

International Co-operation in Outer Space

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I. Stagnation in the Development of International Co-operation in Outer Space?

Within the short span of twelve years, the existing five treaties governing principles and details of universal co-operation in outer space were adopted between 1967 and 1979. In their sum, the Treaty on Principles Governing the Activities of States and the Exploration and Use of Outer Space,

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Abbreviations: AJIL = American Journal of International Law; ICJ Reports = International Court of Justice, Reports of Judgments, Advisory Opinions and Orders; ILA = International Law Association; ILM = International Legal Materials; INTELSAT = International Telecommunication Satellite Organization; ITU = International Telecommunication Union; UNGA = United Nations General Assembly; UNTS = United Nations Treaty Series.

Including the Moon and Other Celestial Bodies (Outer Space Treaty) of 1967¹, the Rescue and Return Agreement of 1968², the Liability for Damages Convention of 1972³, the Registration Convention of 1975⁴ and the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (Moon Treaty) of 1979⁵ provide for a remarkable network of rules governing a broad spectrum of issues peculiar to space activities. Nevertheless, in the light of new opportunities and dangers accompanied by the advance of space technology, demands towards additional agreements were soon pressed, most of them relating to the distribution of benefits to be desired from space activities. It turned out that a common denominator in matters of these distributional problems could not be easily agreed upon at the universal level. As a result, the fast progress of successful negotiations toward agreements on space law, characteristic of the late 1960s and the early 1970s, has slowed down considerably in the past years, and signs of stagnation and frustration have marked the more recent efforts to reach further consensus. It is not possible to describe current points of controversy here in detail, but they shall be reviewed briefly.

a) A very serious situation has arisen since 1982 from the point of view of international co-operation with regard to the principles which should govern direct television broadcasting. The International Telecommunication Union (ITU) has operated since 1977 on the assumption that inevitable overspill of direct television broadcasts into the territory of another State cannot be objected⁶. At first sight such a rule would appear understandable only against the background of a rule which requires prior consent of the State at which a program is addressed. Nevertheless, Western States have issued declarations stating that the mandate of the ITU is

¹ UNTS vol.610, p.205.

² UNTS vol.672, p.121; see on this agreement Bin Cheng, *Outer Space: The International Legal Framework*, in: *Air and Outer Space Law, Thesaurus Acroasium*, vol.10 (1981), pp.41, 96 ff.; C. Q. Christol, *The Modern International Law of Outer Space* (1982), p.152 ff.

³ A/RES/2777 (XXVI); see Bin Cheng, in: *Manual on Space Law*, N. Jasentuliyana/R. Lee (eds.), vol.1 (1979), p.83; Christol, p.142 ff.

⁴ ILM vol.14 (1975), p.433; see A. A. Cocco, *Convention on Registration of Objects Launched into Outer Space*, in: *Manual* (note 3), vol.1, p.173; Cheng (note 2), p.98; Christol, p.213.

⁵ ILM vol.18 (1979), p.1434.

⁶ See Final Acts of the World Administrative Radio Conference for the Planning of the Broadcasting-Satellite Service in Frequency Bands 11,7-12,2 Gtzt (in Regions 2 and 3) and 11,7-12,5 Gtzt (in Region 1), Geneva 1977.

limited to the regulation of technical issues and does not extend to matters of broad political significance. Thus, it would be premature to assume that a consensus had already been reached in 1977. In 1982, Resolution 37/92 was passed after long discussions by the UNGA⁷. Without stating so explicitly, this resolution indicates that direct broadcasting is subject to the principle of prior consent of the receiving State; the resolution is phrased so as to place the concept of sovereignty and non-intervention at a higher rank than the right of everyone to seek and receive free information. *A priori*, it is clear that a certain antinomy exists between these general principles⁸. However, the solution found in favour of national sovereignty does not reflect a solution which is internationally acceptable for those States which consider that the free flow of information and the right of free information to a considerable extent modify the State's sovereign power to regulate matters falling within this subject area. For this reason, Resolution 37/92 could not find the approval of States which place emphasis on the liberty of the individual. Thus, the situation which has arisen after the passing of Resolution 37/92 is not satisfactory, and it is hoped that a new effort to reach a consensus will be made in the near future.

b) With respect to the issue of equitable access of all countries to the orbit, Art.33 of the ITU Convention as amended by 1982 states that all countries or groups of countries are entitled to equitable access to the orbit, taking into account "the special needs of the developing countries and the geographical situation of particular countries". Two conferences are now being planned by the ITU for 1985 and 1988 to implement these guidelines.

It should be noted that the use of the orbit so far has not become a serious practical problem. Technical progress and co-ordination and planning by the ITU mainly explain why, so far, it has proved possible to find satisfactory solutions. Apparently, it may be technically possible in the near future to remove space objects from the geostationary orbit that have

⁷ See P. Malanczuk, *Das Satellitendirektfernsehen und die Vereinten Nationen*, ZaöRV vol.44 (1984), p.257 with further references.

