as a supplementary source of data to improve the standard of forecast for aviation. Although the primary responsibility in this area is the concern of the WMO, nevertheless ICAO has made studies in this field and is co-operating in the World Weather Watch System, which is being developed under WMO auspices.

The Convention on International Civil Aviation, concluded at Chicago on 7 December, 1944, recognized the sovereignty of each State over the airspace above its territory,[74] but includes no definition of airspace. Such a definition would determine the scope of application of that convention as well as of ICAO's sphere of action.[75] Furthermore, the subject of the convention is the article in which the aircraft is defined as "any machine that can derive support in the atmosphere from the reaction of the air."

The launching of vehicles into outer space involves their passage through air space; such vehicles may subsequently re-enter air space. At the national level, the necessary co-operation between the responsible agencies has already been developed. At the international level, an equal degree of co-

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[74] Article 1, Convention, op. cit., supra note 65.

[75] For a discussion of the Boundary Question vide: Law and Public Order, op. cit. supra Introduction note 3 at 35,220, 321-49, 652; Space Law and Government op. cit., Intro.note 10 at 77-116; Lipson and Katzanbach - Law of Outer Space (1961) pp. 8-19.

operation will be required in order to ensure the safety of air navigation during the time of launching or of re-entry of spacecraft through space used by aircraft and for the orderly development of a legal order in space.

One of the objects of ICAO is to "meet the needs of the peoples of the world for safe, regular, efficient and economical air transport." Technical developments may advance to the point where space vehicles will be used to transport mail and other goods and even of persons. Evidently, ICAO would have an interest in the process of co-ordination and regulation of the two activities.

In February 1959, the Council of ICAO decided to bring to the attention of the Assembly of the organization, a suggestion made to the Council that a study be made of the legal status of outer space and the regulation of the use of spacecraft particularly with reference to the traffic of civil aircraft in air space. However, since the question relating to outer space is under special consideration by the United Nations, the Council felt that any action by ICAO on the subject should take into account the need for co-ordination with the deliberations of the United Nations. Since then, however, no legal matters relating to outer space have regretably occupied the attention of ICAO.

This is clearly manifested by the lack of co-ordination and co-operation in regard to the question of damages to third parties. Concequently both ICAO and the U.N. Legal Sub-committee of the Outer Space Committee are engaged in the preparation of agreements dealing to a large extent with the same

problem--damage to third parties on the surface. ICAO is engaged in a revision of the convention relating to damage caused to third parties on the ground[76] and also in a preparation of a draft convention on aerial collisions[77] while the U.N. is engaged in the preparation of a draft convention for liability for damage caused by objects launched into outer space and beyond.[78] In the preparation of the latter, except for scanty references made by delegates to general principles of air law, no co-ordination exists between the two organizations in the preparation of manifestly similar regulations.[79] If this situation is allowed to continue, it may result in conflicting regulations which will be detrimental to the orderly development of legal norms in space.[80]

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[76] Convention on Damage Caused by Foreign Aircraft to Third Parties on the Surface (Rome), 1952.

[77] Vide: ICAO Doc. LC/SC Aerial Collissions No. 71 of 27.3.61.

[78] A/AC.105/19 and 21.

[79] Surprisingly enough, no reference is made even at the Inter-Agency Committee or the Administrative Committee on Co-ordination, both which are responsible for the co-ordination of similar work in the various agencies of the U.N. family. Vide: ACC Report, U.N. Doc. E/4029, 4 May 1965.

[80] At the recent ICAO Council Meeting being held in Montreal a proposal for ICAO's further involvement in outer space was presented by the Colombian delegate. Introducing the proposal he referred to the U.N. Ad Hoc Committee report which called upon the specialized agencies to undertake responsibility in the area of outer space activity within their respective competence. He then expressed the view that ICAO, at least for the time being, should not involve itself with the legal questions arising in connection with the exploration of space which should be left to the U.N. but that it should address itself without any further delay to the technical aspects of space activities affecting international civil aviation. Its proposal A 15-WP/70 was seconded by the United States and approved unanimously on 30 June 1965 at the Executive Committee Meeting in the form of a draft resolution for submission to the plenary session of the 15th ICAO Assembly. Vide: Rept. on the 15th session of the ICAO General Assembly, 15 July 1965, Annex IX; and A15 - Ex Draft Min/5 1/7/65.

An explanation for this state of affairs can be found in the absence of the Soviet Union from the membership of ICAO. The Soviet Union being a major power, especially where space matters are concerned, the Outer Space Committee of the U.N. is very leary of associating itself with the work of ICAO. On the other hand, ICAO cannot at this stage engage in any meaningful activity without the co-operation of one of the two space powers. In the circumstances ICAO is not even invited to the discussions of the U.N. Legal Sub-committee on outer space, and the feeling, therefore, developed that ICAO has no direct role in the elaboration of legal order in space and that its sole concern is the regulation of international air transportation.

This seems to be a poor excuse for non-participation of an experienced international agency in the development of a legal order in space. In this regard we cannot but approvingly quote Dean Maxwell Cohen, when he said that:

> ... the Chicago Convention may be viewed in two ways. It may be viewed as in Article I, as a statement declaratory of jurisdiction in air space. But it also must be seen as a great constitutional instrument setting up an effective international organization, managing a very large part of the problems of international transportation, particularly in regard to safety of navigation, and encouraging, of course, the development of legal conventions to solve many important and subordinate matters. This being so, one must ask whether there are any lessons from the specialized agency experience of ICAO which are projectable with respect to what may be taking place in space? ... we are slowly losing the sense of difference between "airspace" and "space" that we once had, then we must also lose the very substantial diffidence we have had for a very long time in these discussions about the role of ICAO. ... Therefore, our discussion might have dealt concretely with the enlargement of the functions of a well-established specialized agency and the use which could be made of existing machinery with which the international family has already had much experience.[81]

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[81] Dean Maxwell Cohen, Director, Institute of Air and Space Law, McGill University, Montreal; Conference on the Law of Space and of Satellite Communications (Chicago), May 1963, p. 50.

Although we agree with Professor Cohen in regard to the experience of ICAO and the use that could be made of it in the development of space law, we could not agree with him that ICAO as presently constituted could alone develop a legal order in space. On the contrary, it is submitted that neither ICAO nor any other existing specialized agency could alone provide for the orderly development of outer space activities. The requirements of that development far outstretch the scope of any of the present organizations, and therefore it is our view that nothing short of a new specialized agency exclusively devoted to space activities can satisfy these requirements.[82]

There are still other specialized agencies interested in promoting orderly activity in space. The United Nations Educational, Scientific and Cultural Organization (UNESCO), as its name implies, is concerned with educational, scientific, and cultural activities having international ramifications. With regard to the natural sciences, UNESCO does not maintain laboratories or scientific equipment and thus does not conduct any research on its own. UNESCO's modus operandi, for the advancement of world scientific efforts, has been to draw up proposals for implementation by member states or through the auspices of existing international scientific organizations, both governmental and non-governmental, such as ICSU, COSPAR, U.N., and the IAF or by assuming direct responsibility, and as such UNESCO's major function in outer space as manifested thus far is to support the activities of other

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[82] We will be discussing in the next chapter the formation of such an agency in the light of the experiences of our discussions in the present two chapters.

agencies in space affairs which has served to stimulate international space co-operation on a regional and sometimes world wide basis. In this regard it co-operated with ICSU in the International Years of the Quiet Sun (IQSY) and with COSPAR and other agencies in assisting member States with technical assistance, educational and having programmes and organizing symposia, in outer space matters.[83]

With the assistance of experts and by discussion among its own staff, the World Health Organization (WHO), is examining its role in space activity and is trying to define its task in this field. WHO undoubtedly would be concerned with studies on cosmic biology, genetics and radiation, with the physiology and psychology of man in space, as well as environmental contamination from transfer of chemical and biological agents to and from the earth, a question which has to be regulated in the near future in the process of developing a legal order in space.

The growth of activity in the field of the peaceful uses of outer space has already resulted in some countries in the creation of a great many industries which raise highly complex social problems. The International Labour Organisation (ILO), cannot, therefore, neglect this question. It is following all developments with careful scrutiny and is ready to participate in the regulation of industrial and labour aspects of space activity.

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[83] Vide: U.N. Doc. A/AC.105/c.1/WP.1 for further discussion of UNESCO's participation in space activity.

The International Maritime Consultative Organization (IMCO) was invited by the U.N. Outer Space Committee recently to consider the problem and express its views on the need for a navigational satellite system in general and in particular present and future operational requirements of such a system.[84] The recent meeting of the IMCO Maritime Safety Committee in London took note of this request[85] and has undertaken to study and report to the U.N. committee on this matter.[86] (However, IMCO's interest in outer space activities is very limited as of this date). ICAO is also collaborating with IMCO in this matter.

Finally, the International Atomic Energy Agency (IAEA), an organization primarily concerned with the peaceful uses of nuclear energy, is interested in outer space research from two main aspects: technological and biological. The former involves the utilization of nuclear power from propulsion and other energy requirements in space mission, the latter includes the problem of safety of space travellers from radiation hazards.

The IAEA's concern with space activities does not end here. The legal problems of liability that may arise in connexion with the use of space vehicles may have certain features in common with those connected with the liability for accidents involving land-based nuclear installations and nuclear ships. The

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[84] IMCO Doc. MSC X/27 and add I; U.N. Doc. CR432, IMCO(2).

[85] Held in London, April/May 1965, IMCO Agency Item 26.

[86] U.N. Doc. A/5785, 13 November 1964.

The Vienna Convention on Civil Liability for Nuclear Damage of 21 May 1963, elaborated under the auspices of the Agency, and the Brussels Convention on Liability of Operators of Nuclear Ships of 25 May 1962, in the preparation of which IAEA took part, introduced new principles which are relevant to any similar instrument regarding liability in respect of space vehicles.[87]

A comprehensive consideration of non-governmental organizations interested in the development of a legal order in space is outside the scope of this study and for that reason their particular contributions will be merely outlined.

Among the most interested in this area is the International Astronautical Federation (IAF) with its Institute of Space Law (IISL).

The establishment of the IISL in 1959 represented the culmination of almost a decade of work by predecessor organization--the Permanent Legal Committee--within the IAF. IAF itself was founded in 1950 by representatives of eleven national societies interested in rocketry and space exploration.

The basic purpose of the IAF as defined in its constitution and in many declarations, is to promote among all nations space flight as a peaceful project. In pursuit of this purpose, the IAF functions not only to facilitate scientific co-operation among astronautical scientists, but to facilitate the development of legal and political conditions conducive to such international co-operation. In fulfilment of this objective, the IAF throughout its history

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[87] See for the Vienna Convention, Agency documents CN-12/SC/3 and 9, and for the Brussels Convention, document CN-6SC/7.

has had therefore as one of its principal functions the development of international space law.[88] Accordingly IISL organizes a colloquium on space law each year,[89] and publishes the proceedings and thereby contributing to the development of a legal order in space.[90]

The International Law Association (ILA) has been taking a deep interest in the development of a legal order in space. At its 49th session in Hamburg the question of outer space was considered by the Air Law Committee. It recognized its position was only to draft rules which may be helpful to the decision makers as it was a non-governmental body. In resolution 8 adopted at that session the ILA recommended that outer space should be subject to the sovereignty of claims of other exclusive rights by states, and that it should be open to exploration of all states for peaceful purposes in accordance with the U.N. Charter,[91] The U.N. General Assembly resolution 1721 (XVI) of

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[88] For this purpose it has set up eleven working groups within the IISC to study the following problems in relation to the peaceful uses of space: jurisdiction relating to terrestrial activities; legal status of space vehicles; sovereignty over celestial bodies; municipal and treaty law; specific regulatory problems; international regulation and dispute settlement; space communications; private law, damages; general principles governing the exploration and utilization of outer space; regulation and control agreements. The governing body of the IISC is the Board of Directors which include such eminent personalities as: Profs. Pepin of France, Taubenfeld and Harley of USA, Korovine and Cheprove of USSR, Smirnoff of Yugoslavia, Kopal of Czechoslovakia, and Horseford of UK.

[89] It has so far held seven colloquiums, last being in Warsaw in September 1964 and the next will be held in Athens in September 1965, during the IAF Congress.

[90] For further information on IISL, vide: Robert V. Crane, "The International Institute of Space Law", Space Flight, May 1962 and on IAF, Andrew G. Haley, Space Law and Government (Washington), 1963.

[91] Report of the 49th session of the ILA (Hamburg), 1960.

20 December 1961, was phrased in much the same way.[92]

At the following session in Brussels a resolution was adopted[93] to set up a committee to study the problems of space law and to co-operate with the inter-governmental and non-governmental organizations concerned with the problem.[94] At the last session in Tokyo[95] a number of resolutions[96] were adopted relating to outer space including resolution "F" which called for a study on the desirability of establishing a specialized agency for space, which will be our concern in the next chapter.

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[92] Vide: supra, p. 29

[93] Report of the 50th Session of ILA (Brussels), 1962.

[94] It now has four working groups working on specific problems relating to outer space such as damages caused by space vehicles. Many of the resolutions prepared and the views expressed in these discussions are transmitted to the legal sub-committee of the U.N. dealing with outer space activity through common members and as such are contributing a great deal in the progress of the U.N. legal sub-committee's work.

[95] Interim Report of the 51st session of ILA (Tokyo), 1964.

[96] Resolution "A"--urged the states engaging in activities in outer space to conform their conduct to the principles contained in the Declaration of Legal Principles Governing the Activities in the Exploration and Use of Outer Space, U.N. resolution 1962 (XVIII) 13, December 1963 (see infra p.47). Resolution "B"--Requests the Space Law Committee along with the Air Law Committee to continue its study on the subject of the problem of upper limit of national space and the right of innocent passage of foreign spacecraft. Resolution "C"--Directed the Space Law Committee to continue the study relating to the legal status of space vehicles of International Organizations. Resolution "D"--Requests the Space Law Committee along with the Air Law Committee to prepare, for the next session, a draft convention governing private (civil) liability for damage caused by space vehicles. Resolution "E"--Resolves to direct the attention of the Secretary-General of the U.N. to the importance of treating the problem of assistance and rescue in respect of maritime, air, and outer space activities as a whole. Resolution "F"--Requests the Space Law Committee to study the problems attending the establishment of a specialized agency for space with a view to reporting to the next Conference of the Association. Resolution "G"--Requests the study of the international legal problems specifically pertaining to the establishment and operation of an international global communications satellite system. (Resolutions adopted on space law at the 51st ILA Conference, Tokyo, 1964.)

At the 90th session of the Inter-Parliamentary Council, held in Rome in April 1962, space law made its first appearance on the agenda of the Inter-Parliamentary Union. The topic--present problem and future prospects of space law--was discussed by the Juridical Sub-committee and, as an outcome of the discussion, it was decided to set up a sub-committee to consider the whole question in greater detail at a future date. It also endorsed the work of the U.N. in this field and in a resolution sponsored by UK and adopted by the union it called upon the states to approach the legal problems in a dispassionate manner and to ensure that the work of the U.N. Outer Space Committee proceeds harmoniously and on the basis of these principles called upon the committee to prepare an international convention for damage to third parties caused by space vehicles.[97]

At the 1963 session in Belgrade the sub-committee reported its work to the conference and presented a draft resolution on space law.[98] At the sub-committee's two sessions held in Rome and Geneva it considered a joint document of Japan and the Soviet Union.[99] The sub-committee could not agree on questions as to whether legal order in space should be sought in the framework of disarmament or not and also the question as to whether the states should exclusively be responsible for the exploration of outer space.[100] The draft resolution was adopted by the conference noting the progress of space activity since 1957 and recognizing that legal order should keep pace with the technical developments, expressed the hope that states will adhere to the principles enunciated by the

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[97] Proceedings of the Inter-Parliamentary Union (Rome), 1962.

[98] Proceedings of the Inter-Parliamentary Union (Belgrade), 1963, pp. 435-442.

[99] IPU Doc. SL/J/DE/526.

[100] A resolution to that effect presented by the representative of USSR, Mr. Fedossev, was opposed by the representatives of the United States and UK, Menser Deddario and Allen respectively.

U.N. General Assembly in December 1961[101] and called upon the member states to conclude international agreements at the earliest opportunity on basic legal principles that should govern the activities of states in the exploration of space, and damages to third parties on the surface and return and rescue of astronauts and space vehicles.[102]

In the scientific field, the International Council of Scientific Unions (ICSU) with its Committee on Space Research (COSPAR), is actively involved in the orderly development of scientific co-operation in space. Although these bodies are primarily interested in providing a central nerve through which the world scientific community could deal with problems of common interest and encourage scientific co-operation, nevertheless we have to recognize that such international scientific co-operation is a sine-quo-non for the development of a legal order in space. ICSU[103] and COSPAR are performing this function in a very effective manner.

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[101] U.N. resolution 1721 (XVII) December 20, 1961.

[102] See op. cit. supra p. 29 , resolution on space law, agenda item 4.

[103] ICSU, established in 1931, is composed of individual scientific members and national scientific bodies. It has six committees and inter-union commissions. Some of them perform a very real task that is imperative in accelerating the development of a legal order in space. The Inter-Union Commission of Frequency Allocations for Radio Astronomy and Space Science (IUCAF), Scientific Committee on Antartic Research (SCAR), World Magnetic Survey (WMS) and the International Years of the Quiet Sun (IQSY).

