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I. Introduction

Ten years following the landing on the moon, which was the ultimate adventure of the technological era, a new tendency is emerging in space activities, characterized by criteria of rationality and immediate utility for mankind.

The initial stages of the space era were dominated by a quest for prestige and a spirit of international competition befitting a commercial sports event. In the last decade we pursued programs more modest, but more likely to affect directly the lifestyle of the great majority of human beings. Today the emphasis is on the "rediscovery" of our planet and the increasing improvement in space instruments of immediate interest for man.¹

The American and European space programs feature new, low-cost satellites for radio, telephone and television communications, for meteorology, for research and inventory of mineral, grain and water resources on earth, and for the study of the environment. In addition, it is the Space Shuttle which is expected to mark the advent of regular space voyages,² an orbiting space laboratory (Spacelab), and a great telescope to study the universe beyond the distortions of the atmosphere. Human exploration of interplanetary space has been set aside to make way for automated space probes. In the Soviet programs, the main trend seems to point towards permanently inhabited stations in earth orbit (Salyut), to be used for observation and research in space and, also in the future, as departure bases for interplanetary voyages.³ In short, humanity seems to aim at a form of colonization of the space closest to our planet, in order to deepen its investigation of the earth, to increase the contribution of space research to the economy (new technologies characterized by ever-higher levels of precision, compactness, lightness, dependability and durability), to safeguard the balance of nature, and to

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¹The American space program for the next decade is oriented in this direction. See *New Adventures in Space*, U.S. News and World Report, July 16, 1979, p. 33; Wilford, *Ten Years After the Moon, Many Systems Are Still Go*, N.Y. Times, July 22, 1979, Sec. 4, p. 20, col. 1; *Clouds Over The Space Program*, Time, July 16, 1979, p. 24.

²The U.S. has perfected a system for placing satellites and other vehicles in extra-terrestrial orbit at contained costs: this is the Space Shuttle (whose use may begin as early as next year) which would be able to take off toward the designated orbit and return to Earth, landing like a glider. In other words, instead of an entire rocket being destroyed for each launching, only the necessary fuel would be spent, and the Shuttle would be reused for several more launchings. See generally J. Grey, *Enterprise: The Use of the Shuttle in Our Future Space Programs* (1979).

³See Fyodorov, *The Use of Outer Space and Interests of Nations*, Int. Aff. (Moscow), July 1978, p. 12; Oberg, *Red Star In Orbit*, Omni, May 1979, p. 76.

amplify—through an ever fuller flow of information and communications—experiences which are already common to a very large number of people, enabling them to feel more closely linked to a unique destiny in the “global village” Earth.

Some of these projects have a clear potential for use for military purposes, while certain recent incidents⁴ have reopened questions on the criteria followed to guarantee the protection of Earth’s population and environment. However, it is the military aspect which is arousing the greatest apprehension, because it is feared that this may ultimately add a new and serious dimension to the current arms race.

II. *The United Nations and Outer-Space Activities*

The rapid formation of general rules in force for outer space has been considerably aided by the work of the United Nations whose Committee for the Peaceful Uses of Outer Space has been the main catalyst for international cooperation and regulation in this field for 20 years. Such regulation has been inspired by the principle of the free use of outer space, understood as being for peaceful purposes and conducted in the interests of all humanity (national appropriation of any kind is excluded) and with due regard to the equal rights of States.⁵

The Committee for the Peaceful Uses of Outer Space was established by the United Nations with Resolution 1472/XIV of December 12, 1959. As an intergovernmental body subsidiary to the General Assembly, to which it must present periodic reports, the Committee functions on the basis of the rule of consensus. In 1962, a Scientific and Technical Subcommittee and a Legal Subcommittee were established, to each of which an appropriate division of the U.N. Secretariat provides attentive assistance.⁶ It was in

⁴The fall over Canada of the Soviet nuclear satellite COSMOS 954 (January 1978) and the consequent spread of radioactive fragments led to some reflection on the dangers of the use—currently uncontrolled—of certain space technologies. This first nuclear space “crisis” prompted Canada, Italy and several other countries to put forward at the U.N. an appropriate international ruling (see Italy’s Note on the issue in U.N. Doc. A/AC.105/220 (1978) and the first report of the *ad hoc* working group in Doc. A/AC.105/C.1/L.III (1979). The fall to earth of Skylab in July 1979 with only six hours’ prior notice of the site of impact, reopened the discussion on the responsibility and consequences of the growing use of earth orbits. Currently several thousand vehicles, capable of re-entry at any moment owing to technical defects or other unforeseen causes, revolve around our planet. Here, also, a policy of international “traffic control” and national measures aimed at preventing future similar accidents seem necessary, in the superior interests of humanity.

⁵In general, see Bentivoglio, *Le N.U. e la conquista dello spazio*, *La Comunità Internazionale* 3-4 (1970); Comm. on Aeronautical and Space Sciences, *International Cooperation in Outer Space: A Symposium*, S. Doc. No. 92-57, 92d Cong., 1st Sess. (1971); G. Giuliano, *Diritto Internazionale*, II (1974); P. Jankowitsch, *International Cooperation in Outer Space*, (The Stanley Foundation, 1976); S. Gorove, *Studies in Space Law* (1977); U.N. Office of Public Information, *The United Nations and Outer Space* (1977) [hereinafter *The United Nations and Outer Space*].

