IISL-96-IISL.1.02

PROPERTY RIGHTS ON THE MOON AND CELESTIAL BODIES

ALDO ARMANDO COCCA*

Introduction

To analyse the legal régime in force to govern the Moon, it is necessary to pay attention to the text of two fundamental international instruments: the Space Treaty and the Moon Agreement. The precedents of some principles that have been established in these international instruments can be found in the United Nations Charter.

To a better understanding of the legal régime of the Moon, the common opinion of jurists, the statements of members of the Legal Subcommittee of COPUOS during the elaboration of said texts and other proposals and drafts debated in the United Nations are useful.

Some of the United Nations principles found their definitive enunciation in the law of Outer Space. By other side, Space Law reinforces international law facing the strong development of human rights and of the environmental right as well as the emerging international constitutional law and international civil law.

Doctrine: from 1945 to 1966.

I include within the concept of doctrine the statements of the Conference of San Francisco in order to the reception in the text of the Charter of the concepts of *mankind* and *generations*.

In the V[th] International Congress of Astronautics (Innsbruck, 1954) I expressed that the exploration of outer space should be undertaken by humankind for its own benefit. In this regard I proposed the internationalization of space sciences and technologies. To allow that space activities were developed without secrets and exclusively with peaceful purposes.[1]

In the 1[st] International Colloquium on the Law of Outer Space (The Hague, 1958) I offered some principles with reference to the legal nature of the Moon. I pointed out five prior considerations to be discarded from a legal point of view:

1. The Moon does not constitute either a territory or a zone in space;

2. The Moon cannot be declared independent of the States of the Earth;

3. The Moon cannot be declared autonomous;

4. The Moon cannot be declared a sovereign state; and,

5. There are no rights of ownership on or over the Moon.

The principles recommended in said paper are:

1) The Moon is free for the utilization of the States of the Earth. Consequently an

* Trustee of IAA, Director IISL;

adequate regulation for this purpose and for peaceful purposes, is necessary;

2) Regarding the exploitation of its natural resources, the procedure should be similar as that governing the exploitation of the resources of the high seas;

3) For interplanetary travel, there are liberties of transit and scale on the natural satellite.[2]

In the Vth Colloquium (Varna, 1962) I stated that it is necessary to establish a regulation for the common use of the Moon with peaceful purposes exclusively. In the same sense, a regulation for the common use of the natural resources of the Moon should be agreed upon.[3]

At the same time Ernst Fasan asked to the members of the Committee 3 (Celestial Bodies) of the IISL: What does *national appropriation* means, and which clues have been given by authorities for its definition? Is it the same as *occupation* or *annexion?* In fact, the Soviet Prime Minister Krushchev, used exactly the term *annexion* in his letter to the US President Kennedy.[4]

In opportunity of the Paris Colloquium, I explained the meaning of the expression *res communis humanitatis* that I was using in my chair and in papers. In Space Law the subject is humankind as a whole, and the benefits obtained belong *ab initio* to humankind —which embodies all human beings— hence, a *condominium.*

The agent who does the material work of extracting the wealth can only expect a profitable compensation for his task, not an appropriation of the good obtained.

What we have called the fourth juridical dimension, is humankind, and in this way, Law has surpassed its national and international characters when it is projected towards outer space in order to reach a higher category, comprehensive of all mankind.[5]

Ernst Fasan proposed in this Colloquium, a draft resolution concerning celestial bodies: Part B, par. a) and b) determines: The right to use a celestial body shall include the right to exploit its eventual material resources; b) Any state, which, in the exercise of this right, undertakes the exploitation of such resources, shall notify this fact to the Community of Nations and share with the other nations the benefits, obtained by this activity. [6]

The question of the legal condition of celestial bodies was discussed in 1964, once again. In this opportunity, and after reminding the legal basis to adopt the expression *res communis humanitatis* in connection with the status of celestial bodies, I offered the concept of celestial product: it is an object separated or extracted from a celestial body and transported to Earth. Products may be brought to Earth not only for scientific purposes but for their economical value, as well. In this case the product enters into commercialization, the question rises: What is the status of this product imported to Earth? Is in this moment that the idea of creating an organism to deal with the commercialization of these products, arose. This organism should control both the exploration and the ultimate application of the celestial product on Earth. [7]