Particularly COSPAR presently is acting as a substitute at best, for the time being, for a specialized agency for space matters, the establishment of which is imperative for the development of a legal order in space. COSPAR is keenly interested in matters relating to international regulation which may affect space research. The Charter, recognizing the need for international regulation, provides that COSPAR shall keep itself informed of the U.N. and other international activities in the regulatory field, to ensure that maximum advantage is accorded international space science through such regulations and to make recommendations relative to matters of planning and regulation that may affect the optimum space programme.[104]

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[104] COSPAR, established in 1958, continues the international co-operation in space research undertaken during the IGY. It has four working groups which are interdisciplinary scientific committees having as its objective the furtherance of an international scale of the progress of all kinds of scientific investigation carried out with the use of rockets or rocket-propelled vehicles. It held three plenary meetings where scientists from all over the world were represented. At the last meeting in Argentina in May 1965 was attended by over 400 scientists. First two were held in Warsaw (1963), and Florence (1964) respectively. The earlier two COSPAR meetings served as an opportunity for negotiations between American and Soviet scientists which we have made reference to before. Vide note 61 Ch.I US and USSR are represented by the leading scientists of NASA and Academy of Sciences led by Hugh L. Dryden and A. Blagonravov, respectively. However the last meeting did not serve as a basis for such negotiations as the Soviet Union was not prepared to do so, as intimated by the head of the delegation due to the international Cold War climate. The next meeting will be held in Vienna and in 1967 it will hopefully co-operate in organizing a world space symposium with the U.N. to commemorate the first decade of the space age at the European Headquarters of the U.N. in Geneva and as such declined an offer from the Japanese government to hold its 1967 meeting in Tokyo. COSPAR is working in close collaboration with the U.N. presently and it could well become the expert group for the U.N. Committee on Space Matters.

In connection with the development of a legal order in space the role of both these specialized bodies--IISL and COSPAR will be more extensively discussed in the context of inter-governmental bodies in the following chapter.[105]

In concluding this chapter we would like to quote Mr. Abraham Chayes, then Legal Adviser to the US Department of State:

> It is a commonplace to say that we are only at the threshold of space law. But, as with many commonplaces, this one is true. Nevertheless I think we have made an encouraging beginning. A prominent feature of that beginning has been the part played in developing standards and in administrative regulation by the ordinary machinery of the international community, that is to say the United Nations and its associated bodies. The capacity these bodies have shown in these directions is an important asset for the rapid development of law to govern the conduct of man in outer space.[106]

In the next chapter we shall consider the effect of their contribution along with that of the U.N. and in that light evaluate the importance of continuing to develop a legal order in space through the existing organizations we have already discussed, in order to finally ascertain the desirability of a specialized agency for outer space affairs and the role that such an agency could play in the development of a legal order in space.

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[105] For the purpose of completion it may be mentioned that among the international regional organizations interested in space, there are three inter-governmental and one non-governmental agencies that merit mention. In the first category are the European Space Research Organization (ESRO) and the European Launcher Development Organization (ELDO). These are two European organizations mainly interested in the scientific aspects of space activities. The other, Inter-American Committee for Space Research (IACSR) was established to assist in scientific co-operation of space research in the Latin American countries. In the second category is the Eurospace, an organization of European Aerospace industrial organizations.

[106] Chayes, A. - International Organizations and Space. Conferences on the law of space and of satellite communication. op. cit. supra note 80 at 64.

CHAPTER III

THE NEED FOR AN EFFECTIVE INTERNATIONAL ORGANIZATIONAL ROLE IN THE DEVELOPMENT OF A LEGAL ORDER IN SPACE

It is important at this stage to recall the main objective of this study. It is to examine past attempts at elaborating legal order in space so that the developing trends in the international community can be identified and future needs determined. In the following pages, therefore, we shall attempt to evaluate the adequacy of the past efforts, examined in the preceeding chapters, and then to recommend the course of action for the development of a legal order in space. It is convenient to begin with the examination of the legal force of the principles incorporated in the space resolutions of the United Nations General Assembly.[1]

Article 38 of the Statute of the I.C.J. enumerates the generally accepted sources of international law. These sources which are not in order or priority, include conventions, international customs, and the general principles of law recognised by civilized nations as primary sources, and judicial decisions and teachings of the most highly qualified publicists of the various nations as subsidiary means for the determinations of rules of law. It is to be regretted that the Charter and the Statute contain no provisions on the status of the General Assembly resolutions. But, although there is uncertainty about the status of resolutions, one

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[1] Recently, a major work has been published on "The Development of Customary International Law Through the Political Organs of the U.N. (London) 1963, by Rosalyn Higgins. For further discussion of the subject in general vide: Oscar Schacter, The Development of International Law Through the Legal Opinions of the U.N. Secretariat, BYIL 25 (1948) pp.91-125; Skubiszewski, K., Forms of Participation of International Organizations in the Lawmaking Processes, International Organization 4 (1964) 790-805; Jenks, C.W., The Impact of International Organizations on International Law, Grotius Soct. Transac. 37 (1951) 23.

cannot deny that resolutions, which are in some measures expressions of the will of most nations, will be considered to be of great weight by the international tribunals. This can be presumed in light of the consideration accorded highly qualified publicists' teaching as subsidiary means for the determination of rules of law.

United Nations Charter empowers the General Assembly to adopt three categories of resolutions. With respect to two categories of resolutions the authority of the General Assembly is clearly set forth and is not our concern here.[2] Our discussion will focus on the third category of the resolutions addressed to States under Chapter IV, Article 10 to 14 of the Charter into which category fall the resolutions relating to outer space that we elaborated in the first chapter.

There are two major considerations we have to bear in mind in determining the effect of these resolutions. The first concerns the authority or competence of the General Assembly in regard to the subject matter of the resolution and the second concerns the intention of the General Assembly in adopting a given resolution.

Under Articles 10 to 14 of Chapter IV of the Charter the General Assembly may discuss any question within the scope of the Charter or relating to powers and functions of any organ provided for in the Charter; it may discuss any questions relating to the maintenance of international peace properly brought before it; it may consider the general principles of co-operation in the maintenance of international peace and security; and it is to initiate studies

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[2] First, it is expressly empowered to perform certain actions such as admission of members, establishment of organs, making appointments, etc., which clearly create an obligation (vide: Articles 4,5,6,21,22,23,61,63,86,96,97, and 108). Second category of binding resolutions of which authority is easily discernible in the Charter are those addressed to organs of the U.N. placed under the control of the General Assembly, (vide: Articles 22,60,66,87,98, and 101). For further discussion on these two categories vide: Higgins, op.cit., supra note 1; Sloan, F.B., "Recommendations of the General Assembly," BYIL 25 (1948) p.1; Asamoah, Col.Jnl.of Tr.Nat.Law, 3(1965) p.210 and Skubiszewski, op.cit., supra

for the promotion of international co-operation in the political field, for the encouragement of progressive development of international law and its codification, for the promotion of international co-operation in the economic, social curltural and educational fields and to assist the realisation of human rights and fundamental freedoms. Matters relating to outer space fall within the competence of the General Assembly under many if not all the fields of activity enumerated above, and are, therefore, falling within its authority. On all these varied subjects and thus including matters relating to outer space the General Assembly is specifically authorized to make recommendations.

The authority expressly granted does not go beyond that of recommendation. It is assumed by most authorities that the competence of the General Assembly is limited by the normal, natural or obvious meaning of recommendation, and that it is thereby prevented from making decisions which are legally binding upon members.[3] It is submitted that this is not a necessary conclusion, and that it is in fact not fully borne out by the history of the word recommendation in the practice of international conferences and assemblies or the use of resolutions at such conferences.

The language of the operative part of the resolutions of course is no indication of their effect as the General Assembly has not adhered to a settled pattern and has used varying expressions in all three categories of resolutions; such as, 'recommends', 'invites','requests', 'affects to', 'firmly maintains', 'considers', 'expresses the hope', 'calls upon', 'decides', etc.

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[3] vide: Johnson, 'The conclusions of International conferences,' BYIL 35(1959), 'Eagleton, International Government,' (1948) P 197, Schwarzenberger, 'A manual of International Law (1947) P 124, Goodrich and Hambro, 'Charter of the U.N.,' (1946) PP 96, Cf: Louterpacht, 'Oppenheim's International Law' Vol. I (1948) PP 378, 386, 392

The major decisions in Committee II of the San Francisco Conference concerned the relative spheres of action of the General Assembly vis-a-vis the Security Council and did not involve a definition of recommendations as embodied in Articles 10 to 14 of the Charter.[4] Although the General Assembly was not conceived to function as an international legislature[5] it is important to remember that enacting legislation is not the only way in which binding decisions are made. There are, however, statements in the records of the San Francisco Conference which suggest that the word 'recommendation' was understood by many delegations as conferring broad authority to the General Assembly.[6]

However, if we look at the history of the recommendations on resolutions as employed in international conferences before the advent of the United Nations to determine the real nature of these concepts as embodied in the charter we will recognise that they are intended to be legally effective and as such in San Francisco this may have been the intention of the resolutions and recommendations.

The practice of the League of Nations is clearly indicative of the binding nature of its resolutions.[7] Professor Lauterpacht says: "Probably there is no good reason for denying generally that a state may undertake binding obligation amounting to a Resolution of the League Assembly as ratification of a signed treaty is not the only way of assuming binding obligations in international law."[8]

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[4] There is no such interpretation in spite of the Dumbarton Oaks Proposals stated: it would be desirable....that special attributes to these organs be fixed with greater precision particularly with regard to...(a) the validity that should be given to the recommendations of the General Assembly and the Security Council, since the draft does not indicate whether or not these have irrevative scope (Doc: 176, 11/2/7(I), p 4, UNCIO Docts: Vol: IX (1945) P268

[5] Vide: UNCIO docs: Vol. IX (1945) p.70

[6] Vide: for e.g. UNCIO docs: 1151 XI/17, pp. 2, 7, Vol. X (1945)

[7] Vide: Annex V of the League of Nations, "Rules of Procedure of the Assembly (revised April 1927) pp 86-6, Oppenheim Vol. I (1948) P. 139, Wilcox, "The International Conventions (1929) P 284, cf: Brierly, "The Meaning and Legal Effect of the Resolution of the League Assembly of March 11, 1938, BYIL 15 (1939) P. 137

Although the covenant did not expressly provide for the effect of league resolutions, it is reported that the debates of the First Assembly, on the adoption of the statutes of the Permanent Court of International Justice, showed that a majority of states supported the view that the Assembly could make binding decisions with respect to matters within its competence.[9] Although the League resolutions needed unanimity it is generally considered that the two-thirds majority received by the United Nations General Assembly of decisions on important questions represents a forward step towards the democratic principle of majority rule from the League requirements of unanimity.[10] In any case the resolutions dealing with outer space, with which we are concerned, are accepted unanimously by the United Nations General Assembly. Furthermore, the Advisory opinion of the Permanent Court in Railway Traffic between Lithuania and Poland held that a resolution of the League Council assented to by Poland and Lithuania had the nature of an engagement binding upon them.[11] In this regard we have the opinion of Professor Lanterpacit who says:

> There is no good reason for denying generally that a state may undertake a binding obligation by consenting to a Resolution of the League Assembly. Ratification of a signed treaty is not the only way of assuming binding obligations in international law.[12]

It is clear, therefore, that recommendations in the League resolutions already had the binding effect, in which light the delegates to the San Francisco conference would have considered the recommendations as embodied in the U.N. Charter.

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[9] Wilcox op. cit., supra note 7 at 273

[10] Sloane op. cit., supra note 2 at 9

[11] PCIJ Series A/B No. 42 (1931)

[12] Oppenheim, Vol. 1 (1948) p. 139, N.1.

Furthermore, recommendations of the International Labour Organization create an obligation of some force for the member states according to Article 19, paragraphs 5 and 6, of the Constitution of the Organization. Declarations and resolutions under the Charter of the Organization of American States, "have in many cases been regarded de facto as creating binding obligations."[13] These therefore, are historical examples of international practices which lend support to the argument that General Assembly resolutions of the U.N. have a legal effect.

If we examine the contemporary practice of the Security Council, it lends further support to the contention that resolutions under the Charter have a legal effect. It would appear from the discussions of the Corfu Channel case in the Security Council, that many delegates felt that binding obligations could be created by its recommendations. Perhaps this position was most clearly stated by Colonel Hodgson of Australia at the 127th Meeting of the Security Council in discussing the draft resolution under article 36 of the Charter when he said: "Any decision, any recommendation that we may make binds the U.K. and also Albania".[14] This view was relied upon by the United Kingdom in submitting the Corfu Channel case to the ICJ by way of application rather than by special agreement and in arguing that an instance of compulsory jurisdiction was established.[15] The Security Council could consider under article 39 of the Charter, non-compliance with its recommendations a threat to peace and resort to enforcement action against the recalcitrant state and as such they are binding.

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[13] Fenwick, International Law (1948), pp. 79, 205, 429

[14] U.N. Doc. S/PV/166 PP 76-100 and official records: No 34 P 723

[15] Feaver, "The Corfu Channel Case: The Preliminary objection of Albania", The Canadian Bar Review 26 (1948) PP 929-31, Slinane op. cit., supra note 2 at 11.

Therefore, it is clear that resolutions of the Gneral Assembly should be considered as being legally effective. This is so, inspite of the fact that there is no express undertaking to accept them as legally effective, because it cannot be said that the Charter specifically negates such an obligation. Thus Professor Lautenpacht has argued convincingly that the Charter imposes a legal obligation upon the members to respect human rights, although there is no express provision to that effect.[16]

A private law analogy drawing upon judicial experience in the interpretation of precatory words in wills is of more than casual interests. Such words as "Wish," "desire", "requests" and "recommends" have properly been considered imperative when it appeared that the testator had employed them with that intention. There are both English and American cases in which the word "recommend" has been held to create a judicially enforceable trust or to give rise to a valid remainder.[17]

If we consider the statements of the delegates we have the opinions of many who consider the General Assembly resolutions as binding. The Polish delegate at the 760th meeting of the sixth committee of the General Assembly stated that:

> The resolutions of the General Assembly were interpretative of the providions of the Charter and are elaborative of obligations already assumed by members. The principles of the Charter have become part of binding international law and are binding even on states not members of the U.N. [18]

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[16] Vide: Lauterpacht, "The Subject of Law of Nations," LQR 64 (1948) pp 101-3

[17] Chotmondeley V. Cholmondeley (1845) 14 Simons Reports: 590, Colton V. Colton (1887), 127 US Repts. 300

[18] U.N. Doc. A/AC.6/SR.760-62

There are judicial opinions which support our contention in regard to the General Assembly resolutions, although they are not lucid. Extensive consideration was given to the question of the resolutions of the General Assembly in the separate opinions of Judges Klasstad and Lauterpacht in the case of Voting procedure on Questions relating to Reports and Petitions concerning the Territory Southwest Africa. Judge Klaestad said:

> Effects of such resolutions are not of a legal nature in the usual sense, but rather of a moral or political character. This does not, however, mean that such a recommendation is without real significance and importance and that the Union of South Africa can simply disregard it.[19]

Judge Lauterpacht expressed the view that certain resolutions relative to the obligations assumed by members are clearly binding upon them:

> A resolution recommending to an Administratory State a specific course of action created some legal obligation which, however rudimentary, elastic and imperfect, is nethertheless a legal obligation and constitutes a measure of supervision.[20]

Apart from these views expressed by Judges Klaestad and Lauterpacht, it is also reported that M. Alejandra Alvarez a former judge of the ICJ, on may occasions, expressed the opinion that resolutions of the General Assembly are virtually binding upon states in a legislative sense.[21] Although the specific question was not considered the advisory opinion of the ICJ in the "Certain Expenses of the U.N. Case",[22] was built on the assumption that resolutions sanctioning the U.N. Operations in the Congo (ONUC) and U.N. Emergency Force (UNEF) were binding obligations.[23]

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[19](1955) ICJ Rep. 67

[20]Ibid. at 118-19

[21]vide: Johnson DHN, The Effect of Resolutions of the General Assembly, 32 BYIL (1955)-56) P 105

[22](1962) ICJ Rep. 227

[23]The question is settled as the consideration of the expresses of the organization and their apportionment among member states, are any how binding obligations under the charter and the question was the determination as to whether the expresses were regulations and as such the binding nature of the original resolutions dealing with (ONUC) and (UNEF)were not considered by the ICJ vide Ibid.

It would appear therefore, from the above consideration of the words "recommendations" that resolutions have often had a binding character in the history of the practice of international organizations. Hence, the word "recommendation" cannot be equated with the normal meaning of the word; although the charter does not define the word "recommendation" or the effect of resolutions it does not negate the assumption that they are binding, especially, as the interpretation of the word "recommendation" as understood at the time of the San Francisco Conference could well mean the general practice at the time.

That being the nature of the word "recommendation" in the Charter and the concept of resolutions it is submitted that the resolutions dealing with outer space matters, unanimously adopted by the U.N. General Assembly, have a definite legal effect even though they may not be considered by states to be binding. In other words, the scope of "legal effect" is wider than that of "legally binding". The important aspect that is considered here is the influence of General Assembly resolutions on outer space upon the growth of the rules of international law.