⁶For a discussion of this collaboration, see Bentivoglio, *op. cit.*, *supra* note 5 and *The United Nations and Outer Space*, *supra* note 5.

the context of the Legal Subcommittee, and at the behest of the General Assembly, that the relevant international agreements were substantively negotiated.⁷

The Outer Space Committee has not yet succeeded in concluding a precise demarcation between outer space and airspace subject to State sovereignty, nor even a definitive notion of the expression "space object" or of the meaning of "peaceful use" of outer space. However, the U.N.'s work has achieved important results; in particular, four international agreements have been adopted, while a fifth one, concerning the activities of States on the moon and other celestial bodies, was just passed at the last General Assembly.⁸

The Agreement Governing the Activities of States on the Moon was concluded in 1979 after years of fruitless negotiation, mainly because the Soviet Union finally accepted the introduction into the Agreement of the principle, supported by the Third World and until this summer opposed by the U.S.S.R. that the moon's resources are the "common heritage of mankind". The agreement binds the contracting States to elaborate a regime for the equitable allocation of benefits which will result when the commercial exploitation of the moon's resources becomes feasible. Thus it is compromise (the regime of exploitation is conditional upon its commercial feasibility) between the premise of the Third World (which requested an even more binding commitment) and that of the space powers (which favored a bland general principle). The fact remains, however, that this was the introduction, for the first time, of a legal notion ("common heritage of mankind") which in another forum—the U.N. Conference on the Law of the Sea—has not yet been agreed upon with respect to deep-sea resources, inspite of endless negotiations. In addition, the international community—on the basis of the moon agreement—will have to be kept informed of the results of the research and findings of space powers on the moon. The agreement has not exhausted the Committee's activities: other delicate issues, entrusted to it by the General Assembly, remain on its agenda.

The principal topics are: endorsement of the U.N. program for space applications; elaboration of principles for the regulation of future direct television broadcasting via satellite; study of the technical and legal implications of activities involving remote sensing of earth resources from space, and the role of the U.N.; delimitation of outer space; regulation of the use of nuclear-power sources on space vehicles; space transport and implications for future activities in space; and the preparation of the second, U.N. Conference on the Exploration and Peaceful Uses of Space scheduled for 1982. Thus a

⁷This was not an easy task, given the presence of the two great space Powers on both the Committee and its two Subcommittees.

⁸For the Agreement on the Moon, see U.N. Doc. A/SPC/34/L.12 (1979); for the previously adopted instruments—basic Treaty of 1967, Agreement on the Rescue and Return of Astronauts and the Return of Space Objects Convention on Liability for Damages of 1972, Convention on Registration of Space Objects of 1976—see *The United Nations and Outer Space*, *supra* note 5.

full agenda for the XXIII annual session of the Committee in 1980 and, at the same time, an indication of the role which the U.N. is playing as the world forum entrusted to reconcile the special interests of States in order to promote—with a network of legal guidelines in first rank—the participation of all humanity in the benefits of the space era. This is an enterprise of coordination and stimulus, conditional upon effective international reality and the enormous technological gap separating some countries from the rest of the international community, but nonetheless worthwhile, if only for the continual pressure it exerts toward the realization of superior interests of a universal character.

III. *Dangers of a Militarization of Outer Space*

The provisions of international law relating to the use of outer space do not explicitly prescribe demilitarization. Article IV of the basic 1967 Outer Space Treaty limits to the moon and other celestial bodies their use on the part of States “for exclusively peaceful purposes”, while concerning outer space in general, the contracting States, undertake only “not to place in orbit around the earth any object carrying nuclear weapons or any other kind of weapons of mass destruction”, a provision which clearly has left open the possibility of the use of space for a whole range of other activities of a strategic and military nature, such as the use of observation satellites.

On the other hand, from a reading of the general principles incorporated in the treaty, the impression is derived that it contains a general assumption that all outer space activities should be kept peaceful per se inasmuch as they are open to all humanity and are to be “pursued in the interest of all States”. This impression is reinforced by the stress laid on international cooperation and on the scientific exploration of space. In fact, the 1967 Treaty exhibits uniform tendencies and assumes the international community’s substantive commitment of conscience to regulate the matter according to well-determined principles restrictive of the unbridled liberty of States; tendencies, still largely shared, which are aimed mainly at the prohibition of nonpeaceful uses of outer space.

Nevertheless, an explicit agreement on the complete demilitarization of outer space has been made conditional to the larger problem of disarmament. In East and West alike, military programs have been maintained in outer space, aimed at providing, rather than new weapons-systems, support for those already in existence. The use of satellites for military purposes has grown increasingly extensive.⁹

⁹A brief look at the dimensions of the phenomenon may be useful here. The total number of vehicles launched into space by man had reached a 10,791 as of 31 March 1978 (for a breakdown by country, objects in orbit and decayed objects, see Doyle, Reentering Space Objects: Facts and Fiction, 6 J. Space L. 2 (1978). According to the Stockholm Institute for Peace Research (SIPRI) about 60% of all American and Soviet satellites are military. For details, see SIPRI, *Outer Space: Battlefield of the Future* (1978). From the beginning of the space age to the end of 1976, 1386 military satellites had been launched (among them 563 by the U.S. and 899 by the U.S.S.R.), and in 1978 alone, 112 were sent up (19 by the U.S., 91 by the U.S.S.R., 1 by China, and 1 by NATO). For a full discussion and tabulation, see SIPRI, *World Armaments and Disarmament* 4, 257 (1979).

