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WORKING PAPER
SURVEY OF INTERNATIONAL LAW RELEVANT TO
ARMS CONTROL AND OUTER SPACE



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Preface

For a number of years prior to 1985, the Conference on Disarmament (CD) and its predecessor organizations have recognized the importance of outer space. It was, however, only on 29 March 1985 that the CD succeeded in reaching agreement on a mandate for an ad hoc Committee on the Prevention of an Arms Race in Outer Space. This development was welcomed by Canada and other member nations as a first step toward an organized examination of the subject. This process is in accordance with the United Nations General Assembly resolution which was adopted without dissent during its 39th session on December 12, 1984 and which called upon the CD to consider the question of preventing an arms race in outer space as a matter of priority. The mandate now adopted by the CD is a realistic one. It is neither narrow nor restricted but permits the CD to begin some action and undertake concrete work almost immediately.

The ad hoc Committee on the Prevention of an Arms Race in Outer Space established under the mandate, is "to examine, as a first step at this stage, through substantive and general consideration, issues relevant to the prevention of an arms race in outer space". In the process, it should take into account all existing agreements, existing proposals and future initiatives, then report on the progress of its work to the Conference on Disarmament in August, 1985.

From the Canadian perspective, the creation of the ad hoc Committee on outer space is in line with Canada's expressed policy and constitutes a significant step forward in coming to grips with the subject. The mandate of the ad hoc Committee both complements and accurately reflects the realities concerning the bilateral negotiations already underway between the United States and the Soviet Union in Geneva. It neither undermines, prejudices nor in any way interferes with those negotiations and this fact is considered by Canada to be absolutely central to the successful process of both sets of deliberations.

On 26 August 1982, Canada submitted its first substantive working paper to the CD on the outer space issue. That document entitled "Arms Control and Outer Space" (CD/320) undertook to discuss generally the subject of arms control and outer space in terms of stabilizing and destabilizing characteristics. With the establishment

of an ad hoc Committee to focus in more detail, Canada is prepared to reinforce its efforts and to participate actively and effectively in developing an understanding and consensus for further work relating to the subject of preventing an arms race in outer space.

This working paper is meant to facilitate consideration of this area by the CD by providing a basis for examining its legal context. In general, as a review of international law relating to arms control and outer space, it presents a broad interpretation of a variety of views concerning the significance and application of some of the existing treaties. It does not purport to provide a Canadian government position on any issue. Instead, in terms of the CD mandate relating to the prevention of an arms race in outer space, its objective is to provide a rational basis for discussion from which the ad hoc Committee might wish to develop its approach to the subject. It will be apparent throughout this paper that different interpretations may emerge due to the lack of consensus regarding terminology and definitions relating to outer space.

I. Introduction

Generally speaking there are four sources of international law as outlined by Article 38(1) of the Statute of the International Court of Justice.¹ These are:

- a) international conventions, whether general or particular, establishing rules expressly recognized by the contracting states;
- b) international custom, as evidence of a general practice accepted as law;
- c) the general principles of law recognized by civilized nations;
- d) ... judicial decisions and the teachings of the most highly qualified publicists of various nations, as subsidiary means for the determination of rules of law.

This paper will limit its consideration to two categories. First, international conventions and treaties relevant to outer space will be reviewed. Treaties express the intention of the parties to create binding obligations under international law. They may also

reflect general principles of law and the obligations undertaken as part of a treaty may obtain broader acceptance so as to become a part of customary law.

Second, this paper will focus on UNGA resolutions some of which may reflect existing customary law or at least be indicative of the directions in which that law is evolving.

Comments by legal analysts have been included in the text where deemed appropriate.

II International Agreements

Any consideration of international treaty law should be undertaken on the basis of the principles enumerated in the Vienna Convention on the Law of Treaties.²

Article 31 of this Convention provides the following general rule of interpretation:

1. A treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose.
2. The context for the purpose of the interpretation of a treaty shall comprise, in addition to the text, including its preamble and annexes:
 - (a) any agreement relating to the treaty which was made between all the parties in connection with the conclusion of the treaty;
 - (b) any instrument which was made by one or more parties in connection with the conclusion of the treaty and accepted by the other parties as an instrument related to the treaty.
3. There shall be taken into account, together with the contexts:
 - (a) any subsequent agreement between the parties regarding the interpretation of the treaty or the application of its provisions;
 - (b) any subsequent practice in the application of the treaty which establishes the agreement of the parties regarding its

interpretation;

(c) any relevant rules of international law applicable in the relations between the parties.

4. A special meaning shall be given to a term if it is established that the parties so intended.

The discussion of treaties which follows is arranged chronologically by the date of the agreement in question. It should be noted that several treaties are covered which might seem at first glance to be irrelevant to the subject of arms control and outer space. These agreements are included simply because some of their provisions (especially those regarding verification) or the circumstances surrounding their negotiation may shed light on developments respecting arms control and outer space.

i) The Charter of the United Nations (1945)³

The UN Charter has considerable relevance to the subject of arms control and outer space. It is explicitly mentioned in several treaties which deal directly with outer space including the 1967 Outer Space Treaty where parties agree to carry on their activities relating to the exploration and use of outer space "in accordance with international law, including the Charter of the United Nations ..." (Article III; see also the Preamble). Similarly, the Moon Treaty mentions the Charter (Articles II and IV) as does the Environmental Modification Convention (Preamble and Article V).

Particularly relevant in this context is one of the stated purposes of the UN:

1. To maintain international peace and security, and to that end: to take effective collective measures for the prevention and removal of threats to the peace, and for the suppression of acts of aggression or other breaches of the peace, and to bring about by peaceful means, and in conformity with the principles of justice and international law, adjustment or settlement of international disputes or situations which might lead to a breach of the peace; (Article 1)

Also important is the Preamble which states that the peoples of the United Nations will ensure that "by

acceptance of principles and the institution of methods, that armed force shall not be used, save in the common interest".

States are also inter alia obligated to settle disputes peacefully and refrain from the threat or use of force under Article 2:

The Organization and its members, in pursuit of the Purposes stated in Article 1, shall act in accordance with the following Principles.

1. The Organization is based on the principle of the sovereign equality of all its Members.
2. All Members, in order to ensure to all of them the rights and benefits resulting from membership, shall fulfil in good faith the obligations assumed by them in accordance with the present Charter.
3. All Members shall settle their international disputes by peaceful means in such a manner that international peace and security, and justice, are not endangered.
4. All members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the purposes of the United Nations....

Such obligations would seem to apply also to the activities of states in outer space, especially in view of the provisions of the Outer Space Treaty and other treaties mentioned above.

An important proviso to these obligations under the Charter is contained in Article 51 which states:

Nothing in the present Charter shall impair the inherent right of individual or collective self-defence if an armed attack occurs against a Member of the United Nations, until the Security Council has taken measures necessary to maintain international peace and security. Measures taken by members in the exercise of this right of self-defence shall be immediately reported to the Security Council and shall not in any way affect

the authority and responsibility of the Security Council under the present Charter to take at any time such action as it deems necessary in order to maintain or restore international peace and security.

ii) Antarctic Treaty (1959)⁴

During the International Geophysical Year (IGY) of 1957⁵ the international scientific community conducted a number of studies of man's environment - the earth, the oceans, the atmosphere and outer space. The guidelines for the IGY contained several ideas which were later incorporated in the Antarctic Treaty of 1959, and some of these basic provisions served as precedents for later treaties particularly the 1967 Outer Space Treaty, the 1967 Treaty of Tlatelolco, the 1971 Seabed Treaty, and the 1979 Moon Treaty.

Two of the main purposes of the Antarctic Treaty were to ensure continuation of scientific cooperation and to avoid the militarization of the continent. In regard to the latter, the suitability of Antarctica for nuclear tests and the testing of other military equipment provided a strong incentive to prohibit the military use of Antarctica.

The preamble to the Antarctic Treaty recognized "that it is in the interest of all mankind that Antarctica shall continue forever to be used exclusively for peaceful purposes and shall not become the scene or object of international discord" indicating that the parties intended to create a legal regime for this area which would ensure peace on the continent and facilitate international cooperation.