⁸ See R. Jakh u, *Direct Broadcasting via Satellite and a New Information Order*, Syracuse Journal of International Law and Commerce, vol.8 (1981), pp.375, 379 ff.; N. M. Matte, *Droit aérospatial, Les télécommunications par satellites* (1982); B. S. Murty, *Freedom of Information and Space Satellites*, Indian Journal of International Law, vol.21 (1981), p.193; M. A. Rothblatt, *Satellite Communication and Spectrum Allocation*, AJIL vol.76 (1982), p.56; M. Stern, *Communication Satellites and the Geostationary Orbit: Reconciling Equitable Access with Efficient Use*, Law and Policy in International Business, vol.14 (1982) p.859.

completed their mission and thus to create new space in the near future. Under these circumstances, it appears that the current planning system of the ITU may need some modification in detail, but is satisfactory in principle. From the viewpoint of efficiency it would be rather difficult to accept a system with so-called idle slots for the future; instead, adaptation to new demands as they arise appears preferable. It should also be noted here that the concept of the geostationary orbit as a natural resource of individual equatorial countries has rightly not been accepted by the international community, even though certain concessions may be made to this group of countries in the future.

c) An impasse in practical negotiations must also be diagnosed concerning the broad issue of remote sensing, i.e., the collection of information about the earth from mechanisms placed in space⁹. Such information can extend to a variety of areas, including the military field, the distribution of natural resources, environmentally relevant data and information regarding meteorological developments. After more than a decade of negotiations, no consensus is in sight with regard to the conditions in which the territory of a third State may be sensed. The first controversial issue relates to the question of control of the sensed State over activities in relation to its territory. On the international level, the idea of requiring prior consent of the sensed State to such activities has not received wide support. Instead, the negotiations have centered around the duty of a State to inform the sensed State about the nature and scope of the sensing activities and about the conditions under which the sensing State should be obliged to transfer its acquired knowledge to the sensed State. A viable compromise may be found in the principle of non-discriminatory access, by a sensed State, to primary data concerning that State's territory on reasonable terms. Thus, a differentiation is suggested between the raw information which the sensing process provides and the knowledge obtained after the analysis of the primary data. The distinction between primary and analyzed data reflects the fact that the analysis of data is no longer a special space-oriented activity and that high investments are often necessary in order to produce the analyzed data. It is not clear whether the complex issues addressed by the possibilities of remote sensing can soon be solved by way of negotiations, and further efforts to reach a consensus will certainly be necessary.

d) A special issue has arisen with respect to the dangers which may arise

⁹ See UN Doc. A/AC.105/337, April 12, 1984, pp.7, 10, with the text of Draft Principles on p.14, and working papers on pp.19, 33. With regard to the development of the diverse positions of States see Christol (note 2), p.720 ff.

from the malfunctioning of a space object containing a nuclear power source. As you will recall, two satellites of the Soviet Union (in 1978 and 1983) re-entered the earth's atmosphere without the full control of the Soviet Union. These incidents have raised the issue of the obligation of the launching State to provide exact information in a timely manner to all States concerned so that these States may assess the risks and take those measures which they deem necessary. In 1983, the Federal Republic of Germany established a special committee to observe the flight of the uncontrolled Cosmos 1402, but the work of this committee was made difficult by a lack of precise information on the satellite and its characteristics¹⁰. Given the high, and increasingly high, number of satellites with nuclear power, it appears necessary to reach agreement on the launching State's duty to provide information precisely and in a timely manner. Also, the negotiations between Canada and the Soviet Union in the aftermath of the return of Cosmos 954 call for a more precise definition of the concept of damages than the one contained in the rules of the 1972 Convention on the Liability for Damages¹¹.

e) Finally, it should not be overlooked in this survey that the delimitation of the sovereign rights of States toward space remains to be clarified. As is well known, this issue has been the subject of long discussions and a variety of proposals¹². One might be inclined to argue that the absence of an agreement has not resulted in any serious problems in the past and that therefore the issue should not be considered as pressing today. However, it is not at all clear whether such a perspective would be appropriate. With advanced space technology, the definition of the rights of States will become more and more urgent; in the nearer future, for instance, the determination of rules applicable to the space shuttle will probably again raise this issue. Of course, it is difficult to reach a consensus in this area as long as precise technical data regarding the characteristics of future technology is not available. In any case, the practical problems arising under the current situation will have to be addressed in the light of ongoing technical developments.

¹⁰ The German experience with the re-entry of Cosmos 1402 is described in a working paper of the Federal Republic of Germany of March 1983, UN Doc. A/AC.105/C.2/L.138.

¹¹ For a discussion of the problem see C. Q. Christol, *International Liability for Damage Caused by Space Objects*, AJIL vol.74 (1980), p.346 with further references.