At this point the question arises of whether military space technology, in continual development, can be considered a peaceful activity, that is, compatible with the proclaimed objective of "peaceful use" of outer space. This expression, frequently cited in support of complete demilitarization, nonetheless does not lend itself to uniform interpretations,¹⁰ inasmuch as it implies subjective considerations. It should be viewed perhaps in relation to the general terms of international law whose validity has been extended to outer space since the 1961 general assembly Resolution 1721/XVI. Consequently, for space, as for the deep sea, military activities—not expressly prohibited by Article IV of the 1967 Treaty—are admissible: thus it is compatible with international law and the United Nations Charter to observe and photograph from outer space, as well as to test weapons and missiles (barring the prohibitions set forth in the Moscow Agreement of 1963)¹¹, and to engage in any other military activity which might be justified by article 51 of the U.N. Charter (right of self-defense): such would be, for example, remote-sensing activities from space or military maneuvers designed to prepare a State to respond to attacks. Apart, then, from the other legal aspects of the problem, and passing over the difficulties of distinguished military from nonmilitary uses (a satellite may guide a submarine or a merchant ship), it seems unrealistic to demand the complete exclusion of military space activities in the presence of a continuing nuclear arms race, whose effectiveness—and hence its power of dissuasion—is linked to the support constituted by space systems for tracking and sighting. Even citation of precedents does not seem convincing. On the contrary, it emerges that when the desire was present to exclude military use (as in the Statute which established the International Atomic Energy Agency and the Treaty on Antarctica), such was accomplished without ambiguity: military purposes—even defensive—were deemed incompatible with peaceful ones. This ruling does not, however, appear extendable by analogy into space given the absence, in the 1967 Treaty, of an explicit prohibition of all military activities¹².

These are considerations which clearly cannot serve as an adequate response to the apprehensions of those fearing an extension into outer space of the ever-advancing arms race.¹³

¹⁰D. O'Connell, *International Law* 539 (1965); P. Jankowitsch, *op. cit.*, *supra* note 5 at 22; 15 *Revue de Droit Pénal Militaire et de Droit de la Guerre* 3-4, 370 ff. (1976); R. Gardner, *L'ONU e la Politica Mondiale* 154 ff. (Capelli, 1966).

¹¹The Moscow Agreement bans nuclear-weapons tests in the atmosphere, in space and underwater. For text, see 14 U.S.T. 1313; T.I.A.S. 5433; 480 U.N.T.S. 43.

¹²The following quotation from an American Government source confirms this: "... agreement was reached on the Outer Space Treaty, which did not ban either observation from space, for whatever purpose, or the testing and development of orbital bombardment systems, [but] merely [that] deployment. . ." *Comm. on Aeronautical and Space Sciences*, *supra* note 5 at 310.

¹³"... worldwide military expenditures have now reached \$410 billion annually . . . an increase of 50% in the last two decades. The Third World's share has increased from 4% to 14% . . .," see SIPRI *World Armaments and Disarmament*, *op. cit.*, *supra* note 9.

What is especially feared is the introduction into space of anti-satellite systems with decidedly destabilizing effects.¹⁴ For what we are given to know (understandably, these operations are enveloped in a climate of secrecy), military satellites perform indispensable functions for surveys, for preventive verification¹⁵ of attacks, for the system of guidance and control of strategic weapon systems, for communications and for listening to those of others, and for verification of compliance with arms-limitation agreements. The fundamental role of military satellites received confirmation in the debate in the United States (especially in the Senate) on the extent of the American capacity to verify the scrupulous application by the Soviet Union of the terms of SALT II recently concluded at the Vienna summit meeting.¹⁶

¹⁴*See, e.g.*, "President Carter Expresses Concern Over Outer Space Hostilities", Washington Post, March 10, 1977, Sec. A, p. 11, col. 1; "New Killer Satellites Make Sky-War Possible", N.Y. Times, June 11, 1978, Sec. 4, p. 3, col. 1; "Stop the Arms Race." The Christian Science Monitor, Oct. 31 1978, p. 23, col. 3; "New Adventures in Space," U.S. News and World Report, July 16, 1979, p. 33; SIPRI Outer Space: Battlefield of the Future (1978); Scovill and Tsipis, Can Space Remain a Peaceful Environment? (The Stanley Foundation, 1978); Cybernetic War, Omni, May 1979 at 44; Gen. Hackett *et al.*, The Third World War: August 1985, 202-6 (1975). For an illustration of the military space programs being developed by the U.S. and the U.S.S.R. (including antisatellite weapons), *see* World Armaments and Disarmament *supra* note 9, at 256-79. The issue has been raised on occasion at the U.N. as in the statements of Brazil (25 Nov. 1977), and Japan (22 Nov. 1978) in the First Committee of the General Assembly. Italy's initiatives are discussed in this essay. *See* Appendix, *infra*.