In its operative part, the Treaty seeks to preserve a non-militarized status of the Antarctic by prescribing in Article I(1) that it shall be used "for peaceful purposes only" and prohibits "inter alia any measures of a military nature, such as the establishment of military bases and fortifications, the carrying out of military manoeuvres, as well as the testing of any type of weapons".⁶ It is interesting to note that certain terms, such as "peaceful purposes", are not defined in the treaty.⁷

The Treaty, according to paragraph 2 of Article I, "shall not prevent the use of military personnel or equipment for scientific research or for any other peaceful purposes". This provision is said to have been

included in recognition of the importance of the support rendered to scientific activities by naval vessels and personnel.⁸

The extent of the freedom of scientific investigation, as established in Article II of the Treaty, is set out in Article III. Freedom of scientific investigation is provided for to the extent to which it was actually exercised during the IGY.⁹ Furthermore, one of its important elements is that of international cooperation.¹⁰ The parties to the Treaty agree that to the greatest extent feasible and practicable, exchanges shall take place concerning plans for scientific programmes, or scientific personnel between expeditions and stations, and of scientific observations and results. Provision is also made for close cooperation with the specialized agencies of the United Nations and other international organizations having scientific or technical interest in Antarctica (Article II(2)).

Article V prohibits "any nuclear explosions in Antarctica and the disposal there of radioactive waste material".¹¹

In order to promote the objectives and to ensure the observance of the Treaty's provisions, the principle of open inspection was established in Article VII of the Treaty.¹² Under paragraph 3 of Article VII, all areas of Antarctica, including all stations, installations and equipment shall be open at all times to inspection by any observers designated by state parties. Each of these observers shall have complete freedom of access at any time to any or all areas of Antarctica. Aerial observation is also permitted. In order to facilitate observation, information is exchanged between the parties as to expeditions to and within Antarctica, on all stations therein and any military personnel or equipment intended to be introduced into Antarctica (Article IX(1)). No sanctions are provided for non-compliance with the Treaty's provisions. Disputes about interpretation of the Treaty are to be dealt with by consultations. If a dispute remains unresolved, it may be taken to the International Court of Justice (Article XI).

Article IX of the Treaty contains important elements for the joint administration of Antarctica. In particular, representatives of contracting parties so entitled shall meet at suitable intervals for the purpose of exchanging information and for consultation on matters of common interest pertaining to Antarctica; and for

formulating and considering, as well as recommending to their governments, measures to further the principles and objectives of the Treaty. Article XII provides for a review conference thirty years after the Treaty's coming into force.

Prior to the beginning of international cooperation for scientific research, a number of states had already made claims of sovereignty over part of Antarctica. Article IV of the Treaty basically "freezes" the claims to sovereignty and jurisdiction of interested states. Under this provision, the Treaty does not have the effect of a renunciation by any contracting party of previously asserted rights or claims to territorial sovereignty. Furthermore, no new claims or enlargement of any existing claims shall be asserted while the Treaty is in force (Article IV(2)).

Concepts embodied in the Antarctic Treaty, such as the use of this area for peaceful purposes only, the freedom of scientific investigation, the promotion of international cooperation and the exchange of information and scientific personnel constitute examples of provisions which may be of relevance to the subject of arms control and outer space. The Antarctic Treaty is an example of the contribution that international law can make in ensuring a safer world.¹³

iii) The Partial Test Ban Treaty (1963)

Concern for radioactive fallout caused by nuclear testing was one of the strongest motivating forces behind the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water.¹⁴

It developed between 1958 and 1962, with negotiations eventually being conducted in the Eighteen Nation Disarmament Committee (ENDC). Lack of progress in this forum led to private negotiations which resulted in the Treaty. The ENDC and its successors have considered but have not concluded an agreement to ban all nuclear tests.

The direct effect of paragraphs 1 and 2 of Article I is such that it is illegal to carry out a nuclear explosion in outer space:

1. Each of the Parties to this Treaty undertakes to prohibit, to prevent, and not to carry out any nuclear weapon test explosion, or any other

nuclear explosion, at any place under its jurisdiction or control;

(a) in the atmosphere; beyond its limits, including outer space;...

2. Each of the Parties to this Treaty undertakes furthermore to refrain from causing, encouraging, or in any way participating in, the carrying out of any nuclear weapon test explosion, or any other nuclear explosion anywhere which would take place in any of the environments described, or have the effect referred to, in paragraph 1 of this Article.

iv) Outer Space Treaty (1967)

The Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space including the Moon and Other Celestial Bodies,¹⁵ commonly known as the Outer Space Treaty, is regarded as the cornerstone international space law convention. As is evident from its full title, the Treaty establishes a basic legal framework for general space exploration and utilization. Moreover, it marks an important step in controlling certain, though not all, arms in outer space.

Being the first international convention directly relating to an environment regulated by, at best, nebulous customary international law principles, its significance cannot be overestimated. Its adoption brought about substantive changes in the legal regime of outer space. What before had merely been a set of non-binding guidelines now became legal obligations.

Since the Treaty holds a central position within the legal framework governing all activities carried out in space, it is necessary to examine its provisions closely. Three general themes emerge from such an examination: freedom of exploration and use, peaceful use and cooperation and international responsibility of states for their activities in outer space.

In the operative part of the Treaty, Article I reiterates the primary interests of the international community:

The exploration and use of outer space, including the moon and other celestial bodies, shall be carried out for the benefit and in the interests

of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind.

Outer Space, including the moon and other celestial bodies, shall be free for exploration and use by all States without discrimination of any kind, on a basis of equality and in accordance with international law, and there shall be free access to all areas of celestial bodies.

There shall be freedom of scientific investigation in outer space, including the moon and other celestial bodies, and States shall facilitate and encourage international cooperation in such investigation.

This Article establishes a basic principle of space law: space shall be free for exploration and use by all states on the basis of equality.

According to Article II, outer space is not subject to national appropriation by claims of sovereignty, by means of use or occupation, or by any other means. This Article reflects the notion of res communis already granted substantial recognition by customary international law. Article III obliges states to undertake space activities "in accordance with international law, including the Charter of the United Nations, in the interest of maintaining international peace and security and promoting international cooperation and understanding".

The primacy of the common interest of all nations¹⁶ is stressed again in Article IX of the Outer Space Treaty which states that parties shall be guided by the principle of cooperation and mutual assistance in the exploration and use of outer space, and shall conduct all their activities with due regard to the corresponding interests of all other parties to the Treaty. It is worthy of note that in the first three articles of the operative part of the Outer Space Treaty, in which the guiding principles governing space activities have been laid down, no mention of the use of the whole of outer space exclusively for peaceful purposes has been made.¹⁷ It is only with respect to the moon and other celestial bodies that this concept has been accepted (Article IV(2)).

Article IV contains the only provision of the Outer Space Treaty addressed specifically to military activities and reads as follows:

States Parties to the Treaty undertake not to place in orbit around the Earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction, install such weapons on celestial bodies, or station such weapons in outer space in any other manner.

The moon and other celestial bodies shall be used by all States Parties to the Treaty exclusively for peaceful purposes. The establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military manoeuvres on celestial bodies shall be forbidden. The use of military personnel for scientific research or for any other peaceful purposes shall not be prohibited. The use of any equipment or facility necessary for peaceful exploration of the moon and other celestial bodies shall also not be prohibited.

The first paragraph of this article codifies the policy set forth in a bilateral pledge by the United States and the Soviet Union, later unanimously adopted as a resolution of the United Nations General Assembly.¹⁸ Within its admitted limits it contributed affirmatively to the stabilization of international relations through the imposition of some restraints on the military use of the space environment.¹⁹ It also expands the prohibition against nuclear tests in outer space contained in the Partial Test Ban Treaty, to encompass any other kind of weapons of mass destruction.

The second paragraph of Article IV is one of the most controversial provisions of the Treaty and has often been cited in support of the claim that the Treaty forbids only those military activities that are enumerated in the above-mentioned article.²⁰ An argument has been advanced that Article IV, in conjunction with other provisions of the Treaty, imposes "complete demilitarization of outer space".²¹ However, the negotiating history of the Treaty, its text and the practice of states would not seem to support this view.