In international law it is misleading to confuse municipal law term "binding nature" coupled with enforceability, with that of the legal effect of an international law rule.[24] This is so because in the absence of an international enforcement authority, only means of insuring obedience to the rules of international order is the moral reprobation attaching to their infraction. We could not do better to illustrate the point than to quote Judge Lauterpacht when he concluded:

> It is one thing to affirm the somewhat obvious principle that the recommendations of the General Assembly ... adrressed to the Members of the U.N. are not legally binding upon them. It is another thing

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[24] Sloane, op. cit., supra note 2 at 2

> to give currency to the view that they have no force at all whether legal or otherwise and that therefore they cannot be regarded as forming in any sense part of the legal system of supervision. A resolution recommending to a state a specific course of action creates some legal obligation which, however rudimentary, elastic and imperfect, is nevertheless a legal obligation and constitutes a measure of supervision.[25]

It has been suggested that some tests may be applied in ascertaining the legal character of international law. Do states act in conformity with the precepts of international law from a sense of obligation? Do legal advisers in foreign offices consider it necessary to advise a certain course as obligatory under international law? We have already illustrated in quoting Judge Lauterpacht that states have to act in conformity with the resolutions as they create a sense of obligation although they may not be binding. This is more evident and confirms the second test when we consider the fact that states have always addressed legal arguments to justify their action, when they deviate from the obligations of the U.N. resolutions rather than to challenge their legal effect,[26] and they also find solace in these resolutions to justify their actions in certain instances.[27] The resolutions of the General Assembly on outer space matters, therefore, do bear a definite legal effect.

Considering the legal effect of the General Assembly resolutions, we cannot help noting their effect on the development of customary international law.

In this regard it is illuminating to observe the remark of Ivan Kerno, former Assistant Secretary-Gneral for legal affairs before the American Society of International Law in 1952 that:

> The existance of international organization and in particular the U.N., means that there is an important new source of customary international law. The decisions of such organizations, if taken with

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[25] Lauterpacht, op. cit., supra note 18 at 118

[26] Sloane, op. cit., supra note 2 at 2

[27] Vide: U.N. Docs. A/PV.100,p.2 A/PV.128, pp. 91-101, A.C.4/SR 38, p.4 and

> due consideration and consistently adhered to, can afford abundant and easily accessible evidence of the growth of international custom...international organizations, once operating, can be used to generate law, and unless general principles are also fully considered, the growth of international law will be stunted and its content unsatisfactory.[28]

For recommendations of the U.N. resolutions to become binding as custom it would be necessary that they be generally observed as a matter of duty, that they be certain by repetitions practice during a course of time.[29] What is necessary is a generality and not a universality of practice. If we do consider the principles of customary international law it will be clear to us that universality is never reached.[30] Further more if universality could be reached then the role played by customary law is at an end as customary law grows by stages, unlike treaty law the function of which is to rally agreement at a particular time in the development of law. If universality is the criteria for the determination of a customary law "it may become doubtful whether many rules would qualify for that purpose."[31] and as such the General Assembly resolutions on outer space adopted unanimously and even if adopted by a two thirds majority required for important decisions under the charter do qualify for the generality of acceptance by states.

The international community has undergone many changes since the time of 1172 A.D. when customary laws were first embodied in English Equity and as such contemporary international law could devise new techniques of expressing such generality of views as to what is desirable at a given time. Therefore we need not persist in generality of observance of a practice, but rather to

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[28] Vide. infra. note 31 and text

[29] Vide: Law and Public Order, op. cit., supra intro note 3 at 115-119 for detailed discussion of the contemporary view of customary law.

[30] Territorial sea and the three mile rule is clearly indicative of the inability to reach a universal test.

[31] id: 117 note 239

ascertain the desire of states to observe such practices through the techniques of international organization. If a generality of states express their desire to adhere to a course of action for the good of the international community through the overt act of accepting a U.N. General Assembly resolution this should be equated to the traditional international law requirement or generality of observance by states as a criteria for international customary law.[32]

As to the second requirement of time or a long duration is an equally anachronistic legacy of traditional international law, as contemporary international law in the space age cannot afford the luxury of waiting for years to crystallize customary rules as in the centuries of the steamship.[33] Considered in this perspective it is clear to us that U.N. General Assembly resolutions have evolved a technique of law making in contemporary international law which expresses the will of states when they desire to adopt a course of action for the good of the international community.[34] Mr. Oscar Schachter recognized the truth of this process when he said that:

> The traditional, slow procedures of customary international law are not considered as adequate to meet the rapid advances of space technology or the threats of security which they seem to involve ...whether one likes it or not, the United Nations is bound to be used as an instrument for expressing norms based on consensus of diverse interests.[35]

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[32] For a discussion of the development of specific principles of customary international law in the field of space activity vide: Law and Public Order op. cit., supra intro note 3 at 115, 200, 227, 231, 243

[33] Vide. Cohen, Maxwell, ed. Law and Politics in Space, 1964 (Montreal) p. 13

[34] Vide. McDougal, M.S.: Prospects for a Regime in Outer Space. ibid. at 108

[35] Vide. Schachter, Oscar, id. at 96

In considering the legal effect of the resolutions we have to consider the position of General Assembly not only according to the Charter but also as the representative organ of the world community. The General Assembly has a dual character; it is, first, an organ having a separate legal personality, and secondly, it is a congress of one hundred and fourteen individual nations. In its latter capacity it has certain inherent powers which need not be derived from the Charter, and it could exercise these rights as an agent of the international community.

A positive theory of international law was demanded by the fact that in the first quarter of the nineteenth century, with the Final Act of the Congress of Vienna, the quasi-legislative activity of international conventions asserted itself for the first time. From then onwards general international law was frequently evolved by means of international conventions.[36]

Every epoch of history produces alike that mode of legal development which it needs and that theoretical basis therefore which corresponds to its own interpretation of the nature of things. Hence, it is submitted that the traditional system of conventional law making has undergone a change and the present needs are met by the decisions of the U.N. General Assembly taken in its second role as the representative agent of the international community. We observed that the system of conventional law making was the product of the early nineteenth century the technique of which has changed in the face of the dual role of the U.N. General Assembly.

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[36] Vide. Oppenheim, L.: The Future of International Law, 1921 (Oxford) pp. 1-7.

Conventions and customs are merely two different ways of showing the consent of a nation to a particular situation. A treaty or a convention is merely a formal expression of the will of the contracting states - a formal method by which the nations involved show their consent to some act or agreement.[37]

Therefore, what is paramount in conventional treaty making is the consent of states. Although, as observed before, in the early part of the nineteenth century consent was considered to have been given by states only upon ratification, it is submitted that the concept of consent has now changed.

It is also submitted that when the U.N. General Assembly is functioning in its second role as an agent of the international community outside the Charter enumerations, and an affirmative vote is cast by a duly accredited delegate, it should be considered in itself constituting the consent necessary to give rise to a contractual obligation with legal effect.

The contention that states can undertake binding obligations without the traditional formalities of treaty making seems well established in modern state practice. The U.N. has developed a procedure by which agreements become binding by signature without reservation as to approval.[38] Therefore, it is

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[37] Vide: Kunz, The Nature of Customary International Law, 47, Am.J. Int'l. L. (1953) 662; Fenwich, The Sources of International Law, 16, Mich. L. Rev. (1918) 393-95; Pollock, The Sources of International Law, 2, Colum. L. Rev. (1902) 511; for a discussion of this view: The courts have also recognized this view, vide: The Scotia, 81 US (14 Wall) 170 (1871); Paquate Habana, 175 US (1899).

[38] Vide: Wilcox, "The Ratification of International Convention" Ch. 8; and Article 18 of the U.N. Constitution of the International Refugee Organization.

contended that this could be extended to include a vote of a delegate to mean the expression of the consent of that state, for there is hardly a difference between a recorded vote and a signature of the same individual. This view is confirmed by Professor Lauterpacht when he said:

> "The International Bill of Rights of man should become binding, without any necessity for ratification upon members of the United Nations whose duly accredited representatives ... cast their vote in favour of the Bill.[39]

Considered in this context the question of recommendation or a resolution of the General Assembly under the Charter does not enter the argument at all, as the Assembly acting in its second capacity is making law with the use of a new technique of creating obligations that have legal effect in the context of a change in the concept of the "consent" of states.

The clearest example of a General Assembly resolution which create legal obligations, however, are those cases in which the parties have agreed to accept a recommendation as binding. Professor Louis Sohn refers to Annex XI to the Treaty of Peace with Italy, as the leading instance of such an agreement.[40] In a joint declaration made by the Soviet Union, the UK, the US and France concerning Italian Territorial Possessions in Africa, the Four Powers stated that should they be unable to agree upon the disposal of these territories within one year from the coming-into-force of the Treaty of Peace with Italy the matter

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[39] Proceedings of the ILA, Brussels 1948, P. 69.

[40] Louis B. Sohn, "United Nations Legislation", A.B.A.J. 34 (1948) P. 315.

should be referred to the General Assembly of the U.N. for a recommendation, and the Four Powers agree to accept the recommendation and to take appropriate measures for giving effect to it.

Commenting upon this joint declaration Sohn says:

> States can, therefore, agree in advance to be bound by Assembly recommendations and will be as effective as if they were laws enacted by an international legislature with powers similar to a national legislative body.[41]

There is considerable precedent in the practice of the League of Nations for the special agreement of parties to be bound by recommendations,[42] and the practice has been stamped with approval by the P.C.I.J. in its advisory opinion concerning the Mosul case. P.C.I.J. said:

> There is nothing to prevent the parties from accepting obligations and from conferring the Council of Powers wider than those resulting from the strict terms of the movement, and in particular from substituting, by an agreement entered into in advance, for the Council's power to make recommendation, the powers to give decision which, by virtue of their previous consent, compulsorily settles the dispute.[43]

A binding obligation may not only result from an agreement in advance to accept recommendations but may also result from an acceptance of a recommendation after it has been made. In the advisory opinion on the Jaworzina Boundary,[44] the P.C.I.J. interpreted the effect of a joint declaration by the duly authorized representatives of the Polish and Czechoslovak Governments in which they accepted a decision of the Conference of Ambassadors, and said that the court was of the opinion that "this joint declaration gave to the decision the force of contractual obligation entered into by the parties".[45]

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[41] Ibid.

[42] Vide: Sloan op. cit. supra note 2 at 17.

[43] P.C.I.J. Ser. B No. 2, P. 257.

[44] P.C.I.J. Ser. B No. 8, PP. 29-30.

[45] Vide: Sogwarzenberger "International Law", Vol. I, P. 212, discussing ibid.

The legal effect thus arising from the General Assembly resolutions to which the states have signified their consent to be bound is of special significance in determining the legal effect of the resolutions concerning outer space.

In the General Assembly at its eighteenth session when resolutions 1962 (XVIII) and 1964 (XVIII)[46] of 13 December 1963, were adopted, the representative of the United States, Ambassador Stevenson said:

> .... we believe these legal principles reflect international law as it is accepted by the Members of the United Nations. The United States for its part, intends to respect these principles. We hope that the conduct which the resolution commends to nations in the exploration of outer space will become the practice of all nations.[47]

The representative of the Soviet Union, Ambassador Fedorenko, in reply to the statement of the United States said:

> .... The United States considers that these legal principles reflect international law as it is accepted by the Members of the United Nations and that, on its part the United States intends to respect the principles. The Soviet Union, for its part, will also respect the principles contained in this declaration.[48]

The representative of the United Kingdom said:

> My Government intends to respect these principles and believes that the conduct they enjoin will become the practice of every state and thus serve to ensure the exploration and use of outer space for peaceful purposes.[49]

These are international commitments of great significance. No states indicated that it would refuse to regulate its international conduct in the manner provided by the resolutions. Admittedly, unanimity did not exist in the

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[46] Vide: Supra Ch. I, notes 67 and 68.

[47] U.N. Doc. A/PV.1284, pp. 38-40.

[48] U.N. Doc. A/AC.1/PV.1342, pp. 27-46.

[49] U.N. Doc. A/AC.1284, pp. 36-40.

views expressed as to technical legal effect of the resolutions standing alone.[50] However, the fact remains that they were thereafter unanimously adopted.

What better testimony than the above statements of the three Big Powers including the two space powers, to substantiate our argument that states could create legal obligation by signifying their consent to be bound. The intention of the parties to consent to a course of action can be gathered either as expressed therein, or from the surrounding circumstances. These resolutions therefore carry a legal effect in addition to our previous arguments because states have expressly signified their consent to be bound by them and consent so signified create legal obligations as stated in the advisory opinions of the P.C.I.J. which we referred to, herein before.[51]

In conclusion of our discussion relating to the legal effect of the U.N. General Assembly resolutions we would like to quote again Mr. Schacter, the Director of the General Legal Division of the United Nations:

> I do not think that the only alternative to customary law is treaty law, even though in a formal sense these are the two sources of international law.[52] It seems to me that declarations adopted with the general approval by the United Nations General Assembly which purport to set in terms of legal authority standards of conduct for states, can be regarded as an expression of "law" which is regarded as authoritative by governments and peoples throughout the world. The formalist may say these declarations are "only" evidence of international custom, but whether one characterizes the declarations in these terms or in terms of accepted law the effect is substantially the same. We have seen this manifested in regard to resolution 1721 dealing with outer space, and that which was adopted unanimously, is now generally considered to be a statement of the basic legal precepts governing outer space. The fact that it is a resolution and not a treaty has not deprived it of legal effect.[53]

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[50] Vide: Statement of the French delegate, ibid:

[51] Vide: text notes 43 and 45 supra.

[52] Vide: Lauterpacht supra, text of note 12, for a similar view in regard to League resolutions.

[53] Schacter, op. cit. supra note 35 at 96

The ITU represents the whole international community; it acts on behalf of that community through the international legal persons of whom it is composed, i.e. the Sovereign States, with all the necessary personality.[54] Its legislative and executive organ i.e. its terms of reference are similar to those deriving from the powers and duties of a state. It is therefore contended that when ITU Assembly adopts resolutions these create identical obligations as the resolutions of the General Assembly when it is acting as the agent of the international community outside the elaboration of the Charter.

Having thus argued that resolutions of these two organizations especially those of the U.N. General Assembly do have a legal effect which obliges states to act accordingly, we feel that there are good reasons why these two organizations in particular should be looked upon to elaborate the norms necessary for the development of a legal order in space. Before we consider this point, it is important to have a brief glance at another way in which these organizations contribute to the development of a legal order in space.

Drawing up and the recommendations for acceptance of multilateral conventions has already been firmly established by practice as a regular function of these organizations, and would appear to be a power inherent in such a body. The broad fact is that we have by means of multipartite instrument created during the last century, a comprehensive and widely accepted body of legal rules which are constantly in process of revision to meet new needs and without which the functioning of an economically inter-dependent world would be completely disrupted. Aviation and telecommunications are the two facts which have done most to shrink the modern world to its present size. Neither modern aviation

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[54] Vide: Almiron, ITU Conferences, 26 Telecommunication Journal (1959) 206e, for a detailed discussion.

nor modern telecommunications, both having their effect on a legal order for space, could operate for an hour without the detailed codes of rules, general acceptance of which as we noted in the last chapter, has been secured by means of multipartite instruments, largely sponsored by international organizations.

Leaving on one side the constitutions of the specialized agencies, the principle legislative achievements to date of the United Nations such as the Genocide and Law of the Seas conventions, are many.[55] We noted in our discussions in the first chapter that final articles for multipartite instruments regarding the assistance to and return of astronauts and objects launched into and beyond outer space, and the damage caused by such objects to third parties on the surface, are now in course of preparation by the legal sub-committee of the U.N. Committee on the Peaceful Uses of Outer Space. Thus the United Nations is playing an important role in the development of a legal order through international legislation.

However, it must be pointed out that such traditional procedure for the acceptance of obligations under multipartite instruments or international conventions whether executed under the auspices of the U.N. and other international organizations or not is over-complicated and emphasizes unduly the contractual element at the expense of the element of the collective decision of a legislative character inherent in the resolutions of such organizations.

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[55] Geneva Road Traffic Convention of 1949, Refugees Convention, Protocols transferring to the U.N. functions previously discharged by the League, Declaration of Human Rights, etc.; presenting a Plenipotentiary Conference is considering a draft convention to be signed on the "Transit Rights of Landlocked Countries" at the U.N. Headquarters in New York under the auspices of the U.N. Conference on Trade and Development (UNCTAD).

The requirement of ratification results in many laboriously negotiated instruments never coming into force.[56] Mr. Schacter says:

> .... the presumed certainty of the legal effect of the treaties may well be exaggerated. The fact is that treaty making procedures are long and protracted .... There is continuing uncertainty regarding the state of the law because of the delays in the process of ratification. In contrast to this, states feel themselves more readily able to adopt general declarations precisely because they have the character of general statements and because they do not appear to circumscribe the activities of states as much as most detailed treaty provisions do. .... declarations can be changed by a later Assembly and, consequently, they have a suppleness which may be highly desirable in areas of rapid changes.[57]

However, it is quite clear that international organizations interested in space activity that we examined in the earlier chapters do possess both these media of international legislative techniques to develop a legal order in space.

There are many reasons why these organizations in particular the United Nations and the ITU, should therefore be, considered the desirable organs for the development of a legal order in space.

We have seen the shortcomings of international conventions whether they are under the auspices of international organizations or otherwise. We also observed that traditional, slow procedures of customary international law are not considered as adequate to meet the rapid advances of space technology, or threats to security which they seem to involve. Therefore, as already noted the fact that the General Assembly has not been granted explicit competence to legislate is not sufficient to divert the strong desire for an expression of international policy through the resolutions of such organs, that would facilitate peaceful development of a legal order in space.

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[56] Vide: Jenks, C.W. "Impact of International Organization on Public and Private International Law", Grotius Socty: Transact: 37 (1951) 23-49; Wilcox, op. cit. supra note 7.