¹⁵As early as SALT I (1972), the conclusion was reached that both sides should respect "national technical means of verification." President Carter officially took the position on October 3, 1978 that observation satellites had become an important factor for stability in world affairs, and that they could make an immense contribution to the security of all countries by monitoring arms-limitation agreements. "We will continue to use them". Secretary of State Vance reiterated this position in his statement before the Senate Foreign Relations Committee on July 10, 1979, stating that negotiations were under way with the Soviet Union for the limitation of anti-satellite weapons in order to protect those vehicles for observation and communications which are *vital* in periods of calm and *indispensable* in times of crisis. *See also* "U.S. Monitoring War Through Space Photos and Radio Intercepts" N.Y. Times, March 1, 1979, Sec. 1, p. 8 col. 1 The U.S. lacking on-site observers, used satellites to monitor the China-Vietnam war. It should be emphasized that in spite of the obvious effectiveness of satellites, such means must be coordinated with other, "terrestrial" ones (on-site inspections, for example) in order to guarantee the full accuracy of data obtained.

¹⁶The Carter Administration's response was positive, even after the loss of its ground-control stations in Iran. American military satellites, according to the media, operate at a height of 100 miles and can photograph the entire Soviet territory in detail so precise as to record the license numbers on street vehicles. In this way it is easy to identify new missile silos, military manoeuvres, activities involving the construction or modification of weapons, radar installations, test launching, etc. Secretary of Defense Brown, ex-CIA Director Colby and ex-ACDA Director Warnke have said they are convinced of the adequacy of satellites and other, earthbound means for the verification of SALT agreements. Colby has added that clearly a single unidentified Soviet missile would not offer the U.S.S.R. a strategic advantage, given the composition of present nuclear arsenals. *See* "How Satellites Help to Sell SALT," U.S. News & World Report, May 21, 1979, p. 21; "SALT Verification and Iran", Arms Control Today, Feb. 2, 1979; "The SALT Debate: Why We Don't Need Iran," New York, June 18, 1979, p. 41; "Spies in the Sky", Time, July 30, 1979, p. 30; "Verification of SALT II Agreement", U.S. Dept. of State, Special Report No. 56. (August 1979).

In this light, the American proposal to the Soviet Union to begin talks for the limitation of anti-satellite weapons in order to "prevent an arms race in space and to limit the threat to satellites" is hardly surprising. Such talks were then initiated in Helsinki in June 1978 and are still in progress. In official American documents¹⁷ it is confirmed that the U.S.S.R. has developed an anti-satellite system (ASAT); the United States would prefer—rather than to respond with analogous weapon systems—to undertake negotiations aimed at integrating the relevant clauses of SALT I and II (ban on interference with national technical means of verification, including observation and reconnaissance satellites), for example, through the prohibition of attacks on satellites and the limitation of anti-satellite systems. The minimum objective of the American negotiators would be a moratorium on anti-satellite weapons.¹⁸ An agreement seemed imminent on the eve of the Vienna summit meeting¹⁹ but was not achieved because the Soviets would have desired a moratorium on the use of the (American) Space Shuttle, potentially capable of carrying out anti-satellite operations.²⁰ The negotiations are proceeding nonetheless.²¹

The American initiative was considered a step in the right direction even by those who would like to arrive at a complete demilitarization and neutralization of outer space. If this last objective seems unrealistic—or even inappropriate, at the present world juncture—in the light of international security (there exist on earth no means alternative to satellites and equally effective for the observation and reconnaissance of military activities), one may well consider, from this point on, initiatives more ambitious than the American one; that is, which respond more fully to the basic goal of ensuring strictly peaceful and nonhostile uses of space.

It is in this context that the Italian initiative of March 1979 takes root as will be shown in ensuing discussion. It will also be useful to recall, for the record, the recent French proposal (supported by Italy from the outset) for the creation at the United Nations of a world satellite-monitoring agency, a proposal aimed clearly at bringing the use of space technology into a multilateral framework in order to place it at the service of

¹⁷See the Annual Report for 1978 of the Arms Control and Disarmament Agency (ACDA), pp. 73-74.

¹⁸See "U.S. Seeks to Curb Killer-Satellites," N.Y. Times, April 10, 1979, Sec. 1, p. 1, col. 4.

¹⁹See "Soviet and U.S. Agree on Agenda, for Brezhnev-Carter conference" N.Y. Times, June 9, 1979, Sec. 1, p. 3, col. 1, which asserts the possible signing of an agreement on anti-satellite weapons in conjunction with SALT II.

²⁰See "Soviets Said to Ask Space Shuttle Halt," N.Y. Times, June 1, 1979, Sec. 1, p. 6, col. 1; "U.S. Abandons Hopes of Signing More Accords at Vienna Meeting," N.Y. Times, June 9, 1979, Sec. 1, p. 3, col. 1; the United States would have recognized that the Space Shuttle could also be used to place military satellites into orbit, but excluded the possibility of its use against the satellites of another State.

²¹Secretary of State Vance declared as much in his statement before the Senate on July 10, 1979, *supra* note 15.

the United Nations in the interest of peace, so as, for example, to ascertain facts objectively or to be able to make use of a modern global system of communications in case of crisis.²²

IV. Italy's Initiative for an Exclusively Peaceful Use of Space (March 1979)

Italy has always favored the exclusively peaceful use of outer space.²³ Paragraph 80 of the "Programme of Action", set forth in the Final Document of the Special Session of the United Nations General Assembly devoted to disarmament (May-June 1978) and introduced there at the suggestion of the Italian and other delegations, states: "In order to prevent an arms race in outer space, further measures should be taken and appropriate international negotiations held in accordance with the spirit of the 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies."