To verify compliance with the provisions of the Outer Space Treaty, Article XII provides for inspection "on the basis of reciprocity" of all stations,

installations and equipment on the moon or other celestial bodies. Advance notice of inspection is required to ensure safety and to avoid interference with the operations of the facility to be visited. This provision for inspections does not, however, apply to objects in earth orbit. Observation of launches and flights of spacecraft on a voluntary basis is also allowed for by Article X. Article XI, which requires states to inform the UN Secretary General, the public and the scientific community "to the greatest extent feasible and practicable, of the nature, conduct, locations and results" of space activities, also has a limited role in the context of verification.

Concerning anti-satellite (ASAT) weapons Article IV of the Outer Space Treaty, read alone, makes certain legal conclusions clear. First, weapons systems of any kind including conventional weapon systems cannot be lawfully employed on the moon or other celestial bodies.²² Second, the precise language of Article IV is such that ASATs "would not be prevented from being placed in outer space, per se",²³ since there is no specific stipulation in Article IV that space shall be used "exclusively for peaceful purposes" and ASATs are not prima facie weapons of mass destruction. Moreover, the negotiations between the space powers on this matter³¹ suggest that they do not regard the terms of the Outer Space Treaty as prohibiting the emplacement of anti-satellite devices in outer space. This attitude is further reinforced by recent Soviet proposals to ban all weapons in space. Thus, it would appear that the term "weapon of mass destruction" does not cover the emplacement in outer space of non-nuclear ASAT weapons. The same analysis is likely to apply to laser and particle-beam weapon systems with one reservation: the incipient nature of such systems makes it difficult to conclude whether such weapon systems would be for the purpose of mass destruction. This would probably depend on the type of system and its design objectives. Fractional orbital bombardment missiles (FOBS), although clearly weapons of mass destruction, may also not be prohibited by the Outer Space Treaty because they are in "outer space" (as yet undefined in international law) for less than one full orbit around the earth. SALT II, however, does include a provision prohibiting new FOBS systems.

It is worth mentioning that the Outer Space Treaty is not, in fact, an arms control treaty but was in large measure negotiated in COPUOS. COPUOS does not have

a mandate specifically to negotiate matters concerning arms control. That is the specific responsibility of the CD. It is recognized, however, that the arms control and peaceful use aspects of the outer space issue are closely related.

v) The Treaty of Tlatelolco (1967)

The parties to the Treaty for the Prohibition of Nuclear Weapons in Latin America²⁴ agree to use nuclear materials under their jurisdiction exclusively for peaceful purposes and to prevent on their territories the testing, use, manufacture, production, acquisition, receipt, storage, installation, deployment or any form of possession of nuclear weapons. They also agree to refrain from engaging or participating in the testing, use, manufacture, production, possession or control of nuclear weapons (Article I). In essence, the Treaty establishes a nuclear weapon free zone in Latin America.

The safeguards system of the International Atomic Energy Agency applies to peaceful nuclear activities of parties as a control mechanism and for verification purposes (Article XII). In addition, the Convention establishes the Agency for the Prohibition of Nuclear Weapons in Latin America to ensure, among other things, compliance with Treaty provisions (Article VII). The Treaty is noteworthy as representing the first agreement on arms limitation to create an effective regional system of control under a permanent supervisory organ. Specifically, the Agency and the IAEA have the authority to verify that devices and facilities intended for peaceful uses of nuclear energy are not used to test or manufacture nuclear weapons and that explosions for peaceful purposes are compatible with the Treaty. Methods of verification include inspections (Article XVI). Measures are prescribed in the event of violation including referral of the matter to the OAS and UN (Article XX). The Agency is also empowered to enter into relations with any international organization or body, including any future body established to supervise disarmament or measures for the control of armaments in any part of the world (Article XIX).

The Treaty might be seen to serve as an initial model of regional cooperation for the control of arms. The verification provisions also provide a precedent for international control organizations.

vi) Rescue and Return Agreement (1968)

The Agreement on the Rescue of Astronauts, the Return of Astronauts, and the Return of Objects Launched into Outer Space²⁵ as its title suggests provides for the tendering of assistance and the rescue of astronauts in distress whether on sovereign territory or from areas outside of state jurisdiction.²⁶

vii) The Non-Proliferation Treaty (1968)²⁷

This Treaty was negotiated and drafted by the ENDC pursuant to the 1965 General Assembly Resolution 2028 (XX) requesting the ENDC to give urgent consideration to the problem of nuclear weapons proliferation.

Article I of the Non-Proliferation Treaty prohibits the transfer, from a nuclear-weapon state "to any recipient whatsoever nuclear weapons or other nuclear explosive devices or control over such weapons or explosive devices directly, or indirectly." It also requires nuclear weapon states "not in any way to assist, encourage, or induce any non-nuclear-weapon State to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices, or control over such weapons or explosive devices".

This is the active prohibition. The corollary is found in Article II which prohibits the corresponding activities on the part of the non-nuclear receiving state.

Article III provides for verification using safeguards established by the International Atomic Energy Agency. The IAEA inspectors have the authority to conduct regular on-site inspections of nuclear facilities coming under the NPT regime. The NPT, therefore, can be said to serve as a precedent for the establishment of an international body empowered to monitor compliance with a multilateral convention dealing with a specific type of weapon.

viii) The Seabed Treaty (1971)²⁸

This Treaty prohibits emplacing on the seabed and the ocean floor, and in the subsoil thereof beyond the outer limit of a coastal zone, any nuclear weapons or any other types of weapons of mass destruction as well as structures, launching installations or any other facilities especially designed for storing, testing or using such weapons (Article I).

Article III, paragraph 1 of the Treaty states that in order to ensure compliance, each state party has the right to verify, through observation, the activities of other parties on the seabed provided only that this observation does not interfere with such activities. Such observation can be conducted by the parties through the use of their own means, with the assistance of other parties or through appropriate international procedures within the framework of the United Nations and in accordance with its Charter. Should a state be dissatisfied with its inspection and reasonable doubts remain concerning the fulfillment of obligations assumed under the Treaty, the parties shall consult with a view to removing such doubts (Article III (2)). If doubts still persist, the state questioning compliance may notify the other parties to the Treaty with a view to co-operating on further procedures for verification including appropriate inspection of installations (Article III (3)). Finally, if satisfaction is still lacking, the state may refer the matter to the UN Security Council which is empowered to take any action in accordance with the Charter (Article III (4)). The Final Declaration of the Second Review Conference of the parties to the Seabed Treaty states that paragraphs (2), (3) and (5) of Article III include the right of parties to resort to various international consultative procedures, such as ad hoc consultative groups of experts.

Like the Antarctic Treaty, the Treaty of Tlatelolco and the Outer Space Treaty, the Seabed Treaty prevents the introduction of nuclear weapons to a new region of the earth's environment.

- ix) Agreement on Measures to Reduce the Risk of Outbreak

of Nuclear War (1971)²⁹, Agreement on Measures to

Improve the Direct Communications Link (1971)³⁰ and

Agreement on the Prevention of Nuclear War (1973)³¹

In the Prevention of Nuclear War Agreement each side undertakes to act in a manner so as "to prevent the development of situations capable of causing a dangerous exacerbation of their relations, as to avoid military confrontations and as to exclude the outbreak of nuclear war between them and between either of [them] and other countries" (Article I). This is further extended by Article II which requires the parties to refrain from the

threat or use of force against the other or its allies. In a crisis threatening nuclear war the parties agree to hold consultations.

The Agreement on Measures to Reduce the Risk of Outbreak of Nuclear War requires the parties, inter alia, to notify each other immediately of signs of interference with their early warning systems or related communications facilities if such occurrences threaten nuclear war (Article III). There is, in this provision, a recognition that interference with early warning systems (including satellites) could risk the outbreak of nuclear war. Since the parties have agreed in the Prevention of Nuclear War Agreement not to create situations or use force which would endanger international peace and security or cause a dangerous exacerbation of their relations, they have an implied understanding of the need to avoid interfering with early warning satellites.

The 1971 Agreement on Measures to Improve the Direct Communication Link requires the establishment of two additional communications circuits between the superpowers, using satellite communications systems (Article I). Furthermore, "each Party confirms its intention to take all possible measures to ensure the continuous and reliable operation of the communication circuits ..." (Article II). These provisions, therefore, prohibit interference with communications satellites involved in the Direct Communication Link.

