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THE INTERNATIONAL REGULATION OF AN EQUITABLE UTILIZATION OF NATURAL OUTER SPACE RESOURCES

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Introduction

The question is "how?", when one reads about an equitable regulation of the exploitation of scarce or limited natural resources and the sharing of the benefits thereof.
An answer could be: let the free market decide.
As to outer space resources, this can only work after States will have enabled private enterprise to freely compete on a "level playing field".

Article VI of the Outer Space Treaty of 1967 opens the possibility for States to deploy 'national' space activities, also by non-governmental entities by enacting national space legislation. As States widely differ as to the ability to be active in outer space, 'nationality' is not a good basis or criterion for regulation aimed at creating a 'level playing field' for private enterprise.
Therefore States shall have to promote cross-border alliances between 'national' entities, to give them more equal chances.

The Legal SubCtee of the UNCOPUOS had on its agenda since 1989 the discussion of principles regarding international cooperation in the exploration and utilization of outer space. It is the intention to give with such principles substance to article 1 of the OST of 1967, where it stipulates that 'the exploration and use of outer space shall be carried out for *the benefit and in the interests of all countries'*.

Dr. N. Jasentuliyana speaks of ensuring *equal access to the benefits* of space technologies for all countries. (10 Space Policy 7, 1994).
He obviously limits access to the benefits of space technologies, as it is more difficult to give 'equal' access to the technologies themselves as the transfer of technology may be a security problem.

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A working group of the Legal SubCtee has been busy trying to find a wording which may lead to concrete and workable results which are acceptable to all States, i.e. the different groups of States, Brazil leading the developing countries and France and Germany as the voice of the industrialized countries.
The Moon Agreement of 1979/84, in its article 11, 'solves' the problem by imposing a moratorium on the exploitation of the celestial bodies in the solar system, while the States Parties undertake to establish an international regime to govern the exploitation of the natural resources of the celestial bodies as soon as such exploitation becomes feasible.
No action is taken so far to arrive at such an international regime.

The undertaking to come to an international regime is based on the declaration in the article that the celestial bodies, including their orbits around or other trajectories to or around them, and their natural resources are the *common heritage of mankind.*

'Natural resources' do not include man-made facilities in outer space: Artificial satellites and space stations do not belong to the common heritage of mankind, not even when they use outer space resources.
The Moon Agreement, and therefore neither this principle, have universal validity, however. The principle as worded, moreover, lacks substance to give it legal effect.

The UNCOPUOS principles of 1996

The 'benefit problem' results from the 'freedom' of outer space for States. As a result of this freedom, States with the ability to reach outer space pursue their own interests, with the result that there now are space powers and non-space powers.

As a consequence of the equal and non-discriminatory freedom of outer space for exploration and use, the more powerful, more advanced and more active space powers stand to obtain more benefits than less powerful and less active space powers,

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creating next to the 'haves' and the 'have-nots', among the space powers a few dominant ones. The less powerful like a number of the European States try to look after their interests in outer space through international co-operation in the ESA.

The Legal SubCtee of the UNCOPUOS drafted a Declaration of principles with respect to the exploration and utilization of outer space for the benefit and in the interests of all States, taking into particular account *the needs* of developing countries.
The UN Declaration focuses on inter-State cooperation, but fails to oblige States to enter into such cooperation.
Moreover, it gives priority to the needs of the developing countries.
What are these needs?
One example is Tongasat, filling the gap left by Intelsat in Asia.

The Declaration is a "should" document, it gives no 'right' to access/participation/share of benefits with respect to the exploitation of outer space resources.
The UNCOPUOS/General Assembly of the UN can do no more than express the desire in a Declaration that the space powers "should contribute to promoting and fostering international cooperation on an equitable and mutually acceptable basis"; and "aim, inter alia," at :
(a) Promoting the development of space science and technology and its applications." ; and
(b) Fostering the development of relevant and appropriate space capabilities in interested States; and
(c) Facilitating the exchange of expertise and technology among States on a mutually acceptable basis." 1)

The international cooperation, according to the Declaration, "should be conducted in the modes that are considered most effective and appropriate by the countries concerned, including, inter alia, governmental or non-governmental; commercial and non-commercial; global, multilateral, regional or bilateral; and international cooperation among countries in all levels of development."
Anyhow "States are free to determine all aspects of their cooperation on an equitable and mutually acceptable basis". States are free to find 'the most effective cooperation'. 2)
Contractual terms "should be in full compliance with the legitimate rights and interests of the parties concerned, e.g. with intellectual property rights."

These texts of the principles are vague and general and reflect desiderata (the use of "should", instead of "shall"), which moreover, are essentially repetitive of what already exists in legal outer space instruments.
The principles, as desiderata, ought to be self-evident among civilized nations, the basic social need being that the space powers educate the non-space powers about what they are doing and about the results thereof, that they share their scientific and technological knowledge and that they assist the non-space powers in developing *indigenous capability,* enabling them to participate in space activities and receive adequate benefits from space activities.