Recalling the gaps in Article IV of the 1967 Treaty (it covers nuclear weapons and other weapons of mass destruction, but not all weapons), and the dangers of a placement in space of weapons other than those barred in the Treaty, Italy sought to offer a concrete contribution of ideas for the fulfilment of the recommendation cited above, by introducing (in the Committee on Disarmament in Geneva) a draft Additional Protocol to the 1967 Treaty, along with an explanatory memorandum, a document which is reproduced in the Appendix below. What Italy proposed was a new agreement which would prohibit:

²²France's initiative was incorporated in Resolution 71/XXXIII of Dec. 14, 1978, cosponsored by Italy, which entrusted a group of Government experts (including one from Italy) to elaborate a study on the technical, legal and financial implications of the possible creation of an International Disarmament Monitoring Agency that would utilize observation satellites. The group's preliminary report was presented to the XXXIVth General Assembly on September 14, 1979 (Doc. SMA/WP/5) with essentially positive conclusions regarding the feasibility of the project: the Agency, according to the report, should be able to have full independence and to count on the support of States which already make use of space technology further studies are also needed. The position taken by the United States on this issue in its note to the U.N. Secretary-General, dated April 12, 1979, deserves to be noted with the observation that the Soviet Union's attitude is similar. In brief, the U.S. does not consider the project feasible in the foreseeable future; among examples cited were the insurmountable difficulties that would arise in the attempt to conciliate future decisions of the Agency with conclusions reached in a national context regarding a certain fact or an alleged violation of a disarmament agreement, to say nothing of the total cost of the venture, which would level the entire budget of the United Nations. Italy recognizes these problems and others, but has maintained a chiefly positive attitude toward the French proposal, which it views as a first step or possible component of a broader design (Italy did propose—in the framework of a global program or strategy for disarmament—the establishment of an Agency to verify disarmament accords).

²³With other Western powers, Italy proposed to the Committee on Disarmament on March 16, 1960 (Doc. TNCD/3) a ban on weapons of mass destruction in outer space. In 1968, it proposed at the U.N. a review of Article IV of the 1967 Treaty (Doc. A/7221 of September 9, 1968). More recently, it has proposed a series of measures, among them further steps to prevent an arms race in outer space (working paper A/AC.187/97 of 1978 introduced in both Geneva and New York). This suggestion was accepted, and forms the basis of paragraph 80 of the Programme of Action continued in the Final Document of the Xth, Special Session of the U.N. General Assembly devoted to disarmament.

a) the testing, introduction or use of any system—based either on earth or in space—aimed at damaging, destroying or interfering with the operation of any space object;

b) the placing into earth orbit, on celestial bodies including the moon, or elsewhere in space, of any kind of offensive weapon; in particular, of those capable of use for hostile purposes against the earth, the atmosphere, or space objects.

In addition, the memorandum proposes the establishment of international mechanisms (in the context of the United Nations) which would make it possible to strengthen present verification systems, facilitate the prevention of false alarms, improve registration at the U.N. of data on space launchings and deepen international cooperation, as envisaged in the 1967 Treaty.

In other words, the draft Additional Protocol would complete the present regime in force by extending the ban—stipulated in Article IV of the Treaty—to include a prohibition on the placing in space (in earth orbit or elsewhere) of *all armaments*, not just nuclear weapons and other weapons of mass destruction. It would also ban all activities aimed at harming or destroying the satellites of another State or interfering with their operation. In this way the complete protection of all space systems would be guaranteed, while at the same time the introduction or testing in space of a device of any degree whatsoever of offensive capability would be forbidden,²⁴ so that the assured invulnerability of space objects would not serve paradoxically to mask or facilitate the deployment of new weapons. Needless to say, exception would be made in the case of observation and reconnaissance satellites, for their obvious utility in the maintenance of peace and international security, and more generally, in the case of any space systems intended to strengthen strategic stability, ensuring *inter alia* the verification of disarmament and arms-limitation agreements, as indicated in the memorandum.

The goal of the exclusively peaceful use of outer space would be further guaranteed if verification systems could be strengthened on a parallel with the creation of mechanisms of international control,²⁵ in such a way as to prevent false alarms and allay suspicions. This is a task which would be greatly facilitated by an increased openness regarding military activities in outer space.²⁶ It may in fact be predicted that a perfectly legitimate activity—military, peaceful or civilian—might be viewed otherwise by a third

²⁴The difficulty of defining the expression "offensive device" must not be underestimated. In the first instance, one may assume that all military space activities constituting hostile acts should be banned. The hostile intention might be determined case by case parallel with similar situations on Earth.

²⁵The previously mentioned International Agency for the use of observation satellites might serve as the first step towards the establishment of a U.N. Agency for the verification of disarmament measures, see *supra* note 22.

²⁶For example, more data on launchings and objectives of space missions might be provided to the United Nations office at which outer space vehicles are registered.