In connection with the distribution of benefits derived from the Moon, I understood that any distribution assumes the existence of an organ or machinery for the administration of that resources. In my view, in conformity with art. 55 a) of the United Nations Charter, the interests and needs of developing countries and the rights of those undertaking the activity of extraction of the

natural resource of the Moon, are taken into account. It represents a balance which every law is supposed to reach in the light of justice and equity.[8]

In the same opportunity —and linked with the matter— I presented another paper where I gave the scientific fundament of the condition of humankind as subject of international law. The new subject received an increasing personality and patrimony.

The expressions *province of all mankind* and *common heritage of all mankind* have a great juridical sense and mean a deep evolution in the field of law.[9]

It was said that nothing which is found on the Moon could be subject to appropriation; its study and use concern all mankind. In the face of the Space Treaty, appropriation of space resources is fully banned. The establishment of an international organization for space activities becomes essential. A specialized agency —depending of such organization— should be in charge of the administration of space resources.[10]

It has also been said that until the appropriate international machinery is established all states shall use their good offices and mediation in the settlement of disputes, and shall refrain from belligerent action on celestial bodies or in outer space.[11]

A reflection was made by a jurist that resumes the hope of many others: The legal regulations are to be invented, and must assure that the exploration and use of the space, the Moon and other celestial bodies will really serve the common interests of the whole mankind, and the co-operation in this field will contribute to the development of science, to the amelioration of the condition of life, the development of the economical and social circumstances of the present and coming generations, to the improvement of the mutual understanding between the states and peoples and strengthening their amicable connections.[12]

During the elaboration of the Moon Agreement it could be observed that the question of its natural resources belongs to the controversial issues of the draft. In this sense it was proposed the following text:

"Neither state, international intergovernmental or non governmental organization, national organization having the status of juridical person or not, nor natural persons, may claim the surface or subsurface of the Moon as their property".

The provision forbidding any arrangements or transactions between persons, between persons of international or national laws, concerning parts of the surface or subsurface of the Moon, seems to be more suitable.[13]

In connection with the exportation to Earth of Moon resources, it was stated that, "if the states which spend huge sums for the exploration of the Moon will not have the legal possibility to exploit those resources, then they will be confronted with two possibilities:

1) To stop the exploration; or,
2) To continue those exploitations ignoring the non-realistic formulations of the treaties.

I hope however that it will be possible to find out a formulation (for example along the line of Cocca's idea of the utilization of the Moon by the whole 'humanitas') which could be acceptable for all or for the very big majority of states."[14]

The Draft Moon Treaty proposed by the ex-Soviet Union established that the emplacement on the Moon of "vehicles or equipment... including the construction of installations integrally connected with the surface or subsoil of the Moon" i.e. the

practical creation of a station on the Moon, does not create "a right of ownership over portions of the surface or subsoil of the Moon". The draft of this article goes even further and underlines that the surface and subsoil of the Moon may not be the property not only of states but also of international intergovernmental or non-governmental organizations having the status of juridical persons or not, including natural persons. Item 2 of article II renders a detailed enumeration of those juridical acts in which portions of the surface or subsoil of the Moon cannot be the object of, namely, concession, exchange, transfer, sale or purchase, lease, hire, gift or any other arrangement or transaction with or without compensation between states and the fore mentioned organizations and persons. These provisions are of no small importance, their seemingly abstract character, notwithstanding. This article must put an end to the unrealistic wishes of separate individuals to somehow acquire portions of the Moon.[15]

The controversy risen in the COPUOS Legal Subcommittee in the 1970 session period of New York, when the Argentine Delegation answered the Soviet Delegation document on common heritage of mankind, put in evidence that the most complex problem to reach the Moon Agreement conclusion, was the interpretation of said principle.