¹² See UN Doc. A/AC.105/337, April 12, 1984, pp.9, 28; see also Bin Cheng, *The Legal Status of Outer Space and Relevant Issues: Delimitation of Outer Space and Definition of Peaceful Use*, Journal of Space Law, vol.11 (1983), p.89.

II. The Legal Framework of Current International Co-operation

1. General Remarks

Against the background of the ongoing efforts to reach a broader consensus, it is worthwhile to survey the achievements which have so far been made. Given the breadth of the activities covered by modern space law and the sophistication reached in certain areas, it would, however, be presumptuous to offer here more than a rough sketch which may serve as a starting point for our following discussions. One purpose will be to consider the substantive reach of the agreements which have been concluded. However, it is also of interest to focus on the drafting techniques in these agreements in terms of their suitability for application (or modification) in future negotiations. Initially, it is useful here to address the broader framework within which the efforts toward legalized efforts of co-operation in outer space have taken place. On the political level, it is important to be aware of the fact that the main actors which have shaped the growth and the direction of space law have been the United States of America and the Soviet Union¹³. Both these great powers have perceived issues of space law from a variety of perspectives, but it may well be assumed that their military interests in outer space have been continuously prominent in their assessment of a variety of problems. From the viewpoint of economic interests, it is central to the understanding of space law that it is concerned with the regulation of highly advanced modern technology the development of which requires particular resources; in this respect, modern space law is but one specific element in the discussions and negotiations concerning the future international economic order¹⁴. Technologically it is needless to emphasize that the speed with which space technology has been improved and advanced presents particular problems for the formulation and adaptation of applicable norms of international law. In this respect, it is important to note initially that space law has not developed in a legal vacuum. There is no doubt that general customary international law applies to space activities as well¹⁵; the concern of the international community has

¹³ See P. N. Bhatt, *Legal Controls of Outer Space* (1973), p.40.

¹⁴ See D. H. N. Johnson, *Air and Outer Space Law and the New International Economic Order*, in: *Air and Outer Space Law* (note 2), p.379; also O. de Saint-Lager, *The Third World and Space Law*, in: *Proceedings of the Twenty-Fourth Colloquium on the Law of Outer Space*, International Institute of Space Law of the International Astronautical Federation, September 6-12, 1981 Rome, Italy (1982), p.57.

been whether general law contains sufficiently distinct applicable rules, whether these rules are responsive to the specific conditions in space, and, if not, whether the issues raised are of a nature which permits the negotiation of a consensus among the diverse and in part antagonistic interests existing in the contemporary international community.

2. Limited Scope of Three Agreements

In turning now to the subject-matters of space law which have been regulated on the level of treaty law, it is useful to lump together three of the five Conventions concluded within the past two decades. The 1968 Rescue and Return Agreement, the 1972 Liability for Damages Convention, and the 1975 Registration Convention each in their own ways have contributed to clarify and develop norms tailored to the particular conditions and needs of co-operation in outer space. One may well be inclined to attribute special relevance to the Liability Convention beyond the sphere of space law inasmuch as the States therein have agreed on the principle of absolute liability in a field of extra-hazardous activities. On the other hand, it has correctly been pointed out from a policy point of view that this Convention to a certain extent reflects a preference for repressive control via the instrument of liability for damages and implicitly rejects the option of introducing mechanisms for the prevention of dangerous situations by way of international control systems¹⁵. Thus, it appears appropriate to characterize all these three Conventions as individual contributions to the development of space law which politically have not entailed special decisions on the part of the space powers with regard to their freedom of action and which have not, in the economic sphere, introduced major norms calling for closer co-operation. Without underestimating the relevance of these treaties, the following observations, for these reasons, do not place any special emphasis upon them. Instead, the Outer Space Treaty of 1967 and the Moon Treaty of 1979 shall be examined in greater detail from the point of view of legal co-operation.

¹⁵ Cheng (note 2), p.41: "... space law, as it now exists, is not an independent legal system. It is merely a functional classification of those rules of international law and of municipal law relating to outer space, natural or man-made objects in outer space, spacemen and man's activities in outer space".

¹⁶ R. Wolf rum, *Die Internationalisierung staatsfreier Räume (Beiträge zum ausländischen öffentlichen Recht und Völkerrecht, vol.85)* (1984), p.280.

3. The Lack of Special Institutional Co-operation in the Outer Space Treaty

With respect to institutional aspects, it must be borne in mind that both of the general treaties have rejected the concept of international administration of spaces not subject to national territorial jurisdiction¹⁷. In this respect they differ from the emerging law of the sea. One may speculate as to the significance attributed by the great powers to military activities in space within their strategic concepts and the link of these military considerations to their preference for non-institutionalized forms of administration. Schemes of international verification of compliance with the negotiated substantive rules are absent in the two treaties. To make matters worse, it has so far not been possible to agree upon effective mechanisms of dispute settlement¹⁸. Apparently, the main actors prefer a broad scope of freedom of action in areas which they consider as vital, and this attitude may stand in the way of more sophisticated means to secure the performance of existing international obligations. Whatever progress may be feasible and desirable in this respect, currently this situation bears upon the interpretation and the operation of the substantive rules found in the two general treaties.