(x) Convention on International Liability for Damage Caused by Space Objects (1972)³²

This Convention is primarily intended to ensure prompt and equitable compensation for victims of damage caused by space objects. It establishes a set of rules for determining the source and measure of liability for damage occurring on earth, in outer space and in airspace. Specific procedures are envisaged for third party arbitration in cases of disagreement on responsibility or payment of damages.

Different degrees of liability apply depending on the location of the damage resulting from space activities. If the damage occurs on the earth's surface or to aircraft in flight then the launching state is absolutely liable (Article II). If, however, the damage is to another space object, then liability only attaches if the damage is due to the launching state's fault (Article III).

While the Convention is not directly relevant to arms control and outer space, it does reinforce the view that states are legally responsible for their activities, presumably including military activities, in outer space. Moreover, should the military activities of a state in outer space cause damage to third parties, presumably civil liability for those damages might follow.

xi) Biological Weapons Convention (1972)³³

One of the few truly disarmament agreements, this Convention prohibits the development, production, stockpiling and acquisition of biological warfare agents and weapons including toxins. It also requires the destruction or diversion to peaceful uses of existing stocks.

Only limited provisions are incorporated with regard to handling compliance problems. The parties agree to consult and cooperate with each other to resolve disputes about implementation (Article V). This may take place through appropriate international procedures within the framework of the United Nations. Complaints regarding violations of the treaty can be lodged with the UN Security Council (Article VI) and parties agree to cooperate with any Security Council investigation. Recent difficulties in resolving allegations of the use of chemical and/or toxin agents in South-East Asia and elsewhere illustrate the consequences of the lack of adequate agreed international verification of compliance procedures in such a treaty.

xii) Anti-Ballistic Missile Treaty (1972)³⁴

This Treaty between the USA and USSR prohibits the deployment of anti-ballistic missile (ABM) defences except for limited systems to protect each national capital and one other area (Article I and III). The 1974 Protocol to the Treaty restricts each side to one site only. Moreover, while the Treaty permits the development and testing of fixed land-based ABM systems at selected test sites, the parties undertake "not to develop, test or deploy ABM systems or components which are sea-based, air-based, space-based, or mobile land-based" (Article V (1), emphasis added). It can be noted that research is not expressly prohibited by the Treaty

Verification of compliance with the ABM Treaty is to be provided by the use of "national technical means... in a manner consistent with generally recognized principles of international law" (Article XII (1)). Each party also agrees not to interfere with the national technical means of the other when used in accordance with Article XII (1). Furthermore, the use of deliberate concealment measures to impede verification by national technical means is prohibited (Article XII (2) and (3)). This provision against non-interference with national technical means has direct relevance to the law of outer space because one of the primary components of national technical means are reconnaissance satellites. In essence this provision reinforces the legitimacy of such satellite activities.

A Standing Consultative Commission is created to deal with compliance issues and other questions relating to the implementation of the Treaty (Article XIII).

xiii) SALT I (1972)³⁵ and SALT II (1979)³⁶

These agreements limit the number of strategic delivery vehicles that the superpowers may deploy. Only one provision of these agreements directly relates to outer space. Article IX (1)(C) of SALT II prohibits the development, testing or deployment of: "systems for placing into Earth orbit nuclear weapons or any other kind of weapons of mass destruction, including fractional orbital missiles". A common understanding to this provision states that it does not require the dismantling of any existing launchers. This provision, however, would seem to reaffirm and extends for these two states the applicability of the restrictions regarding nuclear weapons incorporated into Article IV of the Outer Space Treaty.

The other features of these agreements that are of most interest here, are those relating to verification. SALT I incorporates the same provision (Article V) regarding use of national technical means as that found in the ABM Treaty (Article XII). Compliance questions are referred to the same Standing Consultative Commission (Article VI).

SALT II also relies for verification on national technical means to be used in accordance with generally recognized principles of international law (Article XV (1)). As in SALT I and the ABM Treaty each party undertakes not to interfere with the other's national technical means (Article XV (2)) and not to use deliberate concealment measures to impede verification by national technical means (Article XV (3)). More precise definitions of concealment are provided in the form of Agreed Statements and Common Understandings. The use of design requirements such as "functionally related observable differences" to distinguish between weapons systems also facilitates verification. As was the case for the ABM Treaty and SALT I, these provisions relating to verification underscores the legitimacy of the use of military reconnaissance satellites which are a major element of national technical means of arms control and disarmament verification.

It is worth noting that recent events have underlined the limitations of national technical means when used alone for verification of strategic arms limits and have emphasized the need for additional effective methods of handling compliance questions.

SALT I expired in 1977 though both sides agreed to abide by its terms after that time. SALT II expires 31 December 1985. Though never ratified, both parties agreed to abide by the terms of SALT II on a reciprocal basis.

xiv) The Threshold Test Ban Treaty (1974)³⁷ and the Peaceful Nuclear Explosions Treaty (1976)³⁸

These two treaties are bilateral ones between the USA and the USSR. The Threshold Test Ban Treaty prohibits underground nuclear weapons tests exceeding 150 kt (Article I) and limits tests to designated test sites (Para. 1 of Protocol).

Verification, as under the ABM Treaty and SALT Treaties, is to be conducted by each side's national technical means used in a way consistent with international law (Article II). Each party again agrees not to interfere with the national technical means of the other. These national technical means include satellites as well as ground-based seismographic instruments.

In addition, the parties agree to consult about implementation. Noteworthy also is the exchange of data provisions in the Protocol relating to test site coordinates, geology, and test details. This Treaty was not ratified and no data exchange occurred. The parties did however state that they would abide by the 150 kt limit, on a reciprocal basis.

The Peaceful Nuclear Explosions Treaty is intended to complement the Threshold Test Ban Treaty by establishing a regime to govern underground nuclear explosions for peaceful purposes which by definition are those conducted outside test sites specified under the latter treaty. It limits any single peaceful nuclear explosion to 150 kt on a reciprocal basis. Any group of peaceful nuclear explosions is limited to 1500 kt. In the case of a group explosion, observers are to be invited on-site and they can bring their own monitoring equipment. Special detailed procedures for the shipment of this equipment are outlined. Other provisions for inspections are given regarding group explosions and individual explosions of different sizes. For explosions below 150 kt, national technical means of verification are relied upon, together with detailed data on the explosion provided by the party conducting it. The amount of information to be provided varies with the yield of the blast. A joint Consultative Commission is to be established to facilitate exchange of information and verification. Detailed procedures for the conduct of inspections are spelled out in a Protocol.

As with the Threshold Test Ban Treaty, the Peaceful Nuclear Explosions Treaty has not been ratified. The Treaty is significant because it involves on-site inspections that would take place at military-related sites on the territory of each superpower. Moreover, the two Treaties because they refer to non-interference with national technical means, again reinforce the legitimacy of military reconnaissance satellites as verification systems in the arms control and disarmament process.

xv) The Registration Convention (1975)

The Convention on Registration of Objects Launched into Outer Space³⁹ entered into force on 13 September 1976. The Treaty establishes a mandatory and uniform registration system for objects launched into outer space. It provides for a general registry which is kept by the United Nations Secretary General and which is

publicly accessible. The Convention also provides a uniform format for information furnished by launching states.

The Treaty is based on the voluntary system established by General Assembly Resolution 1721 of 1961.⁴⁰ Under the voluntary system there was, however, no delineation of what details should be provided. Consequently, the information furnished by countries was not uniform and was not reported promptly and on a regular basis.