In the XVth of Bakú (1973) I concluded, with reference to the Moon Agreement, that the first question to be solved is not only to announce the principle of the *common heritage of mankind* but to give it a juridical content.[16]

In 1977 the question of human heritage of mankind was still controversial: "It appears that the clarification of the notion *exploration* and *use* of natural resources of celestial bodies, as well as of other notions applied in a new branch of international law, is of great importance. It could prevent misunderstandings which occurred as sometimes authors mean different things using different terms and expressions in international documents. As an example such misunderstanding occurred with the notion *common heritage of all mankind.* The clarification and the common approach to the terms and understanding of these or those notions could undoubtedly promote further progressive development of International Space Law".[17]

It has also been stated that the question of humankind legal personality seems to be one of the main legal points of this problem. The creation o a real community of mankind instead of a community of states, is a task reserved to future generations, based in safeguarding peace, social progress of all nations and the falling of the political barriers between them. The legal contents of the "common heritage of mankind" is the creation of an international régime to govern the exploitation of the natural resources of the Moon with special consideration to the interests and needs of the developing countries as well as the efforts of those countries which has contributed to the exploration of the Moon.[18]

Once aimed the consensus for the definitive text of the Moon Agreement, the point of view of a former Ambassador and expert space jurist offered this conclusion: "The Committee on the Peaceful Uses of Outer Space has already produced by consensus five treaties which have been ratified by the US and which have made exemplary progress in the Law of Outer Space. This treaty seems more appropriate considering the rapidly advancing science for the use and developing of resources from space for the benefit of all mankind. We should encourage informed debate on the

interpretation of the proposed treaty. To be avoided are hasty interpretation, inappropriate analogies and unwise political action tending to diminish the role in advancing man's activities in outer space."[19]

By that time it was also expressed: "It is well known what the theory of marxism-leninism says about the fact that the State will die out however it comes from the idea that this process will be long and gradual and can happen only by means of strengthening a state and, which is very important, not any state but a socialist one that reflects the interests of the people. It proves unreal to speak of mankind as a subject of law, i.e. a bearer of rights and obligations since mankind in this meaning is very vague, unconcrete and a politically amorphous notion. The phrases which are met in international agreements on space about "the common interest of all mankind in the progress of the exploration and use of outer space for peaceful purposes" and about "astronauts as envoys of mankind", have no any concrete legal meaning, but they are of emotional and solemn nature. [20]

The question of the possession and industrialization of minerals was pointed out simultaneously: "It would be unrealistic to deny a country its rights of possession of discovered substances, after it has researched or authorized their research according to the laws of that country. The same laws should apply to minerals that are absolutely essential for the maintaining of an established structure or space station. According to our judgement this is in agreement with the principle that prohibits the national appropriation of portions of celestial bodies. The last point concerns the exclusion of sovereignty and not the civil law of possession. On the other hand we agree with the general position of existing literature whereby the present regulations exclude industrial exploitation".[21]

After concluding the negotiation of the Moon Agreement the IISL put as the first item of its agenda the Implications of the Agreement Governing the Activities of States on the Moon and other Celestial Bodies. This question was examined in 16 papers. One of them is referred to the protection of the environment of celestial bodies as a whole that comprises measures both for the preservation and rational utilization. Such a system of measures for protection of the environment of the Moon and other celestial bodies, including their natural resources should precede an elaboration of the exploitation régime to be applied to this resources. What term could be employed to express the juridical nature of the resources of celestial bodies? Maybe common heritage of mankind would do? But this term in conformity with the 1979 Agreement also refers to the celestial bodies of the solar system and their resources. The common heritage of mankind, as a term and a notion, has a broader meaning to be used in a restricted sense, i.e. to express the juridical nature of the resources of the Moon and other celestial bodies.[22]

Ernst Fasan in the same Colloquium referred that several problems remained unsolved. In connection to the international régime, he remarked that the word régime has been carefully selected, because it is identical in English, French and Russian. He also stated that it is necessary to put in clear that states undertake to establish such a régime and that this means that not such a régime would have been established already by the Agreement. To "undertake to establish" may mean that such a task is performed successfully by states in a certain space of time, but it may mean that such an undertaking fails, also. Such a régime might

even be the first step toward a Space Agency which has been proposed by several authors.[23]