State.²⁷ from which might arise also the necessity to proceed as soon as possible from the current bilateral talks between the United States and the Soviet Union on anti-satellite weapons to a multilateral negotiation, both because the issues are of universal concern and in order to prevent in the meantime, third States from insisting upon having to initiate programmes similar to those under consideration for a ban by the two greatest outer space powers.²⁸

V. Initial Developments

The Committee on Disarmament (COD) of Geneva, to which the Italian document was submitted on March 26, 1979²⁹, was absorbed in that session by endless discussions on the definition of its program of work and rules of procedure. In 1979, the Italian proposal was taken into consideration in that forum only in the light of its placement in the context of an agenda covering all the disarmament issues, and was finally included among collateral measures. The Committee subsequently decided (see paragraph 21 of document CD/53, dated August 14, 1979) to confront certain issues—among them, the prevention of the arms race in outer space—at an appropriate stage of its work.

From May 14 to June 8, 1979 the first substantive session of the newly reconstituted United Nations Disarmament Commission (UNDC), entrusted with the priority function of elaborating elements to be included in a comprehensive disarmament program, was held in New York. On that occasion Italy, illustrating on May 15, 1979 a sheaf of proposals, recalled its Geneva initiative in favor of the exclusively peaceful use of outer space. The response was largely positive,³⁰ and the main Western countries, along with Italy, included that specific question in a working paper jointly introduced at the session.³¹ The Commission finally adopted by consensus its report to the General Assembly incorporated in document A/34/42 in which appear the structure and elements of a comprehensive disarmament program, including the issue of the prevention of an arms race in outer space.

²⁷*E.g.*, a Laser beam, used in a solar powered satellite as a means of transmitting solar energy to power centers on Earth, might be viewed instead as an anti-satellite or anti-missile weapon.

²⁸*E.g.*, China might interpret Soviet programs for the development of anti-satellite weapons as intended to "neutralize" Chinese space systems, and then react accordingly.

²⁹Following submission of the document, which was given the symbol CD/9, the Italian delegate illustrated it in statements given on March 27, 1979 and April 24, 1979. For text of the document, see Appendix, *infra*.

³⁰For instance the Austrian representative, referring to the "disturbing phenomenon of the proliferation of the arms race in outer space", expressed satisfaction over Italy's specific initiative.

³¹Working Paper entitled "Elements of a Comprehensive Disarmament Programme", introduced by the Federal Republic of Germany on behalf of the Western group (Doc. A/CN.10/8).

For further information, it should be recalled that in preparation for the Commission session just mentioned, and in the days immediately preceding it, an international symposium was held outside New York City.³² The Italian draft protocol was favorably received by most participants. Some concern was expressed by the American spokesmen and the delegate from the Eastern European group who, recalling the bilateral talks then in progress between the U.S.A. and the U.S.S.R. considered inopportune the proposal to undertake a multilateral negotiation. The Americans in particular added that it was first necessary to determine more clearly the military space activities to be included in the projected ban specifying, for example, other "passive" (i.e. non-offensive) space objects as distinct from observation and reconnaissance satellites, whose use deserved to be equally safeguarded. The Conference concluded: given the increased rate of development of military space technology, and its serious implications for international peace, many participants maintained that the comprehensive disarmament program should include as a priority issue the "assurance of a peaceful use of outer space". Although the 1967 Treaty does not contemplate an automatic review mechanism, the participants considered such review important; the Conference concluded that it might take the form of a change in Article IV which would ban all weapons and any other device for hostile uses in outer space or the ban might be introduced in an additional protocol to the Treaty.

A further occasion to call attention to the Italian initiative arose a few weeks later at the 22nd session of the U.N. Committee for the Peaceful Uses of Outer Space, held in New York from June 18 to July 3, 1979. Again the reactions were mostly favorable, enabling the following paragraph to be included in the Committee's preliminary draft report to the General Assembly: "The Committee took note of the concern expressed by some delegations on the possible extension of the arms race to outer space. In this connexion, reference was made to the proposal tabled by Italy on 26 March 1979 in the Committee on Disarmament for an additional protocol to the 1967 Treaty. . ."³³ At the

³²Report on the Tenth Annual Conference on United Nations Procedures (10-13 May 1979): 'Comprehensive Programme of Disarmament' (The Stanley Foundation, ISSN 0069-8601, Muscatine, Iowa, 1979). Qualified exponents of all the regional groups at the United Nations, including the Chairman of the U.N. Disarmament Committee took part in the Conference. The open, informal atmosphere allowed the participants to explore in depth the issues under discussion and to clarify points of convergence and divergence, facilitating the official work of the U.N. which began the day after the Conference concluded and in which the author participated as the Italian representative.

³³U.N. Doc. A/AC.105/L.113/Add. 5 (1979).

moment of final approval of this passage, the Soviet delegation—claiming to be without specific instruction on the matter³⁴—opposed it. Once the Soviets' isolation in the Committee became evident, the Italian delegation withdrew the paragraph so as not to break the rule of unanimity which traditionally governs the Committee's work.

VI. *Conclusions: Man In Space*

Man has conquered outer space. Wondrous devices have been launched to dizzying heights. Surpassing all the possible limits of fantasy, the mysteries of the universe are being sounded and a planetary vision of humanity and its problems is being born. The latest adventure of the technological era, though, has not given us new men, or new obligations, on a parallel with the new powers of science.