[57] Schacter, op. cit. supra note 35 at 98-99.

There are those who feel that general principles of a vague character should not be treated as legal rules but as political principles. There is nothing closer to the truth than this contention why the U.N. is the desirable organ to develop a legal order in space through those instruments of political principles.

The realities of international life daily demonstrate the increasing interdependence of all peoples and states. In a sense, no country, no state is independent. They are all dependent on each other not only economically, but also politically. Even the space powers are not fully free. They have to reckon seriously with the conditions, circumstances and even ideologies that prevail in other countries.

The whole world-picture has changed rapidly and profoundly within a quarter of a century. Economically, culturally and politically the entire world has shrunk into one great unit; and in these conditions it is only natural to seek international legal order in space in the context of international political organizations.

International law, notwithstanding the reasoned theses of the commentators, consists, in the last analysis, of those principles upon which sovereign nations can agree. Such agreement is seldom, if ever, reached without regard to the political process and as such a political forum such as the U.N. is the desirable arena to attempt to build a legal order in space.

Finally to enhance our argument that the legal order in space should be built on a policy oriented jurisprudence and consequently the political arena of the U.N. where a policy interaction takes place is the most desirable spring-board;[58] we cannot do better than to quote Professor McDougal saying:

> The "law" that is being studied is still too often regarded as a body of doctrine or rules, divorced from power and social process .... The conception of law as a decision-making process, and a process in which the decision-makers are influenced by many variables as yet but few effects .... the process of decision-making is, indeed, one of continual redefinition of doctrine in the formation and application of policy to ever-changing facts in ever-changing contexts ....[59] A democratic conception of law may also include, to add brief detail, a commitment to change by peaceful procedures and to policies which prescribe a wide sharing of power and other values, provision of procedures for the continual review and reformulation of policies and representation in those procedures of all people who are affected, provision of procedure for the interpretation and application of policies, and the balancing of effective power necessary to make procedures secure and to put policies into practice .... Law is neither a frozen cake of doctrine designed only to protect interests in Statu Quo nor an artificial judicial proceeding, isolated from power process commitments formulation and reformulation of policies and constitutes an integral part of the world power process.[60]

In considering the question as to why international organizations especially the U.N. is the appropriate organ to develop a legal order in space, we have to note the emancipation of the Afro-Asian world. It is the last phase of a gradual extension from a world dominated by a European minority to a democratic world in which all nations, great and small, rich and poor in every grade of civilization and culture, participate in the process of law making.

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[58] Vide infra. P.174 for the difficulties that may be encountered in such an attempt and how a synthesis could be achieved.

[59] McDougal, M.S., "The Comparative Study of Law for Policy Purposes: Value Clarification as an Instrument of Democratic World Order", 61 Yale L.J. (1952) 915, as quoted by Whiteman op. cit. supra note.

[60] McDougal, M.S. "Law and Power", 40 Am J. Int'l. L. (1952) 109-111, as quoted by Whiteman, op. cit. supra note.

The generative power of traditional international law, has been in the hands of a few, always the great powers. "They are the ones that have made the laws of war because they are the ones that have made important wars; they have made the laws of neutrality because, in their practices, they have accepted the restrictions upon their power. To conduct belligerant operations, the maritime powers have made the law of the sea because they are the only ones who have fleets that encompass the waters of the world. Those who have fishing industries have regulated international fishing rights. They have done it both by custom and convention, but always regardless of the idea or consent of those other countries which were not engaged in the particular activity that was to be legally regulated."[61]

Such is the state of the law to which the newly independent as well as the less developed nations in Asia, Africa and Latin America are being invited to conform to. These states have never expressed a desire not to be bound by international law although they contributed nothing towards its origin. However, the fact of past foreign occupation which left them almost dry economically, have made them demand an international law which would not run counter to this great urge to improve their economies. The desirability and the importance of recognizing this demand as far as outer space activities are concerned is dealt with later in the chapter. It is only suggested here, that considering the increasing influence these newly developing states have gain

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[61] Cordova - "The Development and Condition of International Law"; the U.N. Ten Years' Legal Process; (The Hague, 1956) p. 43.

the world assemblies, it is inevitable that they will achieve these desired goals by demanding and acquiring a hand in the law making process of the international community.[62]

The traditional techniques of law making - treaty law and customary law - are unacceptable to these nations due to the inequalities that are perpetrated by traditional international law. Correctly Jenks observes:

> The authority of the existing customary international law has been stained, particularly since the greater part of the evidence of accepted custom habitually relied upon by international lawyers relate to the international community whose authority in every sphere the new and newly influential members of the community are inclined to challenge. Within the organization of the United Nations, steps are taken to make the evidence of customary international law more readily available.[63]

Practically all the new countries were formerly colonies. In most cases a relationship of inequality was laid down in a treaty which determined the further legal position of those countries. Often the local ruler was compelled to conclude the treaty. Moreover, it often happened that the local prince maintained or strengthened his political position by means of a treaty with foreign powers, at the expense of his subjects. In other words, the new states have fared badly under the treaty law as much as Jenks speaks of customary international law.

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[62] For a discussion of newly emergent states and international law vide: Roling, B.V.A. - "International Law in an Expanded World," (Amsterdam) 1960; Castender - "The Underdeveloped States and the Development of International Law", International Organization 15 (1961) p. 38; Larsen - "When Nations Disagree", Duke, 1960; Dias, N. "International Law in Asia and Africa", Ceylon Law Review (1963) p. 81

[63] Jenks, C.W. - "Common Law of Mankind" p. 29.

The binding force of treaties rests on permission freely given. That freedom justifies the expectation and forms the basis of the obligation that the treaty will be observed. In numerous important Afro-Asian and Latin American treaties that freedom was not present. Thus in the experience of the new countries, a treaty is an instrument for the maintenance of a subject position.

Thus the question whether "Pacta Sunt Servanda" or the significance of the "Clausla rebus sic stantibus" will enjoy special observance depends, above all, on the position in the legal community at the time of signing and later. Although the League of Nations covenant designed to maintain the status quo, embodied the "scrupulous respect for all treaty obligations"; this "status quo" idolatry is quite foreign to the spirit of the Charter of the United Nations. Such an attitude would have been entirely unacceptable to the new countries. Their influence is already observable in the Charter. The Charter nowhere mentions the "sanctity of treaties". Article 2, para. 2 of the Charter, prescribing the fulfilment in good faith of obligations, deals only with "the obligations assumed by the member in accordance with the present Charter".

What are the expectations and demands of the new majority? They feel that certain sections of international law should be re-written in terms of collectively agreed upon norms and in formulating these terms the new countries should be able to speak on a level of sovereign equality.

There are many compelling reasons why the United Nations is a desirable forum to create legal order in space. In further support of this contention we would like to quote Professor Sohn who says that:

> The Charter of the United Nations is a broadly conceived instrument and it is getting broader every day. Within its framework a brand new system of law has grown up. Some of the developments at the United Nations are considered by many as "revolutionary". We have no time for a slow development of international law through conservative channels; the needs of the world are too great and we must have quick action. Those who have been educated in the cautious ways of League of Nations have great difficulty in adapting themselves to the new methods and procedures. They cry "illegal" or "contrary to international law" whenever something happens which cannot be fitted into the old molds. They no longer feel a need for great reforms; they try to find reasons why certain things cannot be done, rather than to discover new ways of doing them. New situations require new law, and the U.N. is able to create that law as long as it is in accordance with the wishes of the peoples of the world. This new constitutional law of the world, which some of us call world law, has now taken the center of the stage. The Charter of the U.N. and the hundreds of resolutions and declarations of the U.N. organs now form the basis of the legal thinking in international affairs; old international law is used only as a supplementary tool. The U.N. has had a great impact on international law; now vistas have been opened and the time has arrive for international lawyers to lend a helping hand in ploughing the new fields.[64]

We have now ascertained the value of the U.N. General Assembly as a desirable process of creating legal order in space, where the emphasis is placed on the fact that they represent the will of the majority of nations and is an expression of world opinion. Public opinion, which is thus put forth as a principle supporting the recommendations of the General Assembly, has also been suggested as the leading force supporting obligations established by international law. In the marshalling of world opinion recommendations of the Assembly enjoy an advantage because of the opportunity, which is not

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[64] Vide: Louis B. Sohn - "The Impact of the U.N. on International Law" Procd: of American Assoc. of Int'l L. 11 (1952) 106-107.

always available in the sphere of international law, for full publicity and for a recorded vote. The force of a recommendation is not derived from a judgement made in an internal court of conscience, but from a judgement made by an organ of the world community and supported by many of the same considerations which support positive international law. The judgement by the General Assembly as a collective world conscience is itself a force external to the individual conscience of any given state. United Nations also possess a further technique of expressing the same conscience in the preparation of multipartite instruments under its auspices. It could also utilize the advisory opinions of the I.C.J. and the opinions of its international secretariat,[65] in its process of law making.

Having considered the contribution of international organizations in the first two chapters, and examined their legal effect so far in the present chapter, we have concluded by way of a preliminary observation the desirability using the present organizations for the drawing up of legal principles. However, the major question of the adequacy of the present mechanism to regulate the activities of space, in order to develop a legal order in space, still remains to be answered. The following pages are devoted to an attempt to answer this final question.

It is important to stress at this stage that more elaboration of a set of rules does not in itself create order; there must also be machinery to administer or enforce them.

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[65] Vide: Schacter, op.cit., supra note 1.

Therefore, it will be our aim here to suggest a comprehensive mechanism and technique that could develop a legal order in space, bearing in mind that such recommendation would include the mobilization of community action to deal with the developments in space in all its aspects.[66]

However, before embarking upon the specific suggestions, it is imperative to have a brief glance at such attempts in the past in order to recognise the policies of the decision makers, so that our suggested course of action may benefit from such experiences.

"It is doubtless to the credit of the United States that it did take the lead in recognizing that something should be done about space by the community of nations,"[67] says Eldon Kesh, who quotes from the State of the Union Address of the President delivered on 10 January 1957, nine months prior to the launching of Sputnik when he said: "that the international community seriously considers a plan to mutually control the outer space missile and satellite development."[68] A declaration that was not accorded specific emphasis and thought only as one of the elements that must be considered in any further efforts at arms control.

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[66] Our intention is not to suggest a mere law making process, which has already been dealt with, and we have concluded that there is sufficient machinery for this in the U.N. Vide:also: Tamm, John, A Covenant for Space, VIth colloquium on the Law of Outer Space, Paris 1963; David Davis Memorial Institute, Draft Code of Rules for Outer Space, Law and Politics in Outer Space, op.cit., supra note 145; and Louis Sohn, World Peace through World Law, (Harvard) 1962, 296-303. It is a system of controls that could develop a legal order in space with which we are concerned here.

[67] Eldon Kesh, International Co-operation in Space; An American Experience, 1963 (Ann Arbour) P.200.

[68] US Congress House, Committee on Science and Astronautics, US Policy on the Control and Use of Outer Space, Report No. 353, 86th Cong., 1st sess. 1959 P. 2.

In early 1958 once more there was considerable discussion of a new American proposal which would take a positive approach to the political problems of outer space. It would involve a call for some form of international co-operation. The New York Times of 19 January 1958 reported that "the Administration considering two ideas on the nature and scope of an international commission to carry out President Eisenhower's proposal that outer space be used only for peaceful purposes.[69] Most of the discussion involved the notion of setting up a United Nations Commission which would be responsible for the peaceful exploration of space. A report of the New York Times of 17 March 1958 reported that "it seems that the ideal time for this kind of proposal would have been immediately after the first successful launching of an American satellite. Apparently the Administration was advised that this would be the ideal time."[70] No action however was taken, and the only formal proposal of the United States had to do with arms control.

It was in this background that the Soviet Union on 15 March in a foreign ministry statement proposed (inter alia for the first time) "that banning the use of outer space for military purposes, as suggested by President Eisenhower, be coupled with the liquidation of foreign military bases on the territories of other countries, especially in Europe, the Middle East and North Africa. An international programme for space research would be established under the control of the United Nations and each country would pledge to launch rockets only under this programme. A new United Nations agency for international co-operation in research on cosmic space would develop this space programme,

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[69] The New York Times, 19 January 1958, P.1.

[70] The New York Times, 17 March 1958, P. 5.

continue the international geophysical year research programme on a permanent basis and serve as a clearing house and co-ordination for national research.[71]

"The Soviet Union's proposal for control of outer space was a brilliantly conceived, executed and timed propaganda stroke, in the view of some officials."[72]

The Soviet Union therefore had the distinction of being the first country to introduce the world to outer space and also the first country to propose a positive approach to international co-operation this new realm. The United States could, of course, not accept the Soviet proposal, because it included the requirement that foreign military bases be liquidated.

The US reaction to this was to ask for the separability of the question of peaceful uses of outer space from that of disarmament. This was perfectly reasonable and even a highly admirable position, but it lost much of its force in light of the fact that it was a reaction to a dramatic Soviet proposal. Moreover, it had been the United States not the Soviet Union which had first introduced the question of disarmament into discussion of space, as was seen in Chapter One.

Further, the United States in practice proceeded to reject the whole notion of a U.N. agency which would deal with space. This proved to be somewhat shortsighted for the Secretary of States was ready to admit some months later that he had ". . . advocated the control of outer space by an organization under, and created by, and responsible to, the United Nations."[73] The United States felt it was too early and we knew too

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[71]The New York Times, 16 March 1958, P.34.

[72]The New York Times, 17 March 1958, P.1.

[73]John Foster Dulles, "News Conference" Dep't of State Bull. Oct.16,1957, P.708.

little about how space would affect the international political system to set up a U.N. agency at that time. The argument of those favouring a U.N. agency had been based on the same premise, but they argued that it was precisely because space was new and little was known about it that it was both desirable and opportune to undertake international exploration of it.

At that stage the United States cautiously proposed that the United Nations should make a study of problems relating to space exploration to see what kind of an international body was needed. On 15 March the Soviet Union had requested that its proposal be included in the agenda of the 13th session of the General Assembly. On September 2 the US countered with a request that its proposal for a study of the problems of international co-operation be carried out by an Ad Hoc Committee of the U.N. The Assembly decided to include both items under the title question of "peaceful uses of outer space". The US proposal suggested:

> . . . that the Committee should study the following subjects:
>
> (a) The activities and resources of the U.N. and specialized agencies, and other international bodies relating to the peaceful uses of outer space.
>
> (b) The scope of international co-operation in the peaceful uses of outer space and the programme which could appropriately be undertaken under United Nations auspices to the benefit of everyone.
>
> (c) The future United Nations organizational arrangements to facilitate international co-operation in the peaceful uses of outer space; and
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> (d) The nature of legal problems which may arise in the carrying out of programmes to explore outer space.[74]

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[74] Statement by Mr. Lodge in the US Dep't of State Bull. December 15, 1958 P. 976.

Although the proposal brought no credit to the US in the light of the earlier Soviet proposal, it was accepted in the General Assembly especially due to the fact that there was general agreement among the delegates that the U.N. should take some kind of action with regard to international co-operation.

However, the Soviet Union reversed its position unaccountably and not only did they submit a draft resolution proposing the creation of a similar group, but also dropped their proposal for a U.N. space agency and their demand for the liquidation of foreign military bases.[75] Whatever the reason, it is difficult to understand the Soviet action on the space agency, given its apparent populatiry, and Lincoln Bloomfield thinks the US should have taken advantage of the Soviet's error and picket up the space agency theme.[76]

When the report of the Ad Hoc Committee[77] - which the Soviet Union boycotted[78] - was submitted, organizationally the report rejected as inappropriate any attempt to establish a United Nations Space agency. This idea, which had been supported only a year earlier by both of the major powers - although not necessarily at the same time - was now to be dropped.

In its report the Committee elaborated the work of the U.N. and related agencies in the field of space activity and its general conclusion with respect to the existing organizational structure emphasized that space programmes were often parts of broader programmes that also

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[75] Francis Wilcox, "The US and the Soviet Union in the United Nations" Dep't of State Bull. Dec.22, 1958, P.999.

[76] Lincoln Bloomfield, "The Prospects for Law and Order" Outer Space ed. Lincoln Bloomfield 1962 (N.J) P.167.

[77] UN General Assembly Official Records, 14th sess.Annexes Agenda item 25 PP.1-27.

[78] Vide: supra note 15 text, Ch.I.

included many other activities. Outer space had simply been added as a new environment into which present and projected human activities were being extended. Thus an organization such as the WMO, for example, could not make hard and fast distinctions between its space-related and non-space interests. By the same token, the Committee did not feel that the time had come to establish a new autonomous intergovernmental agency within the U.N. framework for the direction of space programmes. Neither did the Committee feel that it would be practicable to delegate the overall task to anyone of the existing specialized organizations. The continuance of present procedures was favoured by and large, together with the suggestions that information on space activities be incorporated in the reports of the various specialized organizations of the United Nations.[79]

In July 1959, General Assembly adopted a draft resolution submitted by US and USSR,[80] which apparently marked a willingness to agree that the U.N.'s role in space co-operation will not be very important.

In the draft resolution setting up the Ad Hoc Committee, it had been specified that the Committee look at the activities and resources of the United Nations which were available for promoting co-operation in space, and to study the need for any new organizational arrangements - A U.N. agency. The possibility of a U.N. space agency that had at one time been widely popular had apparently been allowed to die from inaction. This insured that there would be no permanent group within the U.N. with a responsibility for promoting co-operation.