Concerning the prompt enforcement of the Agreement it has been held that "the potential benefits to the US of ratification of the Moon Treaty significantly outweigh any potential disadvantages. This is particularly true in line of the facts that such potential disadvantages would arise not from this Moon Treaty, but rather from a subsequent accord which would require separate approval or disapproval. Refusal to ratify would simply and devastatingly exclude the US from legal entitlement to the benefits and protections included in the Moon Treaty, and could seriously complicate the prospects of gaining concession from other states in the future régime negotiations. In itself, this would only give rise to investor insecurity and probably make it more difficult for US to shape the results of those future negotiations.[24]

In connection with the future of the Moon Agreement, Eilene Galloway understood that the major issues arising for discussion are the legal status of understanding in COPUOS; the definition and implications of "the common heritage of mankind"; the probable nature of a future international régime; the meaning of equitably sharing of benefits derived from exploitation; and ensuring the development of an harmonious body of space law. At the end of her paper she offers guidelines for the future development of space law.[25]

Her son, Jonathan Galloway demonstrated in his paper that the common heritage of mankind concept is new in international law but it has roots in classical political philosophy, economic thought and religious doctrine. Reference to conservative, liberal and radical thinkers indicate the long history of the terms in the concept which, at a minimum, implies some means of sharing to benefit the whole community and he adds, that the exact nature of régime for the Moon and its natural resources cannot be specified by moral, political or economical theory. He added that the common heritage of mankind concept indicates a commitment to some degree of co-operation, co-ordination and linking of state activities and to some formula for sharing the benefits of ventures on the Moon. The operating institutions for the Moon can expect to benefit from the precedents in place for other organizations in space like INTELSAT and INMARSAT. "However, as Ambassador Cocca of Argentina writes: it is rather dangerous to crystallise in a definition the principle involved in a concept which is just being born in the new domain of space Law, such as the 'common heritage of mankind' as it was established in the Moon Agreement. As the international régime is concerned I dare say it is not a matter of definition; I feel it must be the outcome of the implementation of the guidelines set forth in the Agreement". [26]

In connection with the common heritage of mankind principle, it was stated that "the common heritage of mankind provision in the Moon Treaty is not a hollow phrase, but the expression of an existing and developing legal principle, for which as far as the exploitation of natural resources is concerned, detailed legal rules will have to be worked out pursuant to paragraphs 5 and 7 of article XI".[27]

Martin Menter said with optimism and faith in the future development of Space Law, that "In the interests of avoiding seeds for conflicts encountered through history on Earth, the world community tailored the Outer Space Treaty to a new set of legal principles proclaiming outer space and celestial bodies as the province of all

mankind and that its exploration and use shall be carried out for the benefit of all peoples. It is believed that rather than limit private sector opportunities, The Treaty of the Moon will enhance them by opening new vistas with rewards —as in the past— depending upon initiative, ingenuity and industrial capability, with government support tailored to high risk endeavours.[28]

The major references made about the Moon Agreement were made on the common heritage of mankind principle. In other words: "Since the opening of the Treaty for signature much has been written about the exploitations provisions of the Moon Treaty and the meaning of the phrase 'common heritage of mankind' as used therein. These provisions have drawn so much attention that substantial commentary on other provisions of the Treaty is virtually non-existent."[29]

There have been suggested some ways to complete the Moon Agreement. Present and future states parties to the Moon Agreement as well as there institutions and nationals will need a guarantee to be able to commit more extensive activities on the Moon; among them:

- ✓ Establishment of the international régime on a very short term;
- ✓ Instant establishment of a provisional temporary régime;
- ✓ Establishment of an international space agency, to deal with the practical aspect of exploitation of Moon resources.[30]

The legal text in force

The Space Treaty adopted by UNGA on 19 December 1966 —and in force since 10 October 1967— uses in its Preamble the expression "common interests of *all mankind* in the progress of the exploration and use of outer space for peaceful purposes"; and, "the exploration and use of outer space should be carried on for the benefit of *all peoples* irrespective of the degree of their economic or scientific development".