As to individual areas of co-operation stipulated in the two treaties, co-operation in the field of research, in the sphere of economic activities and in the area of arms control and disarmament may be distinguished, while of course, these issues overlap significantly. The latter area which has turned into such a pressing problem forms the topic of a comprehensive presentation by S. K. Agrawala and will not be covered here.

4. Techniques of Co-operation

As to the techniques of co-operation chosen in the areas of research and of economic activities, it is characteristic of both treaties to set forth at the outset general, open-ended, idealistically oriented clauses of co-operation and to supplement them with certain more specific types of duties of the

¹⁷ V. Leister, International Cooperation in Outer Space: Extending the European Model, in: Proceedings (note 14), p.207; N. M. Matte, Institutional Arrangements for Space Activities: An Appraisal, *ibid.*, p.211; Wolfrum, p.274 f.

¹⁸ For the proposal of the ILA in this respect, see K.-H. Böckstiegel, Convention on the Settlement of Space Law Disputes, in: Proceedings of the Twenty-Sixth Colloquium on the Law of Outer Space, International Institute of Space Law of the International Aeronautical Federation, October 10-15, 1983 Budapest, Hungary (1984), p.179.

member States. A survey of the literature indicates that the broad co-operative language found in the treaties easily lends itself to optimistic and over-optimistic assessments of the current scope of co-operation. The main point which I intend to make here is to suggest caution and to raise questions as to the precision of such a perspective from the point of view of strict legal interpretation. Specifically, it is submitted here that the progress made so far must be ascertained primarily on the basis of specific norms in individual areas of co-operation and not by way of emphasizing broad clauses of co-operation. In contrast to the structure of the treaties and the conventional form of analysis, the following remarks therefore first address these specific clauses. It is felt that this approach, in important aspects, provides for a more realistic and precise analysis of the obligations contained in the abstract norms of the two agreements.

a) Specific duties of co-operation

As a first category of co-operative duties established in the two treaties, one may list those stipulated obligations which concern forms of co-operation in specific circumstances. The clauses on the observation of space activities of States parties to the treaties by other such States, the norms on the general sharing of information acquired about conditions in space, and the rules on access to space objects by third parties, for example, are in point in this context. From the point of view of the strictness of binding language, the mandatory character of an obligation is set forth only in very few of these clauses; Art.13 of the Moon Treaty states without qualification that a State which learns of the crash landing or unintended landing of a space object not launched by it shall promptly inform the launching party. Such clear language, however, is conspicuously absent in other clauses concerning specific co-operation in specific areas. Art.X of the Outer Space Treaty, for instance, regulating the observation of the flight of space objects by third parties, limits the respective obligation of the launching State by stating that relevant requests shall be considered on the basis of equality, and it is added that an agreement between the States concerned shall establish the conditions of such observations. Another area of co-operation to be considered in this context relates to the important issue of information sharing. Art.XI obliges the States parties to inform the international community about the nature, conduct, locations and results of their activities; however, this obligation is limited by the proviso that such information must be given only "to the greatest extent feasible and practicable". Given the general structure of the treaty, it must be assumed

that the relevant decision on such feasibility and practicability lies with the individual State concerned. Art.5 of the Moon Treaty has adopted the same language regarding information obligations, but it has added provisions for the time at which such information shall be furnished. The latter treaty also addresses the issue of exchanging scientific or other personnel; in this respect, the States parties have not agreed on more than the "desirability" of such an exchange "to the greatest extent feasible and practicable".

A last field of co-operation to be mentioned here concerns access to stations, installations, equipment and space vehicles. According to Art.XII of the Outer Space Treaty, access to such facilities shall be granted on the moon and other celestial bodies, however, this obligation to co-operate applies only "on a basis of reciprocity". Whatever the meaning of this qualification, it is not impossible to imagine that a State might on this basis try to evade any obligation. The parallel scheme in Art.15 of the Moon Treaty has omitted the element of reciprocity; it has retained language, however, which calls for maximum precautions to avoid interference with the normal operation of the facility to be visited.