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[79] U.N. General Assembly Official Records, 14th Sess. 1959, Annexes, Agenda item 25.

[80] Vide: supra note 25 text Ch, I.

The policies of other States have varied from time to time. However, a declaration which provided the keynote for the policy of the non-alligned nations in this regard was adopted at the 25 non-alligned countries conference in Belgrade calling for the establishment of an international agency to promote co-operation in the peaceful uses of outer space.[81] More recently the International Law Association at its conference in Tokyo in 1964, requested its space law committee to study the problems attending the establishment of a specialized agency for space with a view to reporting to the next conference of the Association.[82] It appears that the International Law Association assumed the need for such an agency when it called for the study of the problems attending the establishment of such an agency.

We have now seen the history of the attempts to organize to regulate space activity, let us now proceed to discuss the compelling reasons for such an organization. We recognized in the earlier chapters and clearly indicated by the chart[83] that the pattern of international space activity depicts a grouping of organizations with space and space-related functions. Each organization has a charter or constitution, and each has made recommendations or passed resolutions containing general principles for guidance in the use and exploration of outer space. There is a common denominator in the statement of purpose of each organization: that science and space activities should be regulated so that their advance is only for the benefit of all mankind. This is the stated objective of all organizations whether they are governmental or private, intergovernmental, or professional associations. One of the most significant characteristics of the structure of

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[81] Proceedings of the conf. of the non-alligned states, (Belgrade) 1963.

[82] Resolution "F", An International Space Agency, ILA, 51st conf. (Tokyo) 1964.

[83] Vide supra end of Ch. II.

international space activities is that no single organization is established above the groups of organizations dealing with this subject, nor is there any one source of authority and responsibility for international co-operation and the development of a legal order in space.

This situation is conducive to duplication of work, lack of co-ordination, non-co-operation and even competitive efforts that might lead to chaos and disorder. We saw in Chapter Two how efforts are being made in two organizations relating to almost the same activity, when we discussed the interest of ICAO in space and the preparation of two conventions by ICAO and a similar convention by the U.N. Legal Sub-Committee dealing with damages to third parties on the surface.[84]

Although at the time the space age began, several international organizations were compelled to consider the impact of space exploration upon their individual programmes separately, the time has now come to establish a superimposed organization that would serve as a nerve center for control and regulation of space activity so that no duplication or competitive work that is likely to dreate disorder will retard the development of a legal order in space.

It is likely to be argued that "such co-ordinating authority is unnecessary because there are few top-level scientists, engineers, legal experts and officials who can evaluate proposed space research projects, can understand the technical information which is exchanged, and can execute the supervision required to accomplish the desired objective; and that such experts are likely to know each other because they are members of international organizations antedating space age, and to accomplish their objectives they have worked out effective methods:

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[84] Vide supra Ch. II, pp. 124-125

working groups or task forces, data centers for the collection and distribution of knowledge, workshops and international conferences."[85]

Thus, a kind of regulation will develop, a regulation based upon recognition of common interests of people and nations. In this view, space research will be regulated in an orderly basis in the interest of all, based on the interconnection of experts interested in space activity.

It needs little effort to see the folly of this argument. Once again the experiences of ICAO and the U.N., referred above,[86] is a glaring example where the legal experts representing their governments, in many cases being the same individuals, do not co-ordinate their activities in two related fields. Furthermore, it is wishful thinking that individual scientists or lawyers could represent the interests of governments in a given instance for it they are, as is most likely, unconnected with their governments, they will be approaching the problem from a different angle from that of an expert representing their government. An individual lawyer on a certain line of thinking whereas if they were representing their governments at the legal or scientific subcommittee at the U.N. they would be thinking in different terms. Besides, there is no continuity in the co-ordination that could be carried out on this basis. In the circumstances, there is no machinery that can supply this very necessary co-ordination of work carried out by various groups interested in space activity.

We have seen in our discussion in Chapters I and II, that the major attempts at developing a legal order in space in the main is confined to the United Nations. We also saw that these attempts have been more often

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[85] Vide: Galloway, Eilene, "International Regulation of Outer Space Activities." Bull. of Atomic Scientists (Chicago) April 1965, PP.36-37.

[86] Vide: supra Ch.II, pp.124-125

than not bogged down by political considerations. We noted how the Legal Sub-Committee although scheduled to meet this year before July was unable to meet purely because of political considerations and as such major attempts at developing a legal order in space is paralyzed by political considerations which are sometimes hardly relevant to space activity. For example, it is the view of the Soviet Union that no discussion of whatever nature could take place while the war is going on in Vietnam or some other part of the world; United States similarly is leery of the U.N. getting too involved in space activity for everything that the U.N. touches becomes a political issue and for this reason Washington is opposing the calling of a U.N. conference on space in 1967.

The conclusion seems obvious that the development of a legal order in space cannot satisfactorily progress unless it is divorced from the political hustings of the U.N. This is of course not to advocate that political considerations directly relevant to outer space activity are to be ignored as explained earlier in the chapter. To that extent we do recognize the importance of policy makers in the development of a legal order in space and this is the reason which prompts us to discard from consideration non-governmental organizations such as COSPAR and IISL. Our contention, therefore, is not that power has no function in the law making process, but it must be a means to an end, and as far as we are concerned, the end and purposes of international politics should be the promotion of a legal order in space. We will be referring to the importance of security reasons later in this chapter, however, at this stage, it is clear to us that if legal order is to be developed in space, this must be attempted outside the United Nations.

We have seen in the first chapter that the policy of States in the U.N. has far more been one of opportunism than a solid, impartial detached search for the development of a legal order in space. The activities in the U.N. are, however, only partly directed towards the pursuit of political opportunity, and the work of functional specialized agencies, as we saw in the second chapter, is less coloured by such political opportunism. We have seen in the first chapters how the attempts of the U.N. were wrapped up in questions of disarmament, inspection procedure, removal of foreign bases, and the consideration of what are peaceful activities. These are all political questions arising from power politics and security considerations.

We will take full account of these political considerations in suggesting an intergovernmental functional organization for space activity that could create a comprehensive legal order in space. It is hoped that once such an organization is established, power politics will be gradually eliminated from space activity. In this case politics will be only a means to an end.

If we direct our attention to the legal and regulatory implications of both the most recent Telecommunications Convention (1959) and the Radio Regulations annexed to it, that we discussed in the preceeding chapter, the need for an intergovernmental agency is even more obvious.

Article 3 of the Radio Regulations defines the general rules for the assignment and use of frequencies. In this regard section 3 of this article is very emphatic, it states:

> Administration of the members and associate members of the Union, shall not assign to a station any frequency in derogation of either the table of frequency allocations given in this chapter or the other provisions of these regulations, except on the express condition that harmful interference shall not be caused to services carried on by stations operating in accordance with the provision of the convention and these regulations.[87]

What is meant by "harmful interference" is defined in Articles 1-93 thus:

> Any emission, radiation or induction which endangers the functioning of a radio navigation service or of other safety services or seriously degrades, obstructs or repeatedly interrups a radio communication service operating in accordance with these regulations.[88]

These radio regulations are not, therefore, intended to prevent the sharing of duly allocated, assigned and registered frequencies by other stations which do not cause harmful interference. And even where alleged harmful interference has occurred,[89] although in principle an obligation exists in respect of the station sharing a frequency assigned to another immediately to "suspend operations upon receipt of advice of this harmful interference"[90] the matter is to be settled primarily between the two administrations concerned.[91] If the matter cannot be settled by

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[87] Art. 3 sec. 3 of the ITU convention, op.cit., supra note 10, Ch.II

[88] Art. 1-92 of the ITU convention, op.cit., supra Ch.II, note 10.

[89] Vide supra Ch.II, P.95.

[90] Art.11 sec. 4(5) ITU convention, op.cit., supra Ch.II , note 10.

[91] Art.15 sec. 1-11, sec.4, ITU convention, op.cit., Ch.II, note 10.

direct agreement between the administrations concerned, it may be reported to the I.F.R.B.[92] whose powers, however, consist merely in investigating the dispute and issuing "a report containing its findings and recommendations for the solution of the problem."[93] What happens if the administrations concerned decline to accept the findings and recommendations of the Board is now stated with unabashed candour in Article 9, Section 7, paragraph 46:

> In a case where, as a result of a study, the Board submits to one or more administrations suggestions or recommendations for the solution of a problem, and where no answer has been received from one or more of these administrations within a period of thirty days, the Board shall consider that the suggestions or recommendations concerned are unacceptable to the administrations which did not answer. If it was the requesting administration which failed to answer within this period, the Board shall close the study.

If, after all these procedures an administration still finds a need and the will to persevere with the vindication of its legal rights, arbitration is in principle possible. But the arbitral procedure as outlined in Annex 4 of the convention is of the type which, as the advisory opinion of the International Court of Justice in the interpretation of Peace Treaties case (1950) has shown, may easily be stultified by the wilfulness of one of the parties to the dispute. For, although provision exists for the Secretary-General of ITU to select the third arbitrator in case of disagreement between the two national arbitrators as to the choice, no remedy is provided in case one of the parties wilfully refuses to appoint its own arbitrator.[94]

Neither Article 27 of the Convention nor Annex 4 rules out the possibility of submitting disputes directly to the I.C.J. The ITU itself could request

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[92] Art. 15 sec. 13(2), ITU Convention op.cit., supra Ch.II note 10.

[93] Art. 9 sec. 7 44-45, ITU Convention op.cit., supra Ch.II note 10.

[94] Vide: ICJ Reports 1950, p.221, and comments thereon by Bin Cheng - "General Principles of Law" (1953) pp. 151-155.

advisory opinion from the Court, with the proviso of informing the ECOSOC of the request.[95] This writer knows of no occasion when the ITU has sought an advisory opinion from the Court; he is aware of only one specialized agency that has sought an advisory opinion, IMCO.[96]

Although we have identified the relative articles of the Convention and the Radio Regulations, it ought to be pointed out that juridical concepts have played a small part in the international control or radio. In disputes in which a country might conceivably claim a right as against another country, under the terms of the Regulations, there has been no resort to arbitrations or juridical process. By and large, settlements have been effected practically and technically. We should note also that in the conferences of the ITU technicians rather than lawyers have been the dominant figures.

Furthermore, it is most important to recall that, in successive international telecommunication conventions, the following reservation is always maintained:

> Members retain their entire freedom with regard to military radio installations of their army, naval and air forces.[97]

In addition to lack of sanctions there are other reasons that compel us to conclude that the present system is either outdated or is in need of reorganization.

The incorporation of radiocommunication services into the Geneva revisions of the Radio Regulations placed the space telecommunication services automatically within the existing scheme of spectrum management

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[95] ITU Convention op.cit., supra ChII note 10 Annex 6 Art. 7.

[96] ICJ Advisory opinion 8, June 1960 on constitution of the Maritime Safety Committee of IMCO, (1960) ITU Rep. 150.

[97] Art. 50(1) ITU Convention op.cit., supra Ch. II note 10.

applied by the ITU. Stated another way, by the incorporation of these services, the existing scheme of spectrum management was extended by operation of law into the dimension of outer space. It appears that while there have been several complete revisions of the law-making treaties of the ITU in the past three decades, the permanent organic structures of the Union have remained unchanged through these years.

As a result of a pattern which has endured for numerous years, only a share in the task of spectrum management - whether involving radiocommunication services of world-wide application or otherwise - has been assigned to the ITU by its constituent members. Briefly, radio communication services and frequency allocations for them are negotiated within the framework of ITU Administrative Radio Conferences which succeeded each other in intervals measured in years. The services and frequency allocation plans so negotiated are then inserted in the ITU Radio Regulations which in turn are forwarded to each member of the Union for approval or ratification, a practice consuming additional years. Actual assignment to radiocommunication stations of specific frequencies within approved ITU allocation remains the exclusive prerogative of each signatory. At the times revised Radio Regulations are negotiated, each signatory is free to append to them an array of conditions or reservations which it unilaterally declares and imposes. Even the simplest type of ministerial change sought to be made to the Radio Regulations, a complex of detail now numbering 451 pages in the official ITU publication, can be accomplished only through the cumbersome treaty-making process of convening a full-blown administrative radio conference and waiting through the years to collect signatures on documents.

Hence it is clear that the cardinal problems looming for the foreseeable future which involve the rational use of the radio frequency spectrum can no longer be solved by the expedient available in the years past of simply inserting designations for new space radio communication services with frequency allocations for them into the ITU Radio Regulations.[98]

In pointing out the lack of effective sanction behind international frequency allocations, the intention is not to belittle their importance, but merely to show that parties to the international telecommunication agreements have intended to create not an international licensing authority for the mandatory distribution of the frequency spectrum, but an international co-ordinating center to facilitate the avoidance of mutual interference. The problem of frequency control in space research consists, therefore, not so much in preventing space and earth-space radio communications from interfering with each others transmissions, but rather in clearing certain portions of the radio spectrum so as to protect these communications from interference that might lead not merely to the failure of these experiments, but also serious danger to property, life and international peace owing to some malfunctioning in the control of the space vehicle.

Therefore, mere allocation of frequency by the ITU will not be enough in this era of space activities. Everything that has to do with the military or peaceful uses of outer space depends too much on radio communications, and as such it would now appear that, in addition to frequency allocations, what is one of the most urgent problems in this field at the moment is an

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[98] Vide also views expressed by Hon. Nicholas Katzenbach then US Asst. Attorney General, at hearings before House Committee on Science Astronautics, 87th Cong. 1st Sess. Pt. 2 at 716-720 (1961); Glazer, Lawmaking Treaties of ITU through Time and Spate, Mich. L. Rev. 60 (1962) 269-316.

improvement in radio technology and in the legal and administrative machinery so that there may be a far stricter control over the use of the radio spectrum than has so far been achieved nationally or internationally. Thus Colonel James D. Flashman, Directorate of Communications, USAF, wrote:

> Under concepts by which the frequency spectrum is now used, it is just not possible to guarantee that any portion of the spectrum will be interference free, regardless of national or international intentions or agreements. Controls which would make this guarantee possible simply do not exist. . . . Without positive control, virtually all our activities in space communications and electronics will be conducted in an atmosphere of calculated risk, subject to the whim of the negligent, inexperienced or inept co-user of the spectrum, within whose power it is to wreck completely our operations upon which the prestige of an active nation may rest. . .[99]

Thus the effective control of the radio spectrum through an intergovernmental agency becomes very urgent for the development of a legal order in space.

There are many more compelling reasons as to why such an organization is imperative for the control of the progress attaining the developments of space so that it could follow a legal order. One such reason relates to the realization of international co-operation in order to achieve the objective set forth in the General Assembly resolution 1721 (XVII) - part of which is concerned with the establishment of effective operational satellite communications.

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[99] "Positive Control of the Electromagnetic Spectrum", USAF Signal Magazine, May 1959, as quoted by Bin Cheng, Current Legal Problems, 14 (1961) p.258.

This is already a major source of discord between the United States and the Soviet Union. This stems from the formation of American Communication Satellite Corporation (COMSAT)[100] and its offspring - the international consortium for communication satellites (ICS).[101] Despite its designation, the new communications organization appears to be something less than genuinely global. Particularly striking, in the light of President Kennedy's statement in July 1961 that "the US Government will examine with other countries the most constructive role for the United Nations, including the ITU, in international space communications",[102] is the reluctance of the US to consider the possibility of an eventual UN attachment for the system. This is clearly indicated in the following dialogue between a congressional sub-committee counsel, Mr. Roback, and the State Department's special assistant for space communications, Mr. Carter:

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[100] In August 1962, US Congress passed the Communication Satellite Act (US Code 76. Stat. 419) and COMSAT was formally organized as a private US Corporation, in February 1963. In July 1964 representatives of 15 countries signed an agreement to establish an international communication system organized as a consortium effective 20 August 1964, of which 45 countries are now members.

[101] Generally on the implications of COMSAT and the system vide: M.L. Schwartz and Joseph M. Goldsen, Foreign Participation in Communication Satellite Systems: Implications of the COMSAT Act of 1952, R.M.- 3484 - RC, Rand Corporation Publication February, 1963; L.L. Johnson - The Commercial Uses of Satellite Systems, P-2601, Rand Corp. Pub. June, 1962; Nicholas, Early and Daws, - Communication Satellites, Economic and System Choices, R.M. - 3487-RC. Rand Corp. Pub. February 1963.

[102] Statement of President Kennedy 24 July 1961; Dep't of State Bull. Aug.14, 1961, p.274.

Mr. Roback: Do you have any idea about what the future evolution of this organization is going to be? ---

Mr. Carter: You mean in the legal sense or organizational means?

Mr. Roback: Both. That is to say, is it going to become an international corporation?

Mr. Carter: I do not know.

Mr. Roback: Is it going to become a UN agency?

Mr. Carter: Well this phrase, 'UN Agency' is, I might say, a really loaded one.

Mr. Roback: Specialized.

Mr. Carter: No. I think it is not going to become a UN Agency and will not become a specialized agency of the UN I think this is quite clear.[103]

However, the Soviet Union argues that "all such promising declaration of US statesmen on international co-operation in space communication will remain so many words as long as monopolies run the show.[104]

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[103] Hearings, Part I, Satellite Communications 1964, before a Sub-Committee of the Committee on Government Operations, House of Representatives, 88th Cong. 2nd sess. Aug. 6, 10, 11, 1964.