Article I establishes that the "exploration and use of outer space, including the Moon and other celestial bodies, shall be carried out for the *benefit and the interests of all countries* irrespective of their degree of economic or scientific development, and *shall be the province of all mankind.*

Article II states: outer space, including the Moon and other celestial bodies, *is not subject to national appropriation by claim of sovereignty, by means of use or occupation or by any other means.*

Article V: states parties to the Treaty shall regard *astronauts as envoys of mankind in outer space.*

History of the Moon Treaty

The Argentine Delegate used by the first time the expression *common patrimony of mankind* in the United Nations on June 19, 1967.

The phrase *patrimonio común* was translated into French as *patrimoine commun.* and in English as *common property* (UN Doc. AAC 105/C.2/SR 75, p. 15). The paternity of the expression is sometimes attributed to the mission of Malta basing the presumption in a verbal note of 17 August 1967, two months later than the Argentine proposal.[31]

On June 13, 1969 the Argentine Delegation proposed in occasion of the previewed arrival of man to the Moon, a recommendation for the study of the legal condition of materials, resources and products of the Moon (UN AAC.105/C.2/L.54, 13 June 1969).

The antecedents of the Argentine draft Agreement related to the Moon, was the proposal made by Argentina and Poland (A/AC. 105/C.2/L680); which was followed by the proposal of Argentina, France and Poland (A/AC. 105/C.2/L 69).

The draft Agreement on the Principles Governing Activities in the Use of the Natural Resources of the Moon and other Celestial Bodies (A/AC 105/C.2/L.71, 23 June 1970).

The Moon Treaty was adopted in December 1979, entered into force on 11 July 1984. In its article 1 it establishes that the provisions relating to the Moon shall also apply to other celestial bodies within the solar system other than the Earth and the reference to the Moon shall include orbit around or other trajectories to or around it.

In accordance with article 4, the exploration and use of the Moon *shall be the province of all mankind* and shall be carried out *for the benefit and the interest of all countries.*

Article 9 prescribes that state parties may establish manned and unmanned stations on the Moon. A state party establishing a station shall use only that area which is required for the needs of the station.

Article 11 is the most important when it determines that the Moon and its natural resources are *the common heritage of mankind*; the Moon is not subject to national appropriation by any claim of sovereignty, by means of use or occupation, or by any other means. Neither the surface nor the subsurface of the Moon, nor any part thereof or natural resources in place shall become property of any state, international intergovernmental or non-governmental organization, national organization or non-governmental entity or of any natural person. The placement of personnel, space vehicles, equipment, facilities, stations and installation on or below the surface of the Moon, included structures connected with its surface or subsurface shall not create a right of ownership over the surface or the subsurface of the Moon or any areas thereof. The foregoing provisions are without prejudice to the international régime to be established.

In this regard, state parties undertake to establish an international régime, including appropriate procedures, to govern the exploitation of the natural resources of the Moon as such exploitation is about to become feasible. This provision shall be implemented in accordance with the provisions concerning the question of the revision and review of the Agreement.

In the text of the Moon Agreement the following terms are utilized:

- *appropriation*, that means a right concerning possession, which belongs to oneself, to set apart for, or assign to, a particular use in exclusion of all other uses, to make to oneself in exclusion to other, to claim use as by an exclusive right;
- *use* or *occupation*, these expressions are related to prescription, the acquirement of the title or right to something through its continued use or possession for time immemorial or over a long period, it also contemplates the possibility of *usucapion*. The acquisition of the title or right to property by the uninterrupted and undisputed possession of it for a certain term prescribed by law;
- *ownership* the state or the fact of being an owner as synonymous of proprietorship, domain;
- *heritage*, property that is or can be inherited, something handed down from one's ancestors.

- *utilization* to put to profitable account or use, to make useful, as utilize natural resources; to consume, expend, or exhaust by use.

There are other rights that do not appear expressly in the text:

- *real property* from Latin **realis**, **res**, a thing. Relating to permanent immutable things, as real estate land, including the building or its natural assets as mineral water, etc. The owner has the right to control use and dispose of as he wills;
- *usurpation*: the act of occupying a property of another without right; unlawful occupation;
- *patrimony*, from Latin **patrimonium**, property inherit from one's father or ancestor.