What conclusions may be drawn with respect to duties of co-operation in specific areas on the basis of this survey of applicable norms? The two treaties address issues of co-operation which clearly go beyond the requirements of customary law, but it is also evident that such obligations have been phrased in heavily guarded language which leaves a broad margin of appreciation for the member States; seen in conjunction with the institutional weakness of the treaties, one would be hard pressed to enumerate specific situations which call for particular forms of co-operation by States under most of the norms referred to.

b) General duties of co-operation

On a second level of co-operation established in the treaties, less specific forms of co-operation than those previously mentioned are called for, but still the relevant duties rise beyond those implicit in the third category of abstract principles of co-operation. Upon this second level one may in particular place those rules which are aimed at what the treaties designate as harmful interference. Art.IX of the Outer Space Treaty addresses situations in which space activities of one State party would interfere in a potentially harmful manner with space activities of another party. Remarkably, the treaty refrains from establishing a rule which would guide the parties in their effort to solve a problem of this kind; nor does it even stipulate explicitly that the States are bound to plan their activities so as to

avoid overlappings and interferences. The only legal rule agreed upon calls for a consultation procedure; all parties to the treaty may request such procedures, and the State planning an activity entailing a potentially harmful interference shall undertake consultations before proceeding with its activity. The general aim of avoiding harmful interference in various activities is thus based on a different pattern than the forms of co-operation required for specific activities. Whereas the treaties establish certain norms in the latter areas and construe them in detail so as to leave a wide margin of appreciation for the States concerned, the more general call for co-operation with respect to harmful interference is substantiated only with a procedural mechanism in the form of consultations.

From a systematic point of view, it appears appropriate to view this graduated scheme of weak obligations as a manifestation of the will of the sovereign States concerned to plan and implement their space activities in accordance with their national objectives and strategies¹⁹. Indeed the principle of freedom of scientific investigation is explicitly expressed in Art. I of the Outer Space Treaty, and Art. 8 of the Moon Treaty provides that the States parties may pursue their activities in the exploration and use of the moon and celestial bodies in outer space "subject to the provisions of this Agreement". Thus, in two different versions these treaties confirm the basic principle of State sovereignty, even though it must be noted that the version found in the Moon Treaty represents a significant qualification of this principle.

In general, the obligations to co-operate as laid down in the treaties in certain respects significantly qualify the liberties of the States. However, on the basis of an examination of the treaties it will have to be assumed that modern space treaty law has, within its province, so far not modified the conventional rule that co-operative obligations exist only under specific circumstances and thus form an exception to the sovereign right of a State to act, within the rules of international law, in accordance with priorities set from the national point of view.

At least, this is the result which may be drawn from the rules of co-operation so far considered. It remains to be seen whether a qualification of this evaluation is warranted in the light of the third type of co-operative clauses found in the treaties.

¹⁹ See Wolf rum (note 16), p.279 ff.

c) Principles of co-operation

I refer to those broad and abstract principles of co-operation which have been interwoven into the modern treaties of space law more conspicuously than into treaties in all other areas of international co-operation. The task of examining the methods and techniques by which modern space law has combined the principle of State sovereignty, with those broadly based appeals for global co-operation and the legal consequences arising from such a structure of co-operation, presents a peculiar challenge for the interpretation and application of space law. The results of such an examination may be of interest when considering negotiations and formulations in other areas of modern co-operation as well.

Turning now to these broad clauses of co-operation in the Outer Space Treaty, the famous Art.I section 1 states that the exploration and use of the outer space 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"²⁰. The same formula is taken up in Art.4 of the Moon Treaty for the regulation of the exploration and use of the moon. For the understanding and the meaning of this leading maxim of the regulation of outer space, it is important to note that the same Art.I of the Outer Space Treaty subsequently refers explicitly to the applicability of the principle of equality and the rules of international law; in addition, it confirms freedom of access to all areas of celestial bodies and freedom of scientific investigation. Remarkably, Art.4 of the Moon Treaty is written in a similar pattern. It is true that Art.4 adds to the cited wording of the Outer Space Treaty by stating that "due regard shall be paid to the interests of present and future generations as well as to the need to promote higher standards of living and conditions of economic and social progress and development". But, again, this appeal is explicitly placed in the framework established by the Charter of the United Nations. In assessing the role of the broad principles of co-operation and solidarity, it will, therefore, be important to keep in mind the ambivalence which results from the fact that these clauses stand side by side with language pointing directly or indirectly to the traditional sovereign rights of States and the freedom thus granted to the formulation on national interests.

On the same level of abstract principles as Art.I of the Outer Space Treaty, both agreements state that the regulated activities shall be carried

²⁰ For various interpretations of Art.I of the Space Treaty, see Cheng (note 2), p.80 ff.; Wolfrum, *ibid.*, p.284 f.; Christol (note 2), p.20 ff.

out in the interest of maintaining international peace and security and promoting international co-operation and understanding (Art.III of the Outer Space Treaty and Art.2 of the Moon Treaty). Again, explicit reference is made both times to international law and the Charter of the United Nations. A third broad clause of co-operation in both agreements spells out that the regulated activities shall be guided by the principle of co-operation and mutual assistance (Art.IX of the Outer Space Treaty and Art.4 of the Moon Treaty) and that due regard shall be paid to the corresponding interests of other States parties (Art.IX of the Outer Space Treaty and Art.2 of the Moon Treaty).