The Registration Convention is a reflection of the general principles established by the Outer Space Treaty and elaborated through the Rescue Agreement and Liability Convention. While the other treaties do not refer to a central registry system, the Outer Space Treaty does contemplate national registries.⁴¹

Three reasons have been posited for the establishment of a central registry: effective management of traffic, enforcement of safety standards, and imputation of liability for damage.⁴² While the central registry is the most significant feature of the Treaty, it fulfills several other important objectives. Launching countries must maintain a national registry (Article II). Article IV of the Registration Convention requires mandatory reporting to the Secretary-General of the United Nations of information on a number of data, such as the date and location of the launch, changes in orbital parameters after the launch, and the recovery date of the spacecraft. States are not obliged to disclose the specific function of the satellite, but only the "general function of the space objects" (Article 1(e)). Furthermore, the Registration Convention does not require a launching state to provide appropriate identification markings for its spacecraft and its component parts.⁴³

It is worthy of note that, notwithstanding the fact that over half of the satellites launched serve military purposes,⁴⁴ not one of the launchings registered has ever been described as having a military function.

xvi) Environmental Modification Convention (1977)

The Environmental Modification Convention⁴⁵ as its title suggests aims at prohibiting the hostile use of potentially disastrous environmental modification techniques. This Convention is relevant to outer space

because of the potential of space science and technology for use in environmental modification either for peaceful or hostile uses. The dual-purpose nature of these technologies is explicitly referred to in the Preamble of the Convention which recognizes that the use of such techniques for peaceful purposes could "contribute to the preservation and improvement of the environment for the benefit of present and future generations", while their military or any other hostile application "could have effects extremely harmful to human welfare".

The key provision of the Convention is contained in Article I (1) which prohibits "military or any other hostile use of environmental modification techniques having widespread, long-lasting or severe effects as the means of destruction, damage or injury to any other State Party". Environmental modification techniques are defined as those which can be used "for changing - through the deliberate manipulations of natural processes - the dynamics, composition or structure of the Earth, including its biota, lithosphere, hydrosphere, and atmosphere, or of outer space" (Article II, emphasis added). The Convention, therefore, has direct application to outer space.

The Convention does not establish a ban on all environmental modification technologies for military or hostile purposes, but only for those which have widespread, long-lasting or severe effects. No definition of these terms may be found in the Convention itself. However, the understandings which accompany the Convention and form part of its negotiating record, define "widespread" as encompassing an area of several hundred square kilometers; "long-lasting" as lasting for a period of months or approximately a season; and "severe" as involving significant disruption or harm to human life, natural and economic resources or other assets.⁴⁶ These broad and legally non-binding provisions do not alter the largely recognized consequence that whatever is not prohibited verbis expressis by the Convention is implicitly permitted.⁴⁷ Thus, non-hostile techniques are not prohibited, regardless of their effects, nor are techniques which produce destructive effects below a certain threshold.⁴⁸

Another characteristic of the Convention derives from the dual-purpose character of environmental modification technologies. The Convention states that its provisions "shall not hinder the use of environmental modification techniques for peaceful purposes" (Article

III). As a result of their dual-purpose character, the distinction between peaceful and military applications becomes very difficult to draw. Peaceful applications might include changing rainfall patterns, dissipating fog, and the diversion of hurricanes and earthquakes to name but a few.⁴⁹ Hostile applications might include triggering of earthquakes, upsetting the ecological balance of a region and destroying crops. The purpose of using environmental modification techniques in war also includes interfering with communications. Because of the difficulty of distinguishing research and development for peaceful applications from that for hostile uses, nowhere does the Convention prohibit research and development of environmental modification technologies for war-like purposes.

Article III (2) states that parties to the Convention undertake to facilitate, and have the right to participate in, the fullest possible exchange of scientific and technological information on the use of environmental modification techniques for peaceful purposes. Article IV provides that each party to the Convention undertakes "to take any measure it considers necessary in accordance with its constitutional process to prohibit and prevent any activity in violation of the provisions of the Convention anywhere under its jurisdiction or control". Such a provision would seem to have little practical significance since no definition is given as to what constitutes an "activity in violation". Furthermore, recourse to different national laws precludes the establishment of a uniform and objective set of sanctions in case of non-compliance.

No means of verification are provided for in the Convention. However, a recent study⁵⁰ has indicated that military and civilian weather satellites could assist in verifying compliance with the provisions of the Convention, though it would be difficult to determine the cause of any unusual developing weather pattern which may have been detected.

Where a state questions compliance with provisions of the treaty, it may request consultation with another state in accordance with Article V. Consultation may also take place through suitable international procedures within the framework of the UN including the services of appropriate international organizations. Furthermore, a Consultative Committee of Experts may be convened to deal with compliance matters. It would be

composed of representatives of any state party wishing to participate. The Committee is charged with transmitting to the Depositary, a report of its findings which would then be distributed to all state parties. Finally, any party having reason to believe that another party is in breach of its treaty obligations, may lodge a complaint with the UN Security Council. The Council is empowered to initiate its own investigation and parties to the Convention are obligated to cooperate with the Security Council.

xvii) Moon Treaty (1979)

The Agreement Governing the Activities of States on the Moon and Other Celestial Bodies⁵¹ is the most recent agreement dealing directly with outer space. A Resolution was adopted by consensus in the UN General Assembly on 5 December 1979 recommending the Treaty for signature and the Treaty came into force on 11 July 1984.⁵² It should be noted that as of 31 March 1984 there are only four parties to this Treaty. The result of lengthy discussion and compromise, the Moon Treaty is a composite of general principles and specific provisions outlining permissible activity on the moon and other celestial bodies.⁵³ The Treaty is a further elaboration of certain concepts in the Outer Space Treaty. While it does not apply to the earth or earth orbits and while few states are party to the Treaty, the principles it contains regarding space conduct are of great interest.

The Moon Treaty is modeled on the Outer Space Treaty; space activities are to be carried out in accordance with international law in the interest of maintaining peace and security and promoting international cooperation and understanding. Exploration and use is to be carried out for the benefit and in the interests of all nations. All of these principles, while general, are of relevance to space law today.

There are several key articles in the Moon Treaty which serve to establish state conduct for the moon and other celestial bodies. Article IV (1) provides that exploration and use of the moon shall be the province of all mankind and shall be carried out for the benefit and in the interests of all countries regardless of their degree of economic or scientific development. In carrying out activities, states shall be guided by the principle of cooperation and mutual assistance.⁵⁴ Secondly, scientific investigation must be carried out without discrimination and on the basis of equality and in accordance with international law.

While arms control was not a major focus of discussion during the negotiations, some nations did express concern over the military implications of certain space activities. Article III of the Moon Treaty contains the only provision specifically addressed to military activities. Paragraph 1 provides that the moon and other celestial bodies shall be used "exclusively for peaceful purposes". While in this case the language is virtually identical to that found in Article IV (2) of the Outer Space Treaty, the effect is to expand the area of application of the peaceful purposes admonition.⁵⁵ Under the Outer Space Treaty only the moon and celestial bodies were specifically limited to peaceful purposes. Because of the definitional concept contained in Article I of the the Moon Treaty, orbits around and other trajectories to and around the moon and other celestial bodies must also be devoted to peaceful purposes.⁵⁶ With regard to Article III (2), some nations wanted to assure that this provision did not differ in effect from Article 2 (4) of the UN Charter and did not derogate from the right of self-defence under Article 51 of the UN Charter. Article III (2) of the Moon Treaty prohibits "any threat or use of force or any other hostile act or threat of hostile act on the moon". Since there is no definition of the term "hostile act", there is no firm understanding as to how a hostile act might differ from the use of force. In this regard, it should be noted that when France signed the Moon Treaty it reported a clarification to the United Nations as follows:

France is of the view that the provisions of Article 3, Paragraph 2 of the agreement relating to the use or threat of force cannot be construed as anything other than a reaffirmation, for the purposes of the field of endeavour covered by the agreement, of the principle of the prohibition of the threat or use of force, which states are obliged to observe in their international relations, as set forth in the UN Charter.⁵⁷

Article III (2) also prohibits the use of the moon as a base for threatening the earth or spacecraft.

Paragraph 3 of Article III prohibits orbiting of nuclear and other kinds of mass destruction weapons around the moon and any other trajectory to or around the moon. It also forbids the placement or use of such weapons on the moon. It would seem that paragraph 3 attempts to settle the question caused by the omission of the moon from the prohibition contained in Article IV (1) of the Outer Space Treaty regarding placement of nuclear weapons and other weapons of mass destruction.

Paragraph 4 forbids "the establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military manoeuvres" on the moon.

As regards verification, parties to the agreement are allowed to inspect all space vehicles, equipment, facilities stations and installations belonging to any other party. Pursuant to Article XV (1), the Agreement authorizes every contracting state to conduct such inspection "on its own behalf or with the full or partial assistance of any other state party or through appropriate international procedures within the framework of the United Nations and in accordance with the Charter".