[104] The American Telephone and Telegraph Company (AT and T)" the biggest US communication trust has been made the actual boss of the show by the agreements and acts creating COMSAT and ICS. It and other companies dependent on it will have 50% of the corporation's stock and 6 out of 15 directorships . . . all prerequisites for AT and T control have been guaranteed. This transfer of communications satellites to private interests proves a dual threat to general interest. First, AT and T can be expected to hold back the growth of satellite communications in order to protect their investments in ground communications facilities. Second, it means that they will be used in the interest of Big Business without any consideration of the needs of the less developed areas. Indeed, American representatives point out, for example, that the UN General Assembly, unanimously approving on 13 Dec. 1963, the Declaration of Basic Principles Governing the Activities of States in the Exploration and Use of Outer Space, sanctioned the admission of non-governmental juridical persons to activities in space. But this was done provided 'States bear responsibility' for such activity and that it be carried on 'in conformity with the principles set forth in the declaration.' It is these highly essential conditions that have been violated, and American monopolies have at once utilized their positions for crude pressure on other States to subordinate them economically and politically under the guise of international co-operation in the use of outer space." Cheprov, I. International Affairs 12(Moscow) 1963, pp. 34-40. Vide: infra notes 15, 17, 20 and 23.

The first provision for a change for the better is to transfer the entire range of questions pertaining to space communication to the corresponding organizations, foremost of which are the UN Committee on the Peaceful Uses of Outer Space and the ITU."[105]

The Soviet Union claims that the ICS has violated the principles of the UN resolutions, firstly, by trampling upon the provisions of the declaration that exploration and use of outer space "should be for the betterment of mankind and for the benefit of States irrespective of their degree of economic or scientific development . . . and communications by means of satellites should be available to the nations of the world . . . on a global and non-discriminatory basis."[106] ICS agreement could be adhered to only by members of the ITU and also within six months of its signing. It therefore appears that the sovereign equality of States referred to in the General Assembly resolutions is being violated.[107]

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[105] Cheprov, I. International Affairs, 12(Moscow) 1964, p.74.

[106] UN resolution 1721 (XVII), 20 December 1961; UN resolution 1962 (XVIII), 13 December 1963. Vide: infra note 104 and supra note 23.

[107] Soviet Union does not like the idea of the US having the controlling say in the international consortium which will, in effect, have a monopoly on the most efficient international communications system ever devised by man. Washington hinted that the Soviet Union might buy a few shares of stock, but the idea is not conducive to the political ideologies of the Soviet Union as it will be a bitter blow to Marxist pride to have to buy capitalistic stock. Furthermore, the international agreement drawn up for signature in 1964 would not have given any real management powers to the Soviet Union. For not only does the US possess 61% of the shares of the consortium but it is specified explicitly that no matter how many new members may eventually join the system the US share cannot fall below 50%. After the long years of principles opposition by US representatives to the Soviet use of the veto in the UN Security Council, it is distressing, if not surprising, to hear COMSAT's president reassure a Congressional Committee: ". . . let me also say a more or less obvious thing, namely that the corporation in any event has a veto on all actions (of the system)."

The prospects held out by the ICS are especially unfavourable for the developing countries of Asia, Africa and Latin America. Although forty-five States[108] among which many small States have entered the consortium minimum quota contribution of 1.5 per cent of all costs will bar most of them from participation in the committee. More indicative of the closed nature of the consortium is the fact that shares reserved for these new States along with other entrants to the consortium other than the original signatories how numerous they may be, cannot exceed 17 per cent of the total. Assuming that the remaining three-quarters of the world were interested in adhering to the agreement it could never hope to receive more than 17 per cent vote in the consortium's affairs.[109]

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[108] 45 countries have become Members of the International Communications Satellites Consortium: With the present 45-nation organization, four countries have over 75% ownership. In addition to US, with its share of 56.2% there are: UK with 7.7%; France with 5.6% and Germany with 5.6%; Nine others have over 1% ownership: Canada, 3.5%; Australia 2.5%; Italy, 2%; Japan, 1.8%; Switzerland, 1.8%; Brazil, 1.3%; Argentina, 1.3%; Belgium, 1%; and Spain, 1%. The 20 countries with less than 1% but over .10% ownership are: Netherlands, .92%; Sweden, .65%; Israel, .60%; Algeria, .60%; Columbia, .60%; India, .50%; New Zealand .44%; Indonesia, .39%; Denmark, .37%; Norway, .37%; Portugal, .37%; UAR, .34%; Ireland, .32%; Chile, .30%; South Africa, .29%; Uruguay, .20%; Tunisia, .20%; Austria, .18%; Greece, .10%; and China, .10%. The 12 countries with less than 0.10% ownership are: Ethiopia,.08%; Lebanon, .08%; Saudi Arabia, .05%; Ceylon, .05%; Jordan, .05%; Kuwait, .05%; Vatican City, .05%; Syria, .04%; Libya, .03%; Sudan, .01%; Iraq, .01%; and Monaco, .005%.

[109] According to the ICS agreement, US COMSAT is designated to "act as manager in the design, development, construction, establishment, operation and maintenance of the space segment," and as such the management is also exclusively in the hands of COMSAT.

It is clear, therefore, by the restrictive clauses of the agreement a sizeable number of States have been excluded in the agreement while the major portion of the States given access to it has no real voice in it. As Professor Cohen states:

> It seems to me the likelihood of any real participation in the policy-making activities of the satellite corporation here for non-nationals is very remote indeed.[110]

It is clear therefore, that the disagreements arising between States due to the ICS will have to be settled in an attempt to create order in space. This is made more urgent by the possible existence of a rival system to be set up by the Soviet Union[111] and the consequent problems entering such rivalry. Furthermore, many countries, as Brazil has already

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[110] Cohen, Maxwell, Conference on the Law of Space and of Satellite Communications, (Chicago) 1963, p.189.

[111] The Soviet Union launched its first TV satellite, Molnya (Flash) I, on 23 April 1965, for transmission between Moscow and Vladivostok.

indicated, are concerned about the establishment of an authority for the effective control of the broadcast material.[112]

Space communications being global in scope clearly require international action. Ideally, there would be a single universal satellite system, in the same way as it is not rational to have more than one telephone system in a given city. Even if this goal is impossible, systems must be compatible. Equipment must be standardized and operated in accordance with international regulations and international agreement

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[112] There are several questions in conjecture at the moment. Firstly, as the Brazilian delegate said at the XVIIth session of the UN General Assembly: "considering the private nature of the corporation undoubtedly would be used to legalize propaganda of war, hatred or international enmity", control of such broadcasts by recipient States will be a formidable task. This is already taking shape if we consider the recent issue of "equal time" which assumed international proportions when on 7 May 1965, after President Johnson became the first Head of State to request and obtain time on the Early Bird satellite to speak directly to the peoples of the foreign countries. Within moments of the conclusion of the President's speech on American policy in Europe, the Government of West Germany asked for time in which Chancellor Ludwig Erhard could speak to the American people the following day. In one of his rare expressions of editorial opinion, Walter Cronkite, commentator for C.B.S., said on the night of 6 May, on a newscast, that "President Johnson had broken with traditional diplomatic protocol and spoken to people of foreign countries without prior notification of their Government." A report in the New York Times of 8 May 1965 states the "fear voiced in the past months by some individual European broadcasting executives that the satellite circuit might become a propaganda instrument for airing international differences." It is interesting to note that under customary international law it is an accepted principle that a State has a right to object to transgression of its territory by offensive radio waves of foreign waves. It can object either by diplomatic protests or by interfering with radio signals, otherwise known as jamming. Even by international treaty law this right is granted by the Broadcasting Treaty of Geneva, September 1936, which embodies the condemnation of international transmissions constituting an incitement to war or revolt, and transmission of incorrect information likely to cripple international tranquility, (Articles 1 to 4). For further discussion vide: Briggs, The Law of Nations (1935); Hyde, International Law (1945) 192; Jessup and Taubenfeld, op. cit., supra note 132 at 204; Davis, Radio Law (1929) 359; E. Kearse, Space Communication and the Law, Mich.L.Rev. 60 (1962) 873-904; Glazer, Law-making Treaties of the ITU, Mich.L.Rev. 60 (1962) 270.

must be reached on the frequencies used. Further, to avoid a somewhat similar situation to that experienced in the early days of radio communications (when Marconi Company tried to establish a monopoly of ship to shore communications) it will be necessary to co-ordinate the use of the facilities available in the satellites to ensure not only their maximum utilization but also the criteria of non-discriminatory access, stressed by the General Assembly of the United Nations.

Furthermore, to build costly ground stations without any assurance of getting satellite channels is a risky undertaking for many States. "At the present stage of technical development small countries cannot afford to spend the necessary money to build ground terminal stations required for full use of the satellite system as the regular ground terminals are extremely expensive.[113] In the circumstances only a truly universal enterprise suggested later in the chapter could deliver the benefits of satellite communications to a great number of smaller States.[114] The international community cannot be satisfied with anything less than

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[113] Estep, S.D. op.cit., supra note at 159.

[114] Even developed States of Europe are now dissatisfied with certain arrangements and European broadcasters are protesting to the F.C.C. against the high cost of charges for programmes. They feel that a charge of $12,000 for a half hour programme is exhorbitant and prohibitive and as such are compelled to boycott satellite broadcasting.

an international agency to co-ordinate and regulate a single satellite system, that would achieve a communications network on a global and non-discriminatory basis.[115] ITU, as stated by its Secretary-General Gross, is not equipped to handle this kind of job.[116]

The regulatory problems of space communications seem to demand, as Professor Cohen states:

> en almost inevitable emergence of international organizational technicians to deal with the communications problem very soon, because already there are so many interests involved . . . What I look forward to, over a period of time, is a partial solution of the participation and regulation problems through some goodwill and much ingenuity, perhaps expressed ultimately in the evolution of some new specialised agency or some advances in ITU itself far beyond its present structure.[117]

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[115] Prof. Herbert I. Schiller of the Bureau of Economic and Business Research of the University of Illinois, writing in The Nation, 25 Jan. 1965, concludes: "The development of COMSAT reveals certain patterns and directions for world communications in the years ahead. Whereas a tendency toward wider global representation is observable in several important politico-economic international structure - in the United Nations itself. The UN Conference on Trade and Development, GATT, etc. - space communications is emerging as a retrograde structure. The decisions taken thus far are all based on market considerations. An inevitable consequence is the rapid relegation of the non profit communications needs of much of the world to the category of an afterthought. Contrary to the UN resolutions and Presidential statements, the space communications development under COMSAT-Washington auspices has supported an aggressive nationalism, brazenly presenting itself as an international undertaking . . . . It presents a powerful combination of nationalist and commercial impulses to secure global economic and military supremacy."

[116] Vide: Gross - Space Communications: The Need and Scope for Action, 29 Telecommunication. J. (1962) 229; Gross and Stead - Telecommunication and Peaceful Uses of Outer Space; UN Doc. E/Conf. 39/L/39.

[117] Cohen, M. op.cit., supra note 110 at 191.

In identifying the reasons for an international agency for space activity it is useful to canvass the experiences of comparable fields, especially aviation.

When the Aeronautical Commission of the Peace Conference prepared the Paris Convention of 1919[118] for the establishment of the International Committee for Air Navigation (ICAN)[119] it did not have the reception that ICAO has, although it was the first attempt at an international agency to regulate air navigation. Spain which was strongly opposed to certain provisions of the Paris Convention in its original version remained outside the Paris Union. After the withdrawal from the League of Nations it tried to draw together a block of States associated by the Hispanic origin of their culture. In 1926 Spain, Portugal and 19 American Republics signed "ad referendum" the Ibero-American Convention in Madrid[120] forming the CIANA, the equivalent of CINA, which never became an effective body. The other reaction to the Paris Organization was the Pan-American Convention signed at Havana in 1929[121] signed by sixteen States.

Thus the ICAN established by the Paris Convention represents the first unsuccessful attempt at organizing the various States under one international agency. Two great air powers of the era, Germany and the United States, were not members of ICAN. Although these two powers played the most

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[118] Convention for the Regulation of Aerial Navigation of 13 October 1919.

[119] Usually under the French abbreviation "CINA" Commission Internationale de Navigation Aerienne.

[120] "Convencion Ibero-Americana de Navigacion Aerea", of 1 November 1926.

[121] Pan-American Convention of 1 January 1929.

important part in the world air traffic and remained outside, an attempt was made to create order by establishing an international agency for air navigation, and at the time of signature it gave promises of functioning as the single world administrative system for the regulation of international aviation, although unexpected political development within a decade made it impossible for the purpose to be realized. The rival organization in the American Hemisphere was the direct outcome of the United States policy toward Europe and the League of Nations at the time. One of the reasons for the unhappy decision which resulted in Hanavan Convention may have been the desire of the United States to establish a hegemony in the American continent in matters of aerial navigation.

This situation has its space age parallel. While the two space powers might not need an international space agency, such an agency is of paramount importance to the other States, especially the smaller and the less developed ones. Today there is a considerable gap between the developed and the less developed States. If the space powers are permitted to monopolise the space race, in a decade or two the gap between the developed and the less developed countries would widen as they reach for the Moon. If the gap is to be narrowed the less developed States must have their own share of space resources[122] and this could be possible only through the participation of all States in the efforts of an international agency.

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[122] For a comprehensive review of the possible resources available to man in outer space vide: McDougal, Laswell, Vlasic and Smith - "The Enjoyment and Acquisition of Resources in Outer Space"; III U. Pan L. Rev.,(1963) 521-29.

The position is clearly described by none other than the Ambassador Stevenson of the United States:

> "We are further handicapped, many of us, by the impression that the exploration of outer space is a matter of concern only to the great powers because they alone have the capacity to penetrate space. That impression gains force from the belief that outer space is unrelated to the day-to-day problems of whose energies are absorbed by such earthly daily questions as growing enough food to feed their peoples. This impression, I submit, is totally and dangerously wrong. The smallest nation represented here in the United Nations is deeply concerned with this question before us, and so is the poorest of our members. Indeed, they may have far more to gain from the shared benefits of space science - and on just such matters as growing food - than the larger and richer societies. Moreover, the small nations have an overriding interest in seeing to it that access to space and benefits of space science are not pre-empted by a few nations, that space exploration is not carried forward as a competition between big power rivals, that the ideological quarrels which so unhappily afflict this planet are not boosted into space. . . . In outer space we start with a clean slate, an area yet unmarred by the accumulated conflicts and prejudices of our earthly post. We propose today that the United Nations write on this slate boldly, and in an orderly and creative way, to narrow the gap between scientific progress and social invention, to offer to all nations, irrespective of the stage of their economy on scientific development, an opportunity to participate in one of the greatest adventures of man's existence."[123]

All States have undertaken to share the benefits of space technology. This is recognized by the General Assembly resolutions 1721(XVI) when it declared that "communications by means of satellite should be available to nations of the world . . . on a global and non-discriminatory basis."

However, it is left to the smaller States to press for the establishment of an agency to deal with the regulation of space activity. This should not be too difficult a task as can be learned from the experience

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[123] Stevenson, Adlai E - "Looking Outward" (1963) 54-55.

in the field of aviation. We noted how in spite of the two air powers at the time remaining outside ICAN the other States were strong enough to sustain it and no doubt it is to the credit of their perseverance that we have today in the ICAO one single international organization regulating aerial navigation.

There is no doubt as much as the United States tried to establish a hegemony in the American continent in matters of aerial navigation it will strive to maintain a similar hegemony in the field of communication satellites. However, if it is strongly pressed by the other States, it will be unable to resist the pressures. If the Soviet Union too establishes an hegemony in Eastern Europe with the establishment of a similar system, the parallel existence of these regional arrangements will be very confusing and cumbersome and an international regulation will be imperative to avoid chaos and disorder. We have an example in the commercial field in aviation in the history of the International Air Transport Association (IATA).[124] At the inception we had the old IATA[125] created in 1919 and the Trans Europe Union, organised on a Central European basis under German control as a cartel. However, they were found to be cumbersome and IATA was founded to absorb all sectional interest on a world-wide basis. Therefore, if an organization similar to ICAO is to regulate space activity, it is the time to make the necessary efforts by the smaller States and the less developed States, and only through their initiative and persuation that an international agency to regulate space activity is likely to be born.

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[124] International Air Traffic Association Agreement (The Hague) 28 Aug.1919.

[125] International Air Traffic Association.

A preliminary question that arises at this stage is whether an already established organization such as the ITU, WMO or ICAO should be designated as the organ that is desirable to adopt a system of controls that will help develop a legal order in space. However, space activities are numerous and varied and may become the logical concern of many national and international organizations as indicated in the chart. We have already noted the statement of Mr. Gross, Secretary-General of the ITU when he said that "this body is not equipped at present to handle this kind of job."[126] This is so with other organizations as the objectives of space far surpass the activities of interest to any single organization presently in operation and hence the need for a new comprehensive international organization to develop a legal order in space is evident.

A far more urgent and important reason compelling the establishment of an agency stems from military and security considerations attending the developments of space. History has taught us, and its lessons have been particularly hard during the first half of this century, that a world without a system of order is a source of nameless misery for all of us. In such a disorderly society war is considered as an unavoidable catastrophe and is accepted as such. The consequences thereof are all the more disastrous as space science and technology have reached uncontrollable momentum. The great problem of our age, therefore, is whether we shall succeed in completing the process of establishing a legal order

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[126] Vide: op.cit., supra note 116;; as to ICAO we noted in our discussion in the preceeding chapter its inability to assume this role, especially due to the attitude of the Soviet Union towards it. Vide supra P.186.

in space through an intergovernmental organization or whether we shall irrevocably fall back in a hopeless state of chaos, that will be worse thatn the world has ever known.