Whereas the structures of the agreements are parallel in the aspects so far considered, the distinct feature of the Moon Treaty is that it enshrines the concept of the moon and all celestial bodies as the common heritage of mankind; the relevant provisions of Art. 11 deserve special mention.

Before addressing the specific legal relevance of the concept of the common heritage of mankind, it is appropriate to assess the meaning of the abstract types of co-operative clauses in general. It is obvious not only that the legal construction of these clauses presents particular problems, but also that this construction will necessarily be relevant for the interpretation of the agreements in their entirety and space law in general.

A safe starting point in construing these general clauses is to state that they are an integral part of the agreements and thus necessarily share their binding nature. It is true that certain broad clauses of co-operation in treaties of a highly political nature may be so abstract that it is difficult to ascertain any specific duties and obligations inherent in them. Nevertheless, even such clauses cannot be said to be entirely void of legal significance; at least, they imply a negative duty on the parties not to act in evident disregard of the co-operative clause.

It is quite doubtful, however, whether the treaties as a whole fall into the category of highly political treaties which need to be interpreted in a narrow manner. Nevertheless, it may be inappropriate and misleading to disregard the broad structure of the particular agreement in construing their abstract clauses of co-operation. Thus, in this specific context it becomes necessary to take into account the way in which the treaties establish more specific forms of obligations, i.e. to view the abstract clauses of co-operation against the background of those rules which have been phrased in a more specific context. The fundamental point inherent in such an approach is that it would be against the logic inherent in a treaty's structure to construe the abstract clauses of co-operation more broadly than those individual norms of co-operation which have been included

explicitly in the treaty, and which generally are covered by the subject-matter addressed by the abstract co-operative clause.

The relevance of such an interpretative approach for the treaties under consideration may be illustrated in two contexts. Doubts have been raised as to the compatibility of the treaty on the International Telecommunication Satellite Organization (INTELSAT) with Art.I of the Outer Space Treaty inasmuch as INTELSAT operates on a commercial basis²¹. Moreover, it has been intimated that the present modes of international co-operation in the promotion of space research and technology are inconsistent with the general duty of co-operation prescribed in Art.I of the Outer Space Treaty²². However, such an argument bears scrutiny only to the extent that the degree of co-operation expected under the broad co-operative clause does not exceed the degree of co-operation which the parties have accepted in those areas where more specific forms of co-operation have been agreed upon.

It is not necessary here to analyze in detail the consequences of this point of view for co-operation in the area of space research and communication satellites, but it would appear that one would be hard pressed to demonstrate that the current modes of co-operation in these areas fall below those standards of co-operation agreed upon in specific areas addressed by the Outer Space Treaty and the Moon Treaty; the restrictions on the duty to co-operate in the more specific fields of co-operation, which have been pointed out above, are of such a far-reaching nature that positive duties of co-operation of a specific manner can hardly be deduced from the broad clauses of co-operation. The practice of States subsequently to the conclusion of the treaties is in accordance with this view²³.

From a broader perspective, these considerations imply that current rules governing co-operation in outer space are not fundamentally different from those applicable to activities on earth. The political and economic considerations, alluded to above, have led the States concerned to establish a régime in which the role of sovereignty and equality, cornerstones of the

²¹ Wolfrum, *ibid.*, pp.297, 313; a more restrictive point of view is favoured by Cheng (note 2), p.77.

²² Wolfrum, *ibid.*, p.313.

²³ "The fourth paragraph of the Preamble of the Treaty speaks of the desire of the contracting Parties 'to contribute to broad international co-operation in the scientific as well as the legal aspects of the exploration and use of outer space for peaceful purposes'. What actually has been incorporated in the Treaty in implementation of this desire remains much more in the realm of declarations of intentions than firm legal commitments", Cheng (note 2), p.77.

Charter of the United Nations, in principle retain their role and function. While the wording of the treaties examined would not warrant a different conclusion, it is also true that a qualitative modification of the sovereign freedom of the States to act in their own national interest has occurred in this field. This development in general is, of course, parallel to the progress made in other areas not subject exclusively to the territorial jurisdiction of any State, such as the Antarctic Treaty system and the emerging law of the sea.

The Outer Space Treaties in themselves are evidence of a consensus that new types of co-operation shall govern space law and that these new forms shall reflect the consciousness for the need for intensified co-operation and solidarity. Perhaps one can understand the legal implications of the current legal situation most adequately by way of relating this development to the rules which govern the conduct of parties during the various phases in which a treaty is negotiated, signed, and submitted to ratification. The Vienna Convention on the Law of Treaties confirms that while States are not bound by the text of a treaty during these preparatory phases, they are also no longer free to act as if the intention to conclude a treaty was not manifested (Art. 18 *lit. a*). The broad principles of co-operation in the Space Treaties may be considered as evidence on the part of the States parties to develop the details of outer space law gradually step-by-step by way of a negotiated consensus and thus to take into account in their individual actions the consented need for intensified solidarity in outer space²⁴.