It is well known that property rights was a conflict question in the history of humankind, because it is linked with political and economical factors. By other side, any tempted modification to the right of property is always resisted, because there are some associated considerations that spoil the inner essence of law.

Once consensus was aimed among all legal and political systems within COPUOS, it was noticed with surprise that some nations —that endorsed from the beginning the principle of common heritage of mankind— opened a debate that contradict the performance of their own representatives in the elaboration of the Agreement.

In our days we do not discuss property. Humankind is the owner of the whole of the Moon and celestial bodies and of outer space. This means that every member of humankind is owner of an undivided part of the whole as member of the collective owner. Therefore, each part of humankind exercises ownership over its undivided part of the whole good that is owned by humankind. Possession, use, exploitation and utilization are expressions and rights derived from the complex and complete right of property.

Conclusions

The Space Treaty and the Moon Agreement mention and found their principles in institutions taken from Civil Law.

It is correct that the number of real rights is not exhausted, consequently the question poses over Civil Law more than in international law and there are no obstacles for the space jurist, to create new real rights for the space environment and celestial bodies.

In the Moon and celestial bodies there is no sovereignty to guarantee the exercise of any right, nor to organize the simultaneous use and exploitation of the same celestial body.

Therefore it must be created an organ invested of sufficient authority, with jurisdiction and control, to organize and protect the free and full enjoyment of the common patrimony.

It is necessary to recall that when for the first time the expression —now known as common heritage of mankind— was used, the term I utilized was *patrimonio* which was translated into English as *common property* and in French as *patrimoine commun*.

There is a need to harmonize the rights of men with those of who that exploits the resources, bearing in mind that an illegitimate enrichment is not admissible by who did not co-operate in said exploitation. This is the real legal reason for the existence of the principle of international co-operation as legal condition to legitimate space

activities. This harmonization only can be made through an international agency.

References

1 A.A. Cocca, ***Die Rechtliche Natur das Weltraums***, Bericht über den V. Internationalen Astronautischen Kongress, Innsbruck, 5 bis 7 August 1954, Springer Verlag in Wien, 1955, page 283-290.

2 A.A. Cocca, Principles for a Declaration with reference to the legal nature of the Moon, ***Proceedings of the Ist Colloquium on the Law of Outer Space*** (The Hague, 1958), Springer Verlag, Wienn, 1959, page 37.

3 A.A. Cocca, Basic Statute for the Moon, ***Proceedings of the Vth Colloquium on the Law of Outer Space*** (Varna, 1962), Washington, 1963, page 37.

4 E. Fasan, Law and Peace for the Celestial Bodies, ***Proceedings of the Vth Colloquium*** (Varna, 1962), Washington, 1963, page 71.

5 A.A. Cocca, Determination of the Meanings of the expression *res communis humanitatis* in Space Law, ***Proceedings of the VIth Colloquium*** (Paris, 1963), Washington 1964, page 67 and 69.

6 E. Fasan, Basic Principles regarding the Celestial Bodies, ***Proceedings of the VIth Colloquium*** (Paris, 1963), Washington, 1964, page 124.

7 A.A. Cocca, Legal status of celestial bodies and economic status of the celestial products, ***Proceedings of VIIth Colloquium*** (Warsaw, 1964), University of Oklahoma, Norman, 1965, page, 21.

8 A.A. Cocca, Legal status of the natural resources of the Moon and other celestial bodies, ***Proceedings of the XIIIth Colloquium*** (Constanze, 1970), University of California, Davies, 1971, page 148.

9 A.A. Cocca, Mankind as a new legal subject: a new juridical dimension recognized by the United Nations, ***Proceedings of the XIIIth Colloquium,*** cit., page 214.

10 S.M. Williams, The principle of non-appropriation concerning resources of the Moon and celestial bodies, ***Proceedings of the XIIIth Colloquium*** , cit., page 157-159.