With the industrial revolution, and the resultant symbiosis of science and technology, science runs the risk of losing its soul. Increasingly enslaved to the logic of profit of the materialistic society, science produces new and sophisticated instruments rendering possible the destructiveness which, more or less revealed or hidden, is materializing and molding our moment in history. The growing involvement of men of science in the military sector and the generalized arms race are proof of this.

The astronauts' vision of the Earth as a "global village", seen at a vast physical distance from our planet, marked a historic turning-point whose implications, even spiritual, we do not yet fully understand.

The boundless horizons of outer space open upon a future rich with both promise and hidden danger, offering man the possibility to make his long-awaited qualitative leap forward. To prepare for such a breakthrough, science must reclaim a human dimension, collective solidarity must prevail against the logic of power and earthly conquest. Italy's proposal to guarantee exclusively peaceful activities in outer space is an act of faith in the creative potential of human beings. It is the belief in a dialogue which may enshrine in international law the noblest aspirations of our species.

³⁴The impression gathered, however, was that the U.S.S.R. had carefully studied the entire issue, and especially the potential military use of the Space Shuttle. At the request of the Soviets, paragraph 43 of the Committee's report (Doc: A/34/20, previously cited) states that the opinion was expressed (by the Soviet Union) that it would be necessary to elaborate legal principles to regulate (future) space transport, bearing in mind—*inter alia*—the prohibition to remove from space the objects of another (launching) State without its prior consent, as well as to proceed to the elaboration of rules for the transit of space transport systems over the territory of foreign countries after the first launching phase. The United States added to the same paragraph the statement that all these aspects refer to any type of space transport vehicle, and it is on such basis that possible future discussions will be able to take place.

ITALY

Additional Protocol to the 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies" with a view to Preventing an Arms Race in Outer Space.

MEMORANDUM

I. Paragraph 80 of the "Programme of Action" contained in the Final Document of the Tenth Special Session of the General Assembly of the United Nations devoted to disarmament states:

"In order to prevent an arms race in outer space, further measures should be taken and appropriate international negotiations held in accordance with the spirit of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies."

Article IV of the Outer Space Treaty, which is of particular importance to the pursuit of peace and disarmament, provides that:

"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 obligation assumed in conformity with the first paragraph of Article IV by States Parties to the Treaty is in the common interest of mankind and, in particular, represents a common defense against nuclear proliferation. Furthermore, it establishes a link with the Treaty Banning Nuclear Weapons Tests in the Atmosphere, in Outer Space and Under Water, which was signed in Moscow on 5 August 1963.

The second paragraph of Article IV clarifies the scope of the words "exclusively for peaceful purposes." It establishes a dual legal regime: the first one provides for complete demilitarization of celestial bodies (without prejudice to peaceful uses), the second one imposes a ban, limited only to nuclear and other weapons of mass

*Taken from Doc. CD/9 (26 March 1979) introduced by Italy in the Committee on Disarmament in Geneva.

destruction, on military activities in orbits around the earth and in outer space, although it could be argued that the combined provisions of Articles I and IV imply a commitment to the total ban of an arms race in outer space. Furthermore, the text of the Treaty does not state clearly that the moon is a celestial body.

II. The 1967 Treaty explicitly calls for international cooperation and scientific exploration of outer space. Indeed, its main purpose is to promote the exclusively peaceful use of outer space in the common interest of all mankind. For more than a decade the implementation of the Treaty has contributed to prevent the introduction in outer space of nuclear arms race. Recent developments in space technology, in particular the development of interceptor/destroyer satellites, and the possible use in outer space of weapons not specifically prohibited by Article IV suggest the need to supplement the existing legal system with specific provisions. Indeed, it seems advisable, in the interest of international security, to impose a total ban on military activities other than peaceful, in outer space because of the danger of the development of offensive outer space weapons, such as the so-called hunter-killer satellites, which would add a new, more serious dimension to the arms race. Needless to say, the use of reconnaissance, surveillance and communications satellites, and indeed, of any space system which would reinforce the strategic stability by ensuring, *inter alia*, the verification of disarmament and other arms limitation agreements will not be prejudiced. Therefore it would be advisable to review, even on a limited basis, the regime established by the Treaty of 1967 in order to prohibit, *inter alia*, the development and use of earth or space-based systems designed to damage, destroy or interfere with the operations of other States' satellites. Such a ban could be embodied in an Additional Protocol to the Treaty of 1967, extending the prohibition contained in Article IV thereof explicitly to the launching and the stationing in orbit or elsewhere in outer space of all weapons, and not merely of nuclear and mass destruction weapons. Were this not to be done, the protection accorded to all space systems could, paradoxically, permit the introduction of offensive space devices other than those prohibited by Article IV of the Outer Space Treaty.

At the same time we should strengthen existing technical means of verification and lay the basis for a wider involvement of the international community in such of the General Assembly of the United Nations by the adoption of a proposal, introduced by France and which Italy was happy to co-sponsor, for the establishment of an International Satellite Monitoring Agency.

In the view of the Italian Government the problem of military uses and of the prevention of the arms race in outer space falls within the competence of the negotiating multilateral disarmament forum established in Geneva. Such a problem should therefore be dealt with by the Committee on Disarmament at the earliest appropriate time.