Individual actions which clearly frustrate the object and purpose of the Space Treaties to lay the foundation for the development of an intensified co-operation would thus be inconsistent with the spirit and the text of the treaties. Unilateral actions which would prejudice the exploration and use of space for a longer period to the detriment of the interests of the international community would therefore be in violation of the treaties. The same would apply with respect to an unqualified refusal of a State party to participate and contribute in further negotiations on the development of a space régime responsive to the interests of the international community.

²⁴ See also Cheng, *ibid.*, p. 84. – Cheng correctly points that the lack of an institutional structure for the régime of Art. 11 of the Moon Treaty may pose difficult problems of implementation in the future. – Wolfrum (note 16), p. 294, initially assumes that the treaty establishes obligations for the States parties, but then concludes that the implementation of these obligations lies solely within the discretion of the individual State. The interpretation favoured above is not inconsistent with this point of view but it does emphasize the procedural element of co-operation.

In assessing this situation, it should not be overlooked that no comparable document exists with regard to a comprehensive future international economic order; the negotiations on the Charter of Economic Rights and Duties of States have failed to produce a consensus of this nature. Moreover, it must be pointed out in this context that the rapid development of space technology calls for a technique of international co-operation which permits the constant adaptation and development of further applicable rules by way of negotiation; in this respect, the legal structure of the two treaties corresponds with the specific conditions and needs which dominate the factual developments relating to outer space.

5. The Common Heritage of Mankind and the Role of Equity in Modern International Law

Let me now turn, at the end of these considerations regarding the abstract clauses of co-operation, to the concept of the moon and other celestial bodies as the common heritage of mankind²⁵. From the point of view of legal philosophy, one may speculate extensively as to the foundations of this concept and its place in the current system of international law. For the purposes of strict legal construction, however, such speculation would not appear to be required, at least not so initially. Art.11 section 1 of the Moon Treaty applies the concept not in a loose and open-ended manner, but as it "finds its expression in the provisions of this Agreement and in particular in paragraph 5 of this article". In para.5 the parties undertake "to establish an international régime . . . to govern the exploitation of the natural resources of the moon as such exploitation is about to become feasible". The main purposes of such a régime are set forth in para.7. The first three components listed in this provision call for the orderly and safe development of the natural resources of the moon, their rational management and the expansion of opportunities in their use. These elements describe generally accepted policies so broadly that their adoption could hardly have been opposed. The heart of the concept of the common heritage of mankind must therefore be perceived in the last component; section 7 (d) provides for an "equitable sharing by all States parties, whereby the interests and needs of the developing countries, as well as the efforts of those countries which have contributed either directly or

²⁵ With regard to the origin and the development of the concept of the common heritage of mankind in space law, see Wolfrum, *ibid.*, pp.276 ff., 293 ff.; Christol (note 2), p.285 ff.

indirectly to the exploration of the moon, shall be given special consideration". The central concept of the common heritage of mankind thus legally defined lies in the role of equity. It is thus appropriate to address briefly the role which this emerging concept may acquire not only within the Moon Treaty, but also within the dynamic development of international legal co-operation in general.

It bears no special emphasis that developing countries will not be able to carry the main burden of developing and applying space technology, and that the special dimension of the equitable solution agreed upon in para.7 thus lies in the emphasis upon the special consideration to be given to the interests and needs of developing countries. The negotiated definition of equity in para.7 will have to be refined and applied by way of further negotiations. As to more precise legal duties thus established for future negotiations, the general analysis of the legal meaning of the broad clauses of co-operation suggested above will here be relevant. The broad obligation to co-operate has been narrowed, and a framework for further negotiations has been established. While it cannot be doubted that the definition of equity written into the Moon Treaty still moves on an abstract level and leaves much room for further negotiations, it is equally important to note that the progress made constitutes a distinct step forward which has not been made on other levels of global negotiation²⁶.

Indeed, one might be inclined to conclude that modern space law conceptually embodies a significant step towards further international co-operation which has no clear parallels in general international law. Such a point of view may well be acceptable in the light of the traditional doctrine on the sources of international law. There are distinct signs, however, which indicate that this doctrine itself is undergoing a gradual process of adaptation and transformation.

One of the clearest of these signs may be seen in statements found in the majority opinion handed down by the International Court of Justice in the case concerning the *Continental Shelf between Tunisia and Libya* decided in February 1982²⁷. The Court in this decision flatly states, in para.71, that the concept of equity "is a general principle directly applicable as law", and it adds that application of equitable principles is to be distinguished from a decision *ex aequo et bono* within the meaning of Art.38 para.2 of the Statute.