If a party believes another party is not fulfilling the obligations incumbent upon it pursuant to the Moon Treaty, it may request consultations with a view to arriving at a mutually acceptable resolution of any controversy (Article XV (2)). Should no settlement be forthcoming, the parties may take measures to solve their dispute by any other peaceful means. The assistance of the Secretary-General may be sought by either party in order to resolve the controversy (Article XV (3)).

xviii) International Telecommunication Convention (1982)

The presently applicable International Telecommunication Convention was adopted in 1982 in Nairobi.⁵⁸ The purposes of the International Telecommunications Union (ITU) are to maintain and extend international cooperation for the improvement and rational use of telecommunications, to ensure the efficient use of the radio spectrum and to harmonize the actions of states in the attainment of these ends.⁵⁹ The ITU is also responsible for the allocation of radio frequencies for all outer space activities and for ensuring that the radio spectrum is utilized without harmful interference. With respect to the use of the geostationary orbit, provision is made requesting states to undertake efficient and economical utilization to ensure equitable access for all members (Article 33).

However, the opportunities for an equitable and rational allocation of orbital positions are reduced by Article 38 (1) of the Convention which states:

Members retain their entire freedom with regard to military radio installations of their army, naval and air forces.

III United Nations General Assembly Resolutions

The evolution of space law has closely followed space exploration. It should be noted that even prior to the first launchings, it was thought that on the basis of international law, outer space was res communis.⁶⁰ Thus, as was the case with the high seas, space was understood to be free for all to use and to be beyond sovereign claims. Even while the use of outer space was at an experimental stage, the need for its regulation was strongly defended. Initial efforts of the United States in early 1957⁶¹ to ban the use of cosmic space for military purposes did not meet with a favourable response from the Soviet Union.⁶² However, the twelfth session of the United Nations General Assembly adopted Resolution 1148 calling for the "joint study of an inspection system designed to ensure that the sending of objects through outer space should be exclusively for peaceful and scientific purposes."⁶³

Soon after the launching of the first Soviet and American satellites⁶⁴ the international legal aspects of outer space activities began to be examined. In 1958, the United Nations General Assembly created an ad hoc Committee on Peaceful Uses of Outer Space by Resolution 1348 entitled "Question of the Peaceful Use of Outer Space".⁶⁵ Already at this early stage the Assembly resolved to "promote energetically the fullest exploration and exploitation of outer space for the benefit of mankind".⁶⁶ This was to be achieved on the basis of sovereign equality by international cooperation in the study and utilization of space for peaceful purposes. It was thought that the implementation of these aims could best be carried out by the establishment of an appropriate international body within the framework of the United Nations. Consequently, the ad hoc Committee was formed composed of eighteen members and charged with reporting to the General Assembly at its next session, on:

- (1) the activities and resources of the U.N. and other international bodies relating to the peaceful uses of outer space;
- (2) the area of international cooperation and programs in the peaceful uses of outer space which could appropriately be undertaken within the U.N.;
- (3) the future organizational arrangements to facilitate international cooperation in space activities; and

- (4) the nature of legal problems which might arise in carrying out space programs.

The ad hoc Committee obtained permanent status, as a Standing Committee, ⁶⁷ in 1959 by UNGA Resolution 1472 almost one full year later.⁶⁸ This resolution recognized the common interest of mankind as a whole in furthering the peaceful use of outer space and, significantly, made mention of the paramount aim to benefit all states "irrespective of their economic or scientific development" through space exploration. The Assembly also noted that the U.N. should promote international cooperation in outer space. The next significant Resolution, 1721, adopted unanimously in December 1961,⁶⁹ would serve to guide the subsequent evolution of space law. In addition to reiterating the afore-mentioned principles, the Assembly adopted the guiding principle that outer space and celestial bodies would be "free for exploration and use by all States in conformity with international law and would not be subject to national appropriation".⁷⁰ The Assembly called upon states launching objects to furnish COPUOS with information regarding launch details and acquired scientific and technological knowledge. This information was to be communicated through the Secretary-General who was requested to maintain a public registry of all furnished details. COPUOS was instructed to maintain close links with the Secretariat in order to ensure full cooperation and interaction between government and non-governmental organizations concerned with outer space matters.

Thus by 1961 three important themes had emerged:

- 1) that exploration was to be according to international law;
- 2) that all states would be free to explore and use the outer space environment;
- 3) that space could not be subject to claims of sovereignty.

These themes were further elaborated upon in 1963 by the very important Resolution 1962 entitled "Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space".⁷¹ The following guiding principles were propounded:

- 1) the exploration and use of outer space should be carried on for the benefit and in the interest of all mankind;
- 2) outer space and celestial bodies should be 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 should not be subject to national appropriation;
- 4) the activities of states in the exploration and use of outer space should be carried on in accordance with international law, including the Charter of the United Nations;
- 5) states should bear international responsibility for national activities in outer space, this responsibility to be borne by the states alone or by the international organizations and by the states participating in them; it was also set forth that national activities should require continuing supervision by the state concerned;
- 6) in the exploration and use of outer space, states should be guided by certain principles of responsibility, as well as request consultation between interested parties;
- 7) the state on whose registry an object launched in outer space is carried should retain jurisdiction and control over such object and its component parts;
- 8) each state which launches or procures a launching of the object into outer space should be internationally liable for damage to a foreign state by such object or its component parts on the earth, in air space or in outer space;
- 9) states should regard astronauts as envoys of mankind in outer space and should render to them all possible assistance; the principle of the return of astronauts and their space vehicles to the state of registry was also laid down.⁷²

The Declaration of Legal Principles, as well as its precursor Resolution 1721, did not contain any specific controls on military uses of outer space and/or celestial bodies, but did make reference to the general principle that the exploration and use of outer space should be carried on for peaceful purposes.

Another factor which favoured progress in the enhancement of public order in space during this period could be broadly classified as community concerns. In 1962, within the Eighteen-Nation Committee on Disarmament (ENDC) several countries pressed for priority in the question of the Peaceful Uses of Outer Space.⁷³ During 1963, a joint draft resolution to ban nuclear and other weapons of mass destruction from outer space was initiated in the ENDC. Following private negotiation and agreement between the United States and the Soviet Union, the draft was referred to the General Assembly. On 13 October 1963, the General Assembly approved the draft as Resolution 1884 (XVIII). In its operative part, the resolution calls upon all states: "(a) to refrain from placing in orbit around the earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction, installing such weapons on celestial bodies, or stationing such weapons in outer space" or in any way participating in the conduct of the foregoing activities. The substance of this resolution eventually was incorporated into The Outer Space Treaty of 1967 as Article IV (1).

These important concepts formed the basis for conduct in outer space and future space law conventions. It is worthy of note that Resolution 1962 was adopted unanimously. Nevertheless, the adoption of the significant provisions in all the afore-mentioned General Assembly resolutions, while welcomed, were considered only as provisional steps in establishing outer space law.⁷⁴ From a legal point of view, General Assembly resolutions do not constitute binding international law, and have the character of recommendations only. However, in some cases certain resolutions, may reflect customary international law or represent a step in the process of the progressive development of the law.

It is noteworthy that as regards Resolution 1962 many states declared, before its adoption, that their governments would consider the resolution as legally binding, or would at least agree to comply with its principles.⁷⁵

However one characterizes the legal impact of General Assembly resolutions, it is evident that subsequent space treaty law has reflected many principles embodied in these early resolutions. More recent resolutions in the General Assembly have had less impact on the development of the law of outer space. They have, however, since 1981, highlighted an apprehension felt by some nations over an apparent trend towards stationing weapons in outer space.

IV Summary

On the basis of the foregoing review of international law relating to arms control and outer space, certain themes emerge. These may be summarized as follows:

- (1) General international legal norms regarding military activities on earth (e.g. the UN Charter) also apply to military activities in outer space (Outer Space Treaty and Moon Treaty).
- (2) Outer space and celestial bodies are not subject to national appropriation and are free for non-prohibited uses such as exploration and scientific investigation by all states (Outer Space Treaty and Moon Treaty).
- (3) States bear international responsibility for their national activities in outer space and on celestial bodies (Outer Space Treaty, Moon Treaty and Liability Convention).
- (4) Certain military activities in outer space are consistent with international law. These include:
 - (a) The use of military personnel in space (Outer Space Treaty).
 - (b) The use of space-based remote sensors for military purposes (ABM Treaty, SALT Treaties, Threshold Test Ban Treaty, and Peaceful Nuclear Explosions Treaty).