In the military sphere there are two developments stemming from security reasons, being actively considered at present - manned orbital space stations and a satellite destroyer system. Indications are that left to normal cold war pressures, these two systems would be used to augment the arsenal of the US-USSR competition. If however, a system of space control and inspection were to be accepted, these two projects could be used as formidable weapons to advance international space co-operation.

Even after the UN resolution 1721 banning nuclear activity in outer space, Dr. Harold Brown, US Defence Department Director of Research and Engineering, was quoted[127] as voicing the Administrator's concern that the limited arms control measures recently negotiated should not produce a false sense of security. Further, particular concern was expressed regarding pledges wherein the continuity of violation is inconclusive. It could rightfully be maintained that a similar skepticism might be voiced by the Soviet Union as well as by another nation. This understandable compulsion for affirmation of declarators attests to necessity for some measure of international inspection and supervision. The overall objective at all times should be forestall usage of outer space by any nation for military pursuits.[128]

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[127] Vide General Schriever, infra note 128.

[128] For discussion on military implications of outer space vide: William C. Foster, "Space and Disarmament", General Bernard A. Schriever - Does the Military Have a Role in Space? in Space its Impact on Man and Society ed. Lillian Levy, 1965 pp.50-69; Larinov, V. "The Doctrine of Military Domination in Outer Space" 10, International Affairs (Moscow) 1964 pp.25-30; Sponsler, George C. - "The Military Role in Space", Bull.

However, despite these limitations imposed by most important considerations of the defence policy of nations, we saw in the earlier chapters that a desirable momentum has been initiated toward peaceful co-operation in outer space. The danger is that inaction or lack of positive thrust toward building a more substantial structure for relations among nations will be overwhelmed by other forces and events which create fissures in the thin fabric of budding co-operation. As a general proposition, it appears reasonable to expect that the greater the degree of co-operation, the narrower will be the range of problems requiring attention from the standpoint of elaborating rules of conduct for military or other uses of space. A system of controls could therefore create the real legal order that we desire.

Accordingly, with reference to intelligence and observation activities Schacter says:

> I would put the question, whether the controversial issue raised in this respect could not be resolved by stating, as an objective, that observation activities should be carried out by the UN rather than by national states. I realize that this is an objective that may be impossible to realize at the present stage, but it indicates a possible way of transcending an impasse in the framework of a wider context of international order. (One may note that a state now being "observed" would probably gain if the observation were under international auspices and if the information obtained were revealed to that state).[129]

Thus a system of international control is necessary if we are to regulate military aspects of outer space, which is the most foundamental question in the development of a legal order in space. Hence a programme for the establishment of an international space control agency should be seriously considered - and now.

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[129] Schacter op.cit., supra note 2 at 99-100.

There are still other, more general, reasons calling for the establishment of an agency to develop a legal order in space. Even if we have an elaborate set of rules to regulate space activities, there is often no provision for any organized international supervision over the application of the instrument, with the result that, such application being left entirely to the controlled discretion of the parties, the degree of application actually secured is frequently very unsatisfactory. It is still by no means universal to include in important instruments provisions for the reference to an international judicial body of disputes concerning their interpretation. Even when the instrument includes such a provision, the procedure for bringing matters relating to their interpretation before an international judicial body is almost invariably of such a character that few or no cases are brought.

Furthermore, the cost of space exploration is a serious limiting factor of meaningful developments. Contemporary space efforts are marked with duplication of activities by various nations and agencies in a single nation. The funds released by these unnecessary duplications could further the activities of space exploration in a stepped up pace. Developments of space are retarded by the competitiveness of the space efforts. If human resources of man's exertions are pooled together in an international effort, the developments will leap-frog the present achievements in space exploration.

Editorially evaluating the recent Gemini-4 space project of the United States which broke all previous US records in space exploration, the New York Times expressed the view:

> "...thus, at best, this flight will primarily give United States space authbrities experience and knowledge that Soviet rivals already possess. So long as the space race continues, this kind

> of essentially duplicatory activity is unavoidable. So too are the great costs - including the potential cost in human lives - that this duplication imposes . . . this flight's chief contribution is to point up the wastefulness of the space race and the need for replacing the competitive coats and dangers with a co-operative joint space effort by all nations - co-operator that would benefit all mankind."[130]

Therefore the development of an international organization of operational activities in the politico-economic activities of space will greatly enhance the development of a legal order in space, within the context of which man could enjoy the riches of outer space.

In concluding our examination of the reasons compelling the establishment of an agency we like to quote, The Honourable Harlan Cleveland, Assistant Secretary of State for International Organization Affairs. Addressing on the desirability of a functional space agency at the National Conference of the Peaceful Uses of Space, held this spring he said:-

> The General Assembly of the UN has been put out of business for the past year over a political-constitutional point which so far has proved insoluble - while the specialized agencies and affiliated organs working at functional tasks proceeded a pace. And in the midst of military, political and diplomatic turmoil of South-east Asia, the organization charged with the regional development of the lower Mekong Basin has continued to work in routine and astonishing harmony. Clearly we need functional organizations both to keep the peace and to foster a progressive international community - the first needed to sustain enough order in the world while the second proceeds to integrate the world along functionally useful lines . . . . The most hopeful thing that can be said about this state of affairs is that the institutional gap for dealing with contemporary threats to the peace has been made glaringly evident - which is usually the precondition for institutional invention. . . . On the other hand, whenever organizations of functional world community succeed, then political quarrels may seem so damaging to shared national interests that the quarrels have to be resolved or submerged.

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[130] The New York Times 4 June 1965.

> . . . The reality is that international organizations can be reached . . . and international organizations can be formed . . . and international common law can be elaborated . . . on subjects which draw nations together even as they continue to quarrel about the frontiers and friends and ideological frenzies which keep them apart."[131]

We have now identified the reasons for the establishment of an agency for outer space activity. We have seen that the activities of space exploration are so wide that no present organization could alone take the responsibilities. We have more clearly indicated that these functions are far wider than the drafting of principles in the "well-worn language of legal conceptualism" and hence the need for a system of controls through the establishment of an agency is imperative for the development of a legal order in space.

Having thus ascertained the necessity for an agency to control the activities of space in order to develop a legal order in space, it is now left to outline a framework for such an agency and how it could be achieved. The following final pages of this study will be devoted to an attempt to answer these two questions.

We would like at this point to reiterate that we recognize that as in the case of all the international organizations within which the man has had experience, any system of international administration depends upon the action of national governments; the world has so far experienced with only limited examples of supranational institutions. However, it is contended that technological advances and military capabilities have made such

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[131] Cleveland, Harlan The Hon.: "Politics of Outer Space". Address delivered at the Fifth National conference of the Peaceful Uses of Outer Space in St. Louis, Missouri, on 27 May 1965 which the writer was privileged to attend. Vide: Dep't of State Bull. June 21, 1965, P.1007.

conservatism politically and strategically obsolescent, and as such we have to suggest a fresh and vital approach to international cooperation through some sorr of a supranational institution in order to develop a legal order in space.[132]

Our view is that it must be done by the sponsorship of a special agency of the United Nations, primarily because the UN is at this time the most multinational of any existing agency which has both political and scientific interests. The U.N. provides a focus for world attention. It has some existing or readily available machinery to undertake the establishment of such an agency. It has operated police forces. It supports world-wide health and educational programmes. While it does none of these things in the most ideal way, it does have the existence, the facilities and potentialities which could be utilized for the purpose.

Therefore, it is suggested that the Committee on Peaceful Uses of Outer Space should be charged with the task of establishing an International Space Agency (I.S.A.) to regulate and control outer space to insure its use for peaceful purposes only. This Agency would possess the exclusive

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[132] Vide: Jessup and Taubenfeld: "Controls for Outer Space," (New York) 1959; for a discussion of international action taken in the settlement of international questions and also review of the activities of international organizations and the possible patterns of control that may be developed in the future. While Jessup and Taubenfeld concerns themselves in reviewing the action taken by international community to deal with international situations including those taken by international organizations in various fields and a suggestion of inclusive sharing of the administration of outer space especially in the lines of the experiences of the Antartic; our concern is the international control through an administrative organ that can develop a legal order in space, in the light of the experience of international organizations in the field of outer space. We do not feel that too much stress must be placed on the Antartica analogy. In so far as the 1959 Antartica Treaty is concerned, it is only realistic to think that agreement proved feasible only when success in rocketry considerably downgraded that continent's strategic value, so that it is not altogether a valid precedent for outer space, at least for the present.

authority and responsibility to insure that outer space is explored to the maximum for the benefit of all mankind. It will be an independent international organization and function much like a specialized agency of the United Nations. This agency should ensure that the exploration and exploitation of space will be non-aggressive, internationalized and controlled by one central organ under the general supervision of the United Nations.

The I.S.A. established to achieve the above objectives, shall perform the following functions: first, to work out an international programme for launching space rockets with the aim of studying outer space and supervise the implementation of this programme. For this purpose it shall determine the necessary scientific research that has to be carried out in the exploration of outer space and will carry out a comprehensive international programme to explore the mysteries of outer space.

Second, to serve as a World Centre for the collection, mutual exchange and dissemination of information on space research and to co-ordinate national research programmes for the study of cosmic space and render assistance and help in every way toward their realization. For this purpose it shall regulate the programmes of all individual nations and groups of nations in all their aspects to ensure that they accord with the objectives of the I.S.A. Such regulation shall include the allocation and control of radio frequencies used by such individual programmes.

Third, to establish and operate a single world-wide satellite communication system. For this purpose it shall take over the control and operation of the present international satellite communication system in order to provide communication through satellites to all countries on a non-discriminatory basis for which it shall not have profit as a major objective.

Fourth, to establish and operate a single world weather watch system which will serve the needs of the world over.

Fifth, to initiate and control operational programme in order to achieve maximum benefit of such operational devices for the whole of mankind on a non-discriminatory basis.

Sixth, to be responsible for the development of a legal order in space.

Having outlined the objectives and functions of the I.S.A. we shall now proceed to discuss the organizational method by which the I.S.A. could operate to achieve the above objectives and functions.

All nations participating at any given time in the I.S.A. would be represented on the Governing Board, which would determine the operational deployment of the entire space system and logistics, manning equipment, launch facilities, bases and financial support required. Though there are various formulae for determining the distribution of this support, the most important consideration is that each and every nation participating share a definite role and definite responsibility.

In the regulatory field it shall be responsible for the elaboration of legal norms for the conduct of space exploration. These regulations shall be adopted by the majority of two-thirds of its membership and when adopted will be binding on the entire membership.[133] It shall be assisted by an executive board responsible and for the general execution of the programme of the I.S.A., a scientific expert group, a management group and a legal expert group which will also be responsible for the elaboration of detailed and technical rules for the conduct of space activity.

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[133] Vide: Discussion earlier in the chapter for the views in regard to the technique of international law making in the context of changing concepts of consent in the contemporary international community that we are advocating here.

The Governing Board shall elect an Executive Board composed of fourteen members from whom a secretary-general will be elected, and reporting to and responsible to the Assembly.

The Executive Board shall be composed of representatives elected purely on the basis of their individual ability and functioning in their individual capacity and not responsible to the group of states from whom each such Board member is elected. Two representatives each will be elected to represent the following areas respectively, US, USSR, Africa, Asia, Latin America, Eastern Europe and Western Europe including Australia. The Board shall be completely responsible for the operation of the I.S.A. It shall function on the basis of majority rule with a two-thirds majority being required for all decisions which are stated as important. The Board shall also elect experts on the same basis to the following expert bodies.

The I.S.A. will have an expert scientific group comparable to COSPAR, composed of engineers, doctors, scientists and technically trained personnel from as many member nations as feasible. To this group would fall the responsibility to carry out the task of conducting preliminary studies evaluating, determining feasibility, supervising research and development, establishing specifications and quality-control, standards and co-ordinating assembly, testing and systems management. Contracts would probably be let by competitive bidding, with individual firms, governmental-aided organizations and compatibly linked private companies of many nations vying for awards. This body shall function under the guidance and control of the Executive Board.

There shall be another expert group of Economists, Businessmen and Lawyers recruited on the same basis as above and functioning under the direction of the Executive Board, responsible for the management of all operational systems under the I.S.A.

There shall further be an expert group of lawyers and a scientist and an economist, working under the direction of the Executive Board, and responsible for the legal regulation of all technical activities falling under the functions of the I.S.A. other than those regulated by the Governing Board. It shall adopt by way of resolutions all necessary technical regulations for the conduct of space activity by a two-third majority and transmitted to member States for their approval. If a two-third of the member States do not register their protest confidentially with the expert group within a specified time limit they shall be confirmed by the expert group and will have the force of law. It shall also determine the violations of such laws. It shall adopt such rules for the conduct of space activity including technical regulations for landing procedure, navigational aids, launching of objects, the traffic of objects in space, communications for space vehicles and related problems.

The legal expert group shall assist the Governing Board in the elaboration of legal norms for the conduct of space activity in such matters as liability arising from possible damages and other major legal problems. It will regulate activities on its own only in those cases where the Governing Board has directed it to do so.

All three expert groups may request and receive the expert advice of the other three groups in the conduct of their work. The Governing and Executive Boards and the expert groups shall be assisted by a secretariat of international civil servants. The secretariat shall also administer a technical assistance and education and training programme on space related activities. For instance it could administer joint support of ground stations for satellite telecommunication systems in the developing countries similar to the joint support of air navigation services administered

by ICAO under the Chicago Convention.[134] Thus the I.S.A. shall through these organs and functions achieve its objectives and thereby develop a legal order in space.

It is absolutely essential that the I.S.A. be provided with adequate means for inspection purpose. This would mean the inclusion of ground satellite destroyers as well as manned space patrols for close inspection. Technicians will readily admit that no one can say with certainty that any given satellite is a bomb carrier. Accordingly, there is no short cut to a complete and close inspection system operating from the initial launching point, where the payload of the satellite would be verified to be in accord with its declared mission(s), and where the satellite would be identified and given an international registration number and, subsequently, kept under constant international surveillance by tracking stations maintained by the I.S.A. Periodic inspections of the satellite(s) in orbit should be conducted by the I.S.A. using telemetry equipment as well as first-hand observations in space. Finally, I.S.A. should be empowered to inspect, neutralize, disarm and destroy any satellite it considers hostile.

In order to implement this inspection programme, the I.S.A. would have to be authorized to require all nations to register all satellite launchings for which I.S.A. would devise an appropriate international numbering and identification system as a master control for all launchings. Further, I.S.A. should inspect each satellite prior to launching to insure that the instrumentation,

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[134] Under Articles 69 and 70 of the Chicago Convention op.cit., supra Ch.II, note 65 ICAO administers joint support air navigational facilities supported by more than one state financing in order to maintain certain necessary services in areas such as over high seas. For possible programmes on training and education in space activity vide: OSAG/Inf. May 1965.

equipment and all other configurations of the satellite are compatible with its publicly declared purposes. To assist it as a "watcher of the skies", I.S.A. should have access to a globally dispersed tracking system to confirm periodically the total number and position of the satellite. These measures would considerably enhance the capacity of I.S.A. to exert effective control over outerspace by rendering suspect and, therefore, subject to confirmation any unannounced changed in satellite population as well as any unannounced changes in orbit.

The I.S.A. should have the authority to determine that all space satellites whether reconnaissance, surveillance, navigation, meteorological or communication, are being used for peaceful pursuits only. In order to provide the capability to execute this authority, the I.S.A. should have direct access to a number of functional unmanned satellite. To enhance further its inspection capabilities, the I.S.A. should also be entrusted with its own international manned space patrols, satellite interceptors and early warning satellites. All of these satellites should be strategically positioned in space by the I.S.A. and in such numbers and combinations as to maximize its control of outer space. Only upon the existence of comprehensive international inspection system could a nation feel that no other nation would be permitted to gain undue influence in the environs of outer space.

The useful feature of the inspection system described above is that each of the stepscan be viewed as desirable and feasible in itself or as a building block to the succeeding stages. As a first step before the I.S.A. begins its regulatory activities, it might be desirable to clear outer space of all unwanted satellite and rocket components usually designated as "space

junk." (Over 600 assorted bits and pieces of rockets and rocket components are believed to be orbiting in space as unwanted debris)[135]

The next step, which would appear to be the most feasible from the political and technical standpoint, would be the pre-launching inspection stage. Here registration, licensing, inspection, numbering and certification of satellites could take place. In the following stage, an international ground controls, and ground-to-satellite destroyer systems. The third stage, which is politically and technically more challenging, would comprise satellites positioned in outer space and would include unmanned satellite (observational, reconnaissance, surveillance, command and control, and nuclear detection devices) and man-in-space security patrols.

There are additional possible woes of such an inspection system, whether it is executed in stages or at one given time. One notable function assigned to an inspection system in space is to aid in monitoring any disarmament agreements reached on earth. Internationally accepted identification and numbering systems could be used to advance scientific as well as inspection objective. For example, scientists tracking satellites for geodetic and other purposes cannot effectively compare results unless there is a common registration and certification system. Furthermore such a system

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[135] Vide: "Space Junk Rings Forth" The New York Times - 4 April 1965. More than 1,000 man-made objects - satellites, spacecraft, capsules, and assorted bits and pieces thereof - have been placed in orbit since the space age dawned 4 October 1957. Goddard's records identify 469 hunks of junk of United States origin and 182 of the Soviet variety, as having orbited earth one time or another. Of these 372 US pieces and 16 Soviet items are still in orbit. The compilation does not take into account some 400 million hair-thin diploes or wires called project West Ford space needles launched by the United States in May 1962 and presumably orbiting in a continuous band, some five miles wide and twentyfive miles thick circulating the earth which the scientists found to be harmless. US and USSR are now destroying their own satellites in orbit to keep them from falling into each other's hands. In destroying their spacecraft each nation used radio signals to set off detonations.

could monitor and provide space rescue, space stations and space navigation assistance. These additional uses, however could either be viewed as bonuses from andI.S.A. inspection and control system for space or they could be exercised separately from space control system to determine their political acceptance and technical feasibility.