²⁶ See S. Gorove, Principles of Equity in International Space Law, in: Proceedings (note 18), p.17.

²⁷ ICJ Reports 1982, p.18.

In explaining this remarkably modern standpoint, the Court elaborates on the criteria for identifying equitable principles by way of distinguishing equitable techniques of reasoning and equitable results; the Court states that it is "the result which is dominant". From the premises of this result-oriented perspective, it is logical that the Court states that the principles to be applied in an individual case "have to be selected according to their appropriateness for reaching an equitable result". It cannot be asserted that such an approach clearly contradicts the foundations of Art.38 para.1 of the Statute of the ICJ and its listing of sources of international law, but it is also obvious that this analysis by the Court embodies a refined development and an adaptation of the more mechanical rules adopted in 1921 by the Permanent Court of International Justice which is responsive to the current global sociological and economic conditions.

Of course, the statements of the ICJ must be read in the context of the *compromis* agreed upon between Tunisia and Libya and the special legal situation currently existing with respect to the continental shelf and its delimitation. At the same time, it must be taken into account in assessing the potential ambit of the Court's reasoning that one of the characteristics of modern international law is the evasiveness of clear distinctions between the *lex lata* and the *lex ferenda* in many areas. The Court's analysis of equity is directed towards problems of distribution of resources and thus particularly applicable to aspects of the international economic order, but the method by which the Court identified the current normative system may not be without importance for other areas.

Sir Robert Jennings, as he then was, commented in 1980 in general terms upon modern approaches to the identification of general international law:

"... much of this new law is not custom at all, and does not even resemble custom. It is recent, it is innovatory, it involves topical policy decisions, and it is often the focus of contention. Anything less like custom in the ordinary meaning of that term it would be difficult to imagine"²⁸.

One need not go as far as this in commenting and explaining the Court's reasoning with respect to the role of equity in the Tunisian-Libyan case, but Jennings' analysis puts the Court's statement into a relevant perspective.

Against this background, the emphasis upon the role of equity in Art.11 of the Moon Treaty loses some of its uniqueness, and it becomes apparent

²⁸ R. Jennings, *What is International Law and how do we Tell it when we See it?*, Schweizerisches Jahrbuch für internationales Recht, vol.37 (1981), pp.59, 67.

that equity as a legal concept may be generally seen as an emerging norm with potentially broad implications for the systematic development of general international law. Of course, the institutional conditions of the Court have not permitted it to elaborate on its statements from a broad doctrinal and systematic perspective. But the analysis of the Court shows a special determination on its part to at least address the broader issues of international co-operation and to indicate possible directions of legal thinking.

The Moon Treaty illustrates that the Court was not entirely out of step with modern developments directed and guided by States as the main actors in the international community. The special definition of equity found in the Moon Treaty may well be indicative of the method by which States will develop and shape this new concept in other areas. It ultimately remains for States to determine the degree in which they abandon their freedom to act as they wish, both on the level of treaty law and of customary law. In any case, States have already agreed, in Art. 1 para. 3 of the United Nations Charter, that one of the purposes of the United Nations is "To achieve international co-operation in solving international problems of an economic, social, cultural or humanitarian character ..."; the Space Treaties indicate that this dormant obligation of law has not been entirely neglected.

III. Conclusion

The two main agreements on universal co-operation in outer space so far concluded provide for a framework in which further negotiations are to be held and further progress can be achieved. It serves no useful purpose to perceive the two agreements as instruments suitable in themselves to be transformed into specific obligations in those areas where the legal régime remains controversial: The two treaties do not attain such a specificity of norms governing activities not explicitly mentioned. Thus, the broad co-operative clauses which are characteristic of these treaties still need to be implemented and translated into individual forms of co-operation. In terms of substantive legalized co-operation, further efforts are indispensable in order to attain adequate results on the operational level. The promise of the two broad treaties can only be fulfilled by a new generation of agreements with limited scope and specific language. It has become evident in the discussions and negotiations of the past decade that such additional agreements are much more difficult to reach because they pose more complex issues, more demands on the States to abandon sovereign rights and harder tests for their willingness to compromise. Given the short span in

which activities in outer space have taken place, there is no reason to underestimate the value of the agreements which have been reached, but the rapidity of new activities and plans will press the international community to conclude agreements of the second generation in the near future.

Let me close by drawing your attention with one sentence to the roles of India and the Federal Republic of Germany in the new round of negotiations necessary to deal with the difficult points of agenda. Notwithstanding divergencies in terms of the size, regional affiliations and the general economic conditions of our two countries, the objectives and interests of India and the Federal Republic of Germany, as powers without nuclear military ambitions in outer space and with strong interests and achievements in the development of space-related peaceful nuclear technology, do coincide to a remarkable degree. The bilateral ties of co-operation which are already in existence between the two countries provide ample evidence of this common perspective.