(c) The use of space-based communications, navigation, meteorological systems.

(5) Certain military activities in space are inconsistent with international law. These include:

- (a) Interference with space-based remote sensors used for military purposes as between the USA and USSR (ABM Treaty, SALT Treaties, Threshold Test Ban Treaty and Peaceful Nuclear Explosion Treaty).
- (b) Placement of nuclear weapons and other weapons of mass destruction in orbit around the earth and on celestial bodies or in orbit around them. (Outer Space Treaty, Moon Treaty, SALT II). This includes new fractional orbital systems (SALT II).
- (c) Hostile acts or use of force on celestial bodies and orbits around them. (Moon Treaty).
- (d) Placement of military bases and conduct of military tests or manoeuvres on celestial bodies and in orbits around them. (Outer Space Treaty and Moon Treaty).
- (e) Testing of nuclear weapons in outer space (Partial Test Ban Treaty).
- (f) Development, testing, deployment of space-based ABM systems or components (ABM Treaty).
- (g) Military or hostile use of environmental modification techniques in outer space (Environmental Modification Treaty).

V Conclusion

Opinions may vary on whether or not each of the five categories outlined above could be extended to encompass other space activities beyond those itemized. Opinions will also differ on the legal status of many of the themes listed. Much of the discussion surrounding what activities are permitted and what are proscribed focusses on certain key definitions such as "peaceful purposes", "free use", "militarization". Consideration of these definitions may facilitate the future deliberation of the CD on arms control and outer space.

NOTES

- 1) (1946) no. 67 United Kingdom Treaty Series, Cmd. 7015. Signed 26 June 1945; entered into force 24 October 1945.
- 2) (1980) no. 58 United Kingdom Treaty Series, Cmd. 7964. Opened for signature 23 May 1969; entered into force 27 January 1980.
- 3) Supra, note 1.
- 4) (1961), 402 United Nations Treaty Series 71. Opened for signature 1 December 1959; entered into force 13 June 1961.
- 5) The International Geophysical Year (IGY) was organized under the auspices of the International Council of Scientific Unions in 1957-58 and was planned and carried out by more than 50 states. Each participating state planned and developed its own programs, which were coordinated by a special Committee for the International Geophysical Year. See: Buedeler, The International Geophysical Year, UNESCO, (1957); Chapman, IGY-Year of Discovery, (1959).
- 6) See also Article IX (1) (a): "use of Antarctica for peaceful purposes only" and the first and fourth preambular paragraphs.
- 7) Stein, "Legal Restraints in Modern Arms Control Agreements", (1972), 66 American Journal of International Law, 255, 259; Vlasic, "Disarmament Decade, Outer Space and International Law", (1981), 26 McGill Law Journal 173.
- 8) Hanessian, "The Antarctic Treaty", (1959), International and Comparative Law Quarterly 436, 468.
- 9) Article II states: "Freedom of scientific investigation in Antarctica and cooperation toward that end, as applied during the International Geophysical year, shall continue, subject to the provisions of the present Treaty".
- 10) Article III states:
"1. In order to promote international cooperation in scientific investigation in Antarctica, as provided for in Article II of the present Treaty, the contracting Parties agree that, to the greatest extent feasible and

practicable: a) information regarding plans for scientific programmes in Antarctica shall be exchanged to permit maximum economy and efficiency of operations; b) scientific personnel shall be exchanged in Antarctica between expeditions and stations; c) scientific observations and results from Antarctica shall be exchanged and made freely available.

2. In implementing this Article, every encouragement shall be given to the establishment of cooperative working relations with those Specialized Agencies of the United Nations and other international organizations having a scientific or technical interest in Antarctica."

- 11) According to Article V (2), if all the contracting parties were to adhere to any broader international agreements concerning the use of nuclear energy, including nuclear explosions and the disposal of radioactive waste material, those agreements would apply to Antarctica.
- 12) Article VII (2). This provision was the first time that the two superpowers agreed on an on-site inspection system to ensure against unauthorized military activity.
- 13) Antarctica: 10th Meeting of Treaty Consultative Parties, (November 1979), Department of State Bulletin 21.
- 14) (1963), 480 United Nations Treaty Series 43. Opened for signature 5 August 1963; entered into force 10 October 1963.
- 15) Adopted in UNGA Resolution 2222 (XXI), 19 Dec. 1966. (1967) 610 United Nations Treaty Series 206. Opened for signature 27 January 1967; entered into force 10 October 1967.
- 16) Vlastic, supra, note 7, 170.
- 17) Goedhuis, "What Additional Arms Control Measures Related to Outer Space Could be Proposed?", in: Jasani (ed.), Outer Space - A New Dimension of the Arms Race, (1982), 297, 299.
- 18) UNGA Resolution 1884, 13 October 1963.

- 19) Christol, "Article Four and 1967 Principles Treaty: Its Meaning and Prospects for its Clarification", Paper submitted at the XXIXth Congress of the International Institute of Space Law of the IAF, held in Dubrovnik, 1-8 October 1978, 6.
- 20) Stein, supra, note 7, 260.
- 21) Marcoff, Traité de droit international public de l'espace, (1973), 357.
- 22) Christol, supra, note 19, 26.
- 23) Ibid.
- 24) UN Doc. S/RES/255 (1968). (1967) 634 United Nations Treaty Series 326. Opened for signature 14 February 1967; entered into force 22 April 1968.
- 25) (1969) 672 United Nations Treaty Series 119. Opened for signature 22 April 1968; entered into force 3/December 1968.
- 26) Articles II, III and IV.
- 27) (1970) 729 United Nations Treaty Series 161. Opened for signature 1 July 1968; entered into force 5 March 1970.
- 28) (1973) no. 13 United Kingdom Treaty Series, Cmd. 5266. Opened for signature 11 February 1971; entered into force on 18 May 1972.
- 29) Agreement on Measures to Reduce the Risk of Outbreak of Nuclear War. (1972), 807 United Nations Treaty Series 57. Signed 30 Sept. 1971; entered into force 30 Sept. 1971.
- 30) Agreement on Measures to Improve the Direct Communications Link. (1972), 806 United Nations Treaty Series 402.
- 31) Agreement on the Prevention of Nuclear War. (1973), 24 United States Treaties 1478. Signed 22 June 1973; entered into force 22 June 1973.

- 32) (1974) no. 16 United Kingdom Treaty Series, Cmd 5551. Opened for signature 29 March 1972; entered into force on 1 September 1972.
- 33) Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction. (1976) no. 11 United Kingdom Treaty Series, Cmd 6397. Opened for signature 10 April 1972; entered into force 26 March 1975.
- 34) Treaty between the USA and the USSR on the Limitation of Anti-ballistic Missile Systems. Treaties and Other International Acts, Series 7503, (Washington: US Department of State, 1973). Signed 26 May 1972; entered into force 3 October 1972. Protocol to the Treaty between the USA and the USSR on the Limitation of Anti-ballistic Missile Systems. UN Doc. A/9698, Annex III, 9 August 1974. Signed 3 July 1974; entered into force 24 May 1976.
- 35) Interim Agreement Between the USA and the USSR on Certain Measures with Respect to the Limitation of Strategic Offensive Arms. Treaties and Other International Acts, Series 7504 (Washington: US Department of State, 1972). Signed 26 May 1972; entered into force 3 October 1972.
- 36) Treaty Between the USA and the USSR on the Limitation of Strategic Offensive Arms, and Protocol. CD/28, 27 June 1979 and CD/29, 2 July 1979. Signed 18 June 1979.
- 37) Treaty Between the USA and the USSR on the Limitation of Underground Nuclear Weapon Tests. U.N. Doc A/9698, Annex I and II, 9 August 1974. Signed 3 July 1974.
- 38) Treaty Between the USA and the USSR on Underground Nuclear Explosions for Peaceful Purposes. CCD/496, 23 June 1976 and CCD/496/Corr. 1, 5 August 1976. Signed 28 May 1976.
- 39) Adopted in UNGA Res. 3235 (XXII), 12 Nov. 1974. (1978) no. 70 United Kingdom Treaty Series, Cmd 7271. Opened for signature 14 Jan. 1975; entered into force 15 September 1976.
- 40) UNGA Resolution 1721 (XVI), 20 Dec. 1961.