Among the greatest technical problems presented in such a programme would be that of ability to operate a technically perfect surveillance programme and the ability to destroy the potentially dangerous satellites.

In regard to the first we would like to quote Martin Weldman writing about surveillance satellites:

> Although there are abundant technical problems, the solution to most appears within grasp. The problem of terrain surveillance from high altitudes, for example, primarily involves high - resolution offices. Yet, when presented with conditions adverse to photographic techniques, alternative methods can be employed. X-rays, vidicon scanning, infrared, and even acoustics are being studied to implement and supplement official instrumentation. Before long, the observation - impeding factor of cloud functions, localized western conditions, atmospheric haze and even darkness to say nothing of man-made camouflage attempts - will have virtually no effect on satellite surveillance. . . . Is the programme beyond us technically? The answer is: "Decidedly not."

The problems of technical nature cannot be considered as incapable of solution, particularly when an I.S.A. sponsored programme might command the joint efforts of the world's foremost engineering and scientific personnel.

There need be nothing nationally restrictive about such a programme. After all, extension of the I.S.A. activities to demilitarize space activity does not jeopardize the member States own military prerogatives.

Just as every nation now retains its right to defend, so should every nation be permitted to observe and take action in self-defense where necessary. A question of security reasons is whether the I.S.A. could implement such a programme without exposing the closely guarded security details of States.

First, the question is whether there are guarded secrets and second, whether States lose anything by losing such secrets.

Surveillance material is not the exclusive possessions of one State only. Previous advances in these fields have always been matched, sooner or later, by comparable advances on the part of other States. Recent experience has shown us that technological advances on the part of one nation are invariably duplicated or improved upon by another similar advanced nation. Therefore, we must expect detection system by other States than those concerned about its security details. Yet, this prospect certainly holds no fears for a nation devoid of aggressive intent. A peaceful nation should not have any objection to bein recognized - or observed - as much. Furthermore, both space powers are already aware of their missile sites and there seem nothing so worth hiding than the location of missile sites. A world body charged with the safeguarding of peace of every nation by detecting non-peaceful activity that tend to create chaos and disorder and taking action to counter such attempt should eliminate any comparable risk that might ensue by exposing a nations security details. Thus returning to the issue of intelligence and observation activities, that could be carried on by international organization, Schacter says:

> I realize that this is an objective that may be impossible to realize at the present stage, but it indicates a possible way of transcending an impasse in the framework of a wider context of international order. (One may mote that a state now being "observed" would probably gain if the observation were under international auspices and if the information obtained were revealed to that state)."[136]

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[136] Schacter op.cit., supra note 35 at 100.

Having discussed the problems of enforcement, and the technical and political implications of an I.S.A. sponsored programme, a further question that arises is that of funding. This is more so, as we noted the difficulties of international financing relating to the U.N. An across-the-board assessment of all member nations seems likely to encounter maximum resistance. One obvious alternative implementation involves a pro rata tax among the member nations, or an arrangement to "retro tax" nations in ratio to the value of contracts that companies within their borders may have been awarded in the development of components and systems for the operational stock of the I.S.A. Yet another plan might require predominant underwriting by the developed nations, specially the space powers, under the theory that they have an obligation to the international community to explore outer space for the benefit of all mankind. Obviously, the matter of funding cannot be taken lightly; yet, if other obstacles can be eliminated, financing assuredly cannot be permitted to remain too great an impediment in view of the overwhelming benefits to be derived by an international programme sponsored by the I.S.A.

Having outlined a framework for an international space agency, we do not advocate either its originality[137] or the immediate feasibility but

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[137] We have based our framework of the I.S.A. in the above discussion on the thinking of the following writers: John Morse, Multilateral, U.N. or Bilateral Implementation; Martin H. Waldman, The Practicability of the U.N. Surveillance; Leon Sloss, Unilateral Space Observation and the Atlantic Alliance, Hoover Institution Symposium on Open Space and Peace 1964; Leonard B. Schwartz, Control of Outer Space; Jessup and Taubenfeld, op.cit., supra note 132; Donald Cox, The Need for a U.N. Space Law; Arnold W. Knuth, Legal Problems of Outer Space in relation to the U.N.; Symposium op.cit., Intro.note 19.

we do strongly advocate the imperativeness of such an agency. We do accept that this is a far-reaching plan that is less enticing to a more modest proposal,[138] but nevertheless, it is our contention that an agency of this nature is absolutely necessary for the proper development of a legal order in space.[139]

Although we do believe that the immediate establishment of the I.S.A. as outlined above is the most desirable way to develop a legal order in space, recognizing the political reality we are prepared to compromise for a gradualistic approach. In this approach we wish to record the absolutely indispensable role that the newly developing States have to play to establish the I.S.A.

Rather than assume that the two space powers would refuse to join the I.S.A., the smaller States could make a thoughtful and concerted attempt to invite the United States and the Soviet Union to collaborate jointly in the initial formulation of the I.S.A. This direct appeal to all nations draws its greatest strength from the fact that outer space is common to the entire community of mankind. It is readily acknowledged that the comprehension of spatial phenomena can be advanced measurably by encouraging a larger number of nations to join in the exploration of space. On the other hand, no one nation has the authority or even the ability to dictate how outer space should be used and to make of it an arena for the advancement of purely national ambitions that would create chaos and disorder in space.

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[138] For more modest and therefore appealing suggestions of an organization for space vide: Jessup and Taubenfeld op.cit., supra note 132.

[139] For a proposal of an agency in the context of a revised U.N. Charter, vide: Grenville Clark and Louis Sohn, World Peace through World Law, IInd ed: 1962, pp. 296-302.

By adroit diplomatic soundings, the views of the two space powers and other members of the world community could be obtained and synthesized either through the foreign ministries of each country or under the United Nations auspices into the form of an aide-memoire suggesting the alternative shapes that an I.S.A. could take. Used as a working paper, this memoire could then be discussed and dissected in detail at a special conference of the international community, if possible under U.N. sponsorship, to arrive at an understanding of the objectives, organization, membership, budget, voting rights and procedures for adjudication of disputes. Instructive insight could be gained from the manner in which the IAEA was brought into being, though greater care should be exercised to profit from the latter's shortcomings, both at its inception and later.

Should diplomatic soundings reveal that the inclusion of every nation in the I.S.A. from the very outset is overly ambitious, recourse might be had then to a gradualist approach which would have several subsidiary phases. The gradualist plan is premised on the assumption that some inspection among some nations is not only preferable to none at all but is a worthy enterprise in itself and, furthermore, increases prospects for adoption on a broader scale. Gradualism proposes a reciprocity of moves based on a positive appeal to ensure the development of a legal order in space as contrasted with the destructive and negative appeal prompted by those whose only solution to the problem lies in the escalation of all sorts of weaponry and thereby create chaos and disorder in outer space.

A gradualist approach may be taken up by one group of States, either the Eastern or the Western bloc, whichever is more amenable to diplomatic soundings made in regard to the establishment of the I.S.A.

If the gradualist approach is taken up by the Western bloc states in which case a modest beginning may be made by the United States and Canada drawing up an agreement for joint execution of the regulatory and control functions previously described for the proposed I.S.A. This bilateral arrangement could be undertaken as an experiment to test the effectiveness of the proposed agency and to iron out any organizational and technical wrinkles. US-Canadian collaboration could lead to wider partnership by inviting the Latin American nations to join and to contribute their nations, equipment and facilities to the enlarged I.S.A.

After a given period, a pause for re-examination of the functions, staffing, logistics, procedures and detailed operation of the I.S.A. should take place, resulting in such changes as may be deemed necessary. Subsequently, the UK and the Common Market countries and, later all of the NATO nations should be invited to join the ranks of the I.S.A. and submit their satellite launchings to its control as well as funds, equipment and personnel. Should France prove to be unwilling to associate itself, as it is most likely, she might be left outside for a time and progress made with those willing to participate.

Following another period of operation, testing and examination, the multitude of natinns comprising the politically neutral world could be invited to participate, which would significantly enhance the universality of I.S.A. and provide thereby an ever more credible instrument for ensuring universal security. Each new entrant should be fully convinced of the necessity of contributing money, equipment, facilities and personnel to maintain the inspection posts on earth and in space, as well as international launching bases, according to the individual capacity but with constant stress on the importance of all participants performing an active and responsible role in I.S.A. After these moves, which could be undertaken in separate phases

indicated or in those combinations possible within the dynamics of politics and operational requirements, the members of the Soviet bloc could then be asked to join; concurrently, or subsequent to this, People's Republic of China could be invited.

A similar gradualist approach could be taken by the Eastern bloc if they are more amenable to the diplomatic soundings made in regard to the establishment of the I.S.A. While we do recognize that realities of international politics might demand such a gradualist approach it is our submission that the time is ripe for a bold move to create legal order in space by the world community because the technology for the next phase of weapons, as exemplified by manned space stations and satellite destroyers, is not yet fully developed. The crucial decisions concerning the future of these weapons have yet to be made, permitting a redirection of their functions on behalf of the proposed I.S.A. and eventual space control, and thereby the development of a legal order in space.

On the universalist level of atomic energy we should take note of the proposal first put forward by the United States in 1946, known as the "Baruch Plan."[140] According to this proposal, an international authority would be set up which would own all fissile material in trust for the world, and own, operate, and manage all facilities in handling dangerous amounts of such material. When a control system was in full operation, the manufacture and use of atomic weapons would be banned and existing stocks disposed of. This plan, known as the Atoms for Peace Plan, was, however, not accepted. But ten years later, following another United States proposal made originally in

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[140] U.N. Atomic Energy Commission, Off.Rec., 1st year, 1st meeting, No.1, p.4 vide also, Atoms for Peace, S. Doc. No.55, 84th Cong., 1st sess.(1954).

8 December 1953, the treaty of 26 October 1956, succeeded in setting up the IAEA.[141] It is contended that a failure to accept any proposal to develop a legal order in outer space by the establishment of the I.S.A. would merely be repeating the error of 1946 when a splendid opportunity of ensuring that nuclear energy would be used only for peaceful purposes was missed.[142]

One of the first points historians of the 21st century will make about the latter half of the 20th century is that it marked the beginning of a break up of the bipolar world and the emergence of a new, multipolar balance of power. They will note that a major catalyst was the diffusion of nuclear technology, along with the post war economic recovery of Europe and Japan and the emergence of a new major power in China. Although this trend is just beginning, as new centers of power emerge there will be a growing premium on co-operation rather than coercion in international relations. This will be necessary in order to solidify alliances and create new ones and because there will be a greater number of States capable of pursuing an independent course in international affairs. One need only name France and China, to illustrate this trend. It is the fact that such independent-

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[141] Vide: E.B. Stason, Atoms and the Law, 1959.

[142] "The systems of inspection administered by international agencies in the field of nuclear energy, as found in the statutes of IAEA, ENEA and the Euratom, if allowed to operate, will provide valuable lessons not only for similar schemes of international co-operation in the peaceful uses of outer space but also for any effective plan of general disarmament without which there is no real hope in the complete demilitarisation of either nuclear energy or outer space." Bin Cheng, International Co-operation: From Atoms to Space, BYIL (1962) 247.

minded countries have yet to achieve full realization of their military potential and ambitions that a bold move in creating a legal order in space is necessary and possible here and now.

There is one general statement that we must bear in mind and that is that increasing human knowledge, increasing human power over the elements and over space, is bringing about an interrelation between all people so that a world order, a world government, is becoming in our lives unavoidable reality. In the field of outer space we saw in our discussions in earlier chapters that the two space powers have made comparatively significant progress in declaratory peace. Complementary programmes and projects are necessary to maintain and to mobilize this momentum. Establishment of the I.S.A. presents such a catalyst.

It is therefore felt that by clarifying and proposing legal arrangements within the scope set out in this study, lawyers can contribute, in common with governmental and international officials interested in international organization, to foster a climate in which durable international machinery and comprehensive codes for space activity that appears necessary could be launched so that eventually through a system of controls a legal order in space could be developed.

In concluding this study we would like to quote Richard Gardner:

> We are developing institutions, brick by brick, to construct a regime of law and order in outer space. No Congress of Vienna can promulgate a grand Code of Space. In a divided world such as ours, the best means to develop the values of law and order are through co-operative arrangements on specific functional problems."[143]

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[143] Address by Richard N.Gardner, Deputy Asst.Secty. of State for International Organization Affairs on "Outer Space Co-operation and the U.N.", before the section on International and Comparative Law of the American Bar Association, on April 4, 1962 in San Francisco. Vide: Dep't of State Press Release No.484, Aug. 2, 1962, P.9.

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**Include reports of Committee on Peaceful Uses of Outer Space.

Committee on the Peaceful Uses of Outer Space

Verbatim Records of meetings

A/AC.105/PV.1	27 November 1961
A/AC.105/PV.2-9	19-29 March 1962 (First session)
A/AC.105/PV.10-16	10-14 September 1962 (Second session)
A/AC.105/PV.17-19	25 Feb - 18 March 1963 (Third session)
A/AC.105/PV.20-23	9-13 September 1963 (Fourth session)
A/AC.105/PV.24	22 November 1963 (Resumed fourth session)
A/AC.105/PV.25-35	October-November 1964 (Fifth session)

Scientific and Technical Sub-Committee

Summary records of meetings

A/AC.105/C.1/SR 1-11	28 May - 13 June 1962 (First session)
A/AC.105/C.1/SR 12-20	14-29 May 1963 (Second session)
A/AC.105/C.1/SR 21-26	22 May - 5 June (Third session)
Report of First session	A/AC.105/5
Report of Second session	A/AC.105/14
Report of Third session	A/AC.105/20 and Add.1

Legal Sub-Committee

Summary records of meetings

A/AC.105/C.2/SR.1-15	28 May - 20 June 1962 (First session)
A/AC.105/C.2/SR.16-28	16 April - 3 May 1963 (Second session)
A/AC.105/C.2/SR.29-37	9-26 March 1964 (Third session, first part)
A/AC.105/C.2/SR.38-39,40	
Report of First session	A/AC.105/6
Report of Second session	A/AC.105/12
Report of First part of Third session	A/AC.105/19
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III. A/AC.105/2		Letter of 20 March 1962 from Mr. Krushchev, Chairman of Council of Ministers of USSR, to President Kennedy.
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ORGANIZATIONAL PATTERNS OF INTERNATIONAL OUTER SPACE ACTIVITY: 1965*

UNITED NATIONS AND RELATED AGENCIES

GENERAL ASSEMBLY
Committee on the Peaceful Uses of Outer Space.
Legal Subcommittee
Scientific and Technical Subcommittee.
Disarmament Commission[1].

SECRETARY-GENERAL

Secretariat
Outer Space Section

ECONOMIC AND SOCIAL COUNCIL

SPECIALIZED AGENCIES
International Telecommunication Union.
World Meteorological Organization.
Unesco.
International Atomic Energy Agency[2].
International Civil Aviation Organization.

NATIONS AND GROUPS OF NATIONS

REGIONAL GROUPS
European Space Research Organization.
European Space Technology Center.
European Space Data Center.
European Space Research Institute.
Sounding Rocket Range, Sweden.
European Launcher Development Organization.
European Conference on Satellite Communication.
Scandinavian Committee for Satellite Communication.
Advisory Group for Aeronautical Research and Development.
Provisional Inter-American Committee for Space Research.

TREATIES
Nuclear Test-ban Treaty.
Allocation of Frequency Bands for Space Radio-communication Purposes.

U.S. NASA
International programs with 66 countries.

INTERNATIONAL SCIENTIFIC COMMUNITY

INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS (ICSU)

COMMITTEE ON SPACE RESEARCH
Working groups on: Tracking and telemetry (world list of satellite tracking stations); International Year of the Quiet Sun; data and publications; international reference atmosphere; space biology; physics and chemistry of near space.
International space science symposia.
Consultative Group of Potentially Harmful Effects of Space Experiments.

PROFESSIONAL ASSOCIATIONS[3]
International Astronautical Federation.
International Institute of Space Law.
International Academy of Astronautics.
International Aeronautical Federation.

INDUSTRIAL ORGANIZATIONS

INTERNATIONAL
International Satellite Communication System.
Eurospace.

NATIONAL
U.S. Communications Satellite Corporation.
British Space Development Company.
Societe pour l'Etude et les Realisation d'Engins Ballistiques.
Aerospace firms.

CHANNELS OF RELATIONSHIPS

--------- Cooperation, formal and informal
_____ Direct organization of relationship

(Interrelated by means of exchange of information, representation of key personnel on governmental and nongovernmental organizations, bilateral and multilateral agreements and arrangements, joint space programmes and attendance by space experts at international conferences.)

[1] The Commission reports to both the General Assembly and the Security Council.

[2] Not officially a specialized agency but similar for practical purposes.

[3] In addition to scientific groups organized by ICSU.

* Adopted from Galloway Eilene, International Regulation of Outerspace Activities. Bulletin of Atomic Scientists, April 1965, P. 38.