11 C.E.S. Horsford, Rules of human activity on celestial bodies, ***Proceedings of the XIIIth Colloquium*** cit. page 210.

12 L. Szaléky, The way of the further perfection of the legal regulation concerning the Moon and other celestial bodies especially regarding the exploitation of natural resources of the Moon and other celestial bodies, ***Proceedings of the XVIth Colloquium*** (Bakú, 1973), University of California, Davies, 1974 , page 198-199.

13 V. Kopal, The development of legal arrangements for the peaceful uses of the Moon, ***Proceedings of the XVth Colloquium*** (Vienna, 1972), University of California, Davies, 1973, page 159.

14 M. Smirnoff, The Need for a treaty on the legal status of the Moon, ***Proceedings of the XVth Colloquium***, cit., page 175.

15 E.G. Vassilevskaia, Legal regulation of activities on the Moon for the cause of peace and progress, ***Proceedings of the XVth Colloquium***, cit., page 180.

16 A.A. Cocca, The principle of the common heritage of all mankind as applied to natural resources from outer space and celestial bodies, ***Proceedings of the XVth Colloquium***, cit., page 176.

17 E.G. Vassilevskaia, Notions of "exploration" and "use" of natural resources of celestial bodies, ***Proceedings of the XXth Colloquium*** (Prague, 1977), University of California, Davies, 1978., page 475.

18 R. Arzinger, Legal aspects of the common heritage of mankind, ***Proceedings of the XXIInd Colloquium,*** (Munich, 1979), American Institute of Aeronautics and Astronautics, New York, 1980, page 89-90.

19 E.R. Finch, Jr., 1979 United Nations Moon Treaty encourage lunar mining & space development, ***Proceedings of the XXIInd Colloquium***, (Munich, 1979), American Institute of Aeronautics and Astronautics, New York, 1980, page 124.

20 E. Kamenetskaya, Subjects of international Space Law, ***Proceedings of the XXIInd Colloquium,*** (Munich, 1979), American Institute of Aeronautics and Astronautics, New York, 1980, page 164-165.

21 M. Miklódy, Some remarks on the question of

possession of mineral resources of the celestial bodies, ***Proceedings of the XXIInd Colloquium,*** (Munich, 1979), American Institute of Aeronautics and Astronautics, New York, 1980, page 179-180.

22 R.V. Dekanozov, Juridical nature and status of the resources of the Moon and other celestial bodies, ***Proceedings of the XXIIIrd Colloquium*** (Tokyo, 1980), American Institute of Aeronautics and Astronautics, New York, 1981, page 6-7.

23 E. Fasan, Some legal problems regarding the Moon, ***Proceedings of the XXIIIrd Colloquium*** cit., page 10.

24 E.R. Finch Jr. and A. L. Moore, The 1979 Moon Treaty encourages space development, ***Proceedings of the XXIIIrd Colloquium*** cit., page 17.

25 E. Galloway, Issues in implementing the Agreement Governing the Activities of States on the Moon and other celestial bodies, ***Proceedings of the XXIIIrd Colloquium*** cit., page 19 and 23.

26 J. F. Galloway, Political, philosophy and the common heritage of mankind concept in international law, ***Proceedings of the XXIIIrd Colloquium*** cit., page 25 and 27.

27 P.P.C. Haanappel, Article XI of the Moon Treaty, ***Proceedings of the XXIIIrd Colloquium*** cit., page 30.

28 M. Menter, Commercial space activities under the Moon Treaty, ***Proceedings of the XXIIIrd Colloquium*** cit., page 43.

29 R. W. Norris and R.L. Bridge, Some implications of the Moon Treaty with regard to public order in space, ***Proceedings of the XXIIIrd Colloquium*** cit., page 57.

30 H.L. van Traa-Engelman, The Moon Treaty —Legal consequences and practical aspects, ***Proceedings of the XXIIIrd Colloquium*** cit., page 76.

31 S.M. Williams, The Role of Equity in the Law of Outer Space, ***The Journal of the David Davies Memorial Institute of International Law,*** London, vol. V, N° 1, May 1975, page 702-703.