- 41) In Articles V and VIII.
- 42) Matte, Aerospace Law: From Scientific Exploration to Commercial Utilization, (1977), 159 and authorities therein cited.
- 43) Vlastic, supra, note 7, 190.
- 44) Goedhuis, supra, note 17, 298.
- 45) (1979) no. 24 United Kingdom Treaty Series, Cmd. 7469. Opened for signature 18 May 1977; entered into force 5 October 1978.
- 46) Understanding to Article I reproduced in Agreement Governing the Activities of States on the Moon and other Celestial Bodies, Committee on Commerce, Science, and Transportation, 95th Cong., 2nd Session, May 1980, 250.
- 47) Dolman, Resources, Regimes, World Order, (1981), 322.
- 48) Krieger, Disarmament and Development. The Challenge of the International Control and Management of Dual-Purpose Technologies, (1981), 41.
- 49) In 1975, Canada submitted a working paper to the Conference of the Committee on Disarmament which groups 19 technologies within three main categories: atmospheric modification; modification of the oceans; and modification of the land masses and water systems associated with them. CCD/463, 5 August 1975; see also CCD/465, 8 August 1975 for the Swedish delegation's study.
- 50) Jasani, Outer Space: A New Dimension of the Arms Race, (SIPRI), (1982), 111.
- 51) UN Doc. A/RES/34, 68, 14 Dec. 1979.
- 52) For an analysis of the development of the Treaty, see Matte, "Treaty Relating to the Moon", in: Jasentuliyana and Lee (eds.), Manual on Space Law, vol. I (1979), 253; Reijnen, "The History of the Draft Treaty on the Moon" (1975), 19th Colloq. on the Law of Outer Space 357.

- 53) Reference to the moon hereinafter shall include other celestial bodies as well. Article 1(1) states that provisions of the agreement relating to the moon shall also apply to the other celestial bodies within the solar system, other than the earth, except in so far as specific legal norms enter into force with respect to any of these celestial bodies.
- 54) Article IV (2). It is stressed that international cooperation in pursuance of the agreement " should be as wide as possible".
- 55) Norris and Bridge, "Some Implications of the Moon Treaty with Regard to Public Order in Space", (1979) 23rd Colloquium on the Law of Outer Space 57, 57.
- 56) Article I (2) states that reference in the Agreement to the Moon shall include orbits around or other trajectories to or around it.
- 57) Supra, note 56.
- 58) Final Acts of the Plenipotentiary Conference, International Telecommunications Union, Nairobi, 1982. Opened for signature 6 November 1982; entered into force, 1 January 1984. This Convention replaces the 1973 Malaya-Torremolinos Convention, (1975) United Kingdom Treaty Series, Cmd 6219.
- 59) See generally Article IV of the Convention.
- 60) Brownlie, Principles of Public International Law, (3rd ed.), (1979), 266-7.
- 61) In its Memorandum submitted to the First Committee of the United Nations General Assembly on 12 January 1957, the United States proposed that "the first step toward the objective of assuring that future developments in outer space would be devoted exclusively to the peaceful and scientific purposes would be to bring the testing of such objects under international inspection and participation". UN Document A/C.1/783.
- 62) For the position of the Soviet Union see UN Document DC/SC.1.49 (18 March 1957) and DC/SC/1/55 (30 April 1957).
- 63) UNGA Res. 1148 (XII), 14 November 1957.

- 64) The first Sputnik was launched on 4 October 1957, followed closely by Explorer 1 on 31 January 1958.
- 65) UNGA Res. 1348 (XIII), 15 December 1958.
- 66) Ibid.
- 67) The Committee on the Peaceful Uses of Outer Space or COPUOS as it is commonly termed.
- 68) UNGA Res. 1472 (XIV), 12 Dec. 1959.
- 69) UNGA Res. 1721 (XVI), 20 Dec. 1961, "International Cooperation in the Peaceful Uses of Outer Space".
- 70) Ibid.
- 71) UNGA Res. 1962 (XVIII), 13 Dec. 1963.
- 72) Matte, Aerospace Law, (1969), 106-7.
- 73) United Nations Department of Political and Security Affairs, The United Nations and Disarmament, 1945-1970, 19.
- 74) Kopal, "Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies", (1966), McGill Yearbook of Air and Space Law 463, 467.
- 75) Kopal, supra, note 74, 467.


STATUS OF MULTILATERAL AGREEMENTS RELATING TO OUTER SPACE

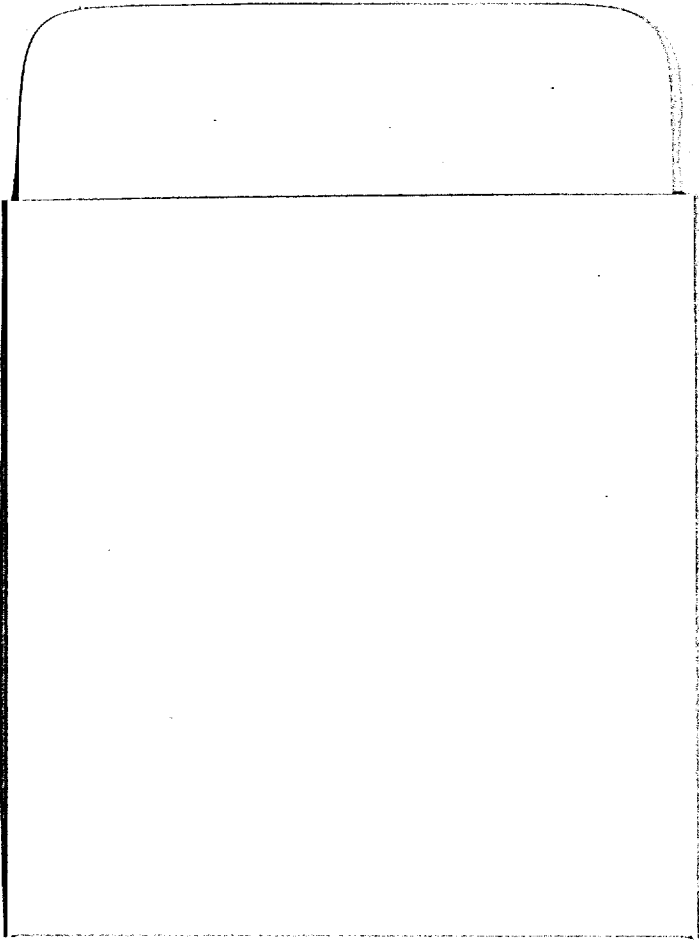
	<u>Opened for Signature</u>	<u>No. of Parties as of (date)</u>	
1. Charter of the United Nations	1945	158	31 March 1984
2. Antarctic Treaty	1959	32	31 December 1984
3. Partial Test Ban Treaty	1963	111	31 December 1984
4. Outer Space Treaty	1967	92	31 December 1984
5. Treaty of Tlatelolco	1967	29	31 December 1984
6. Rescue & Return Agreement	1968	79	31 March 1984
7. Non-Proliferation Treaty	1968	127	31 December 1984
8. Seabed Treaty	1971	81	31 December 1984
9. Convention on International Liability for Damage Caused by Space Objects	1972	72	31 March 1984
10. Biological Weapons Convention	1972	104	31 December 1984
11. Registration Convention	1975	32	31 December 1984
12. Environmental Modification Convention	1977	54	31 December 1984
13. Moon Treaty	1979	4	31 March 1984
14. International Telecommunications Convention	(a) 1973	156	31 March 1984
	(b) 1982	8	30 June 1985

Sources:

Bowman, M.J. and D.J. Harris. Multilateral Treaties: Index and Current Status. London: 1984.

United States. Arms Control and Disarmament Agency. 1984 Annual Report. Washington: April, 1985.

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