The danger of an arms race in outer space and the importance of satellites for the verification of arms control agreements justify its consideration under the terms of reference of the Committee on Disarmament in Geneva.

III. Italy has always been in favour of the use of outer space exclusively for peaceful purposes.

Since 9 September 1968, the Italian delegation proposed to the United Nations to review Article IV of the Treaty of 1967 (Doc. A/7221). On 1 February 1978, both in New York and Geneva, Italy proposed the adoption of further measures to prevent the extension of the arms race (Working Paper A/AC.187/97). This suggestion is reflected in paragraph 80 of the Programme of Action of the Final Act of the Special Session on Disarmament.

The Italian Government, in submitting this Memorandum to the Committee on Disarmament, hopes that it will be favourably received and make an effective contribution to the elaboration, at an appropriate stage, of timely measures to ensure the practical application of paragraph 80.

In supplementing the rules of the 1967 Treaty, pertinent provisions of the Convention on the prohibition of military and any other hostile use of environmental modification techniques should—in the view of the Italian delegation—be also kept in mind.

Attached to this Memorandum is a draft Additional Protocol to the Outer Space Treaty which Italy has elaborated with the aim to provide a concrete basis of discussion in the proceedings of the Committee on Disarmament.

ANNEX I

Additional Protocol to the Treaty on Principles governing the Activities of States in the Exploration and Use of Outer Space including the Moon and Other Celestial Bodies.

The high contracting Parties

- recalling* the need to facilitate, in the interest of all mankind, the exploration and use of Outer Space for exclusively peaceful purposes;
- considering* the urgent need of adopting further effective measures aimed at preventing an arms race in outer space;
- noting* the necessity to supplement the provisions of the Treaty on principles governing the Activities of States in the Exploration and Use of Outer Space including the Moon and Other Celestial Bodies of 27 January 1967;
- stressing the importance* of the latest technological developments for the effective implementation of the principles mentioned in article 1 of the Treaty;
- convinced* of the opportunity to prevent any development that might jeopardize the achievement of the aims of the Treaty;

—*taking note* of paragraph 80 of the Final Document adopted by consensus at the Tenth Special Session of the General Assembly of the United Nations devoted to Disarmament;

have agreed on the following:

ARTICLE I

1. Outer space, including the moon and other celestial bodies, shall be used for peaceful purposes only. States Parties to this Protocol undertake to refrain from engaging in, encouraging or authorizing, directly or indirectly, or in any way participating in any measures of a military or other hostile nature, such as the establishment of military bases, installations and fortifications, the stationing of devices having the same effect, the launching into earth orbit or beyond of objects carrying weapons of mass destruction or any other types of devices designed for offensive purposes, the conduct of military manoeuvres, as well as the testing of any type of weapons.

2. The provisions of this Protocol shall not prevent the use of military personnel or equipment for scientific research or for any other peaceful purposes as well as the use of such personnel or equipment for the purpose of participating in any control system to be established in order to ensure compliance with disarmament and security agreements.

ARTICLE II

Each State Party to this Protocol undertakes to adopt any measures it considers necessary in accordance with its constitutional processes to prohibit and prevent any activity in violation of the provisions of the Protocol anywhere under its jurisdiction or control.

ARTICLE III

1. Any State Party to this Protocol which has reason to believe that any other State Party is acting in breach of obligations deriving from the provisions of the Protocol may lodge a complaint with the Security Council of the United Nations. Such a complaint should include all relevant informations as well as all possible evidence supporting its validity.

2. Each State Party to this Protocol undertakes to cooperate in carrying out any investigation which the Security Council may initiate, in accordance with the provisions of the Charter of the United Nations, on the basis of the complaint received by the Council. The Security Council shall inform the States Parties of the result of the investigation.

3. Each State Party to this Protocol undertakes to provide or support assistance, in accordance with the provisions of the Charter of the United Nations, to any State Party which so requests, if the Security Council decides that such Party has been harmed or is likely to be harmed as a result of violation of the Protocol.

ARTICLE IV

This Protocol shall be of unlimited duration.

ARTICLE V

1. This Protocol shall be open for signature to all the Parties of the Treaty on principles governing the Activities of States in the Exploration and Use of Outer Space including the Moon and Other Celestial Bodies. Any State which does not sign it before its entry into force may accede to it at any time;

2. This Protocol shall be subject to ratification by signatory States. Instruments of ratification or accession shall be deposited with the Governments of the United States of America, the United Kingdom of Great Britain and Northern Ireland and the Union of Soviet Socialist Republics in their capacity of Depositaries of the Treaty;

3. This Protocol shall enter into force upon the deposit of instruments of ratification by Governments;

4. For those States whose instruments of ratification or accession are deposited after the entry into force of this Protocol, it shall enter into force on the date of the deposit of their instruments of ratification or accession;

5. The Depositaries shall promptly inform all signatory and acceding States of the date of each signature, the date of deposit of each instrument of ratification or accession and the date of the entry into force of this Protocol, as well as of the receipt of other notices;

6. This Protocol shall be registered by the Depositaries in accordance with Article 102 of the Charter of the United Nations.

ARTICLE VI

This Protocol of which the English, Arabic, Chinese, French, Russian and Spanish texts are equally authentic, shall be deposited in the archives of the Depositary Governments, who shall send duly certified copies thereof to the Governments of the signatory and acceding States.