These principles, adopted by the general Assembly of the UN, can hardly be considered to add new obligations for, more especially, the space powers, nor new rights for the developing countries.
They do not constitute a new binding legal regime adding new and binding rules to the provisions of existing space conventions.

Agreement on a Declaration of principles regarding cooperation, in our opinion, can easily be reached as the principles are just that, i.e. 'principles', which, as such, need not immediately be translated into action as long as there are no practical proposals or a concrete planning of how the principles can best be implemented.

The principles are formulated in such a way that they remain completely non-committal, open-ended and merely reflecting the good intentions of the States. They give general guidance *if* action is taken.
They do not bind States to take such co-operative action, however.

What is needed in our opinion, and would be more practicable, is to internationally 'de-nationalize' space activities by placing private enterprise under the international responsibility of the State of incorporation of the entity and from where the activities are being deployed, while enabling non-governmental entities to enter into cross-border cooperative arrangements for the utilization, that is the commercial exploitation of the outer space resources. 3)

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Private enterprise of different States will only enter into such co-operations if it is in their mutual benefit to become a multi-national entity.
States, therefore, should promote the opportunities for private enterprise to obtain benefits from space activities, deployed under cross-border co-operative arrangements.
Such approach is far better than pursuing a space-power struggle between States.
The UN Principles can merely act as an exhortation to in principle not exclude (the private enterprise of) any State, while giving indications as to the objective of such cooperation.

Again in our opinion, instead of adopting vaguely-worded principles, it would be better to create opportunities of direct access by private enterprise of all States to outer space resources, i.e. to the exploitation and the benefits thereof.

The approach to international space law taken in 1967 must be modernized to accommodate private enterprise in outer space, to compete in a level playing field.

There is no longer the confrontation between East and West leading to forced compromises. (e.g. Article VI of the OST).

Private enterprise is to be given direct access to outer space activities in order to exploit the natural space resources.

To this end a distinction must be made between what States should do and what should be left to private enterprise.

International legal instruments should make a distinction between:

(i) international outer space law for States to cover the technical/operational and infra-structural as well as environmental aspects of commercial outer space activities, which activities have to be regulated internationally and should be placed under international governmental supervision, while agreeing on easily amendable SARPS;

In other words, governments have the task to ensure the licensing and authorizing of private entities to be active in outer space and the registration of *civil* space objects/spacecraft, give the (traffic) "rules of outer space", ensure the security of space activities, provide the needed infra-structure, promote an international level playing field, guarantee fair competition internationally, arrange for standardization of licensing and registration requirements and oblige private enterprise to conform to regulations for the protection of the environment;

and

(ii) supplementary international legal instruments to bring private enterprise into outer space under standardized regulations concerning:
the economic aspects of commercial outer space activities, which should be left to private enterprise and be regulated in international legal instruments to guide national legislations, which should be based on standard provisions agreed upon internationally, taking into account article 1 of the OST and other obligations of the States involved, under existing international space law, as well as the principles mentioned-above.

Present space law

Present space law must be read as making a distinction between outer space (the solar system) as an area, outer space as a medium and outer space as a natural resource.

In the OST outer space is treated as an area, which States have freedom to explore, without the right to appropriate parts of outer space. moreover the OST treats outer space as a medium which may be used by States in which to sojourn or to transit.
Only the Moon Agreement deals with outer space as a natural resource.
When drafting the OST, natural resources were amply discussed, but finally left out as the time was not ripe to include provisions on their exploitation.
Even the later Moon Agreement in its article 11.5. refers to an international regime for the exploitation of natural resources, "as such exploitation is about to become feasible", but the UNCOPUOS in 1995 still found no need to take this matter up in accordance with article 18 of the Moon Agreement.

This means in the light of the Moon Agreement article 11.3. that 'a contrario' the OST leaves free the appropriation of natural resources, at least of the celestial bodies.
If earth orbits are a natural resource, the OST does not apply to these resources as such, but only as part of outer space as an area and a medium. To the extent that these resources are scarce or limited, Article I of the OST applies.

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The *freedom* of article I, *second* paragraph, of the OST means that every State has an equal right to do what it likes in outer space, as long as its national or international activities do not adversely affect other States.

In our opinion the only workable interpretation of article I, *first* paragraph (in view of private space activities and in connection with its second paragraph,) of the OST is that it does not require a 'sharing of benefits', but only requires that all space activities and their results are public so that everybody can share the news of discoveries and experiences.
The obligations with respect to the benefits of the exploration and use of outer space and the interests of all countries and this exploration and use being the province of mankind, for private enterprise, should be interpreted by keeping in mind the following distinction:
(a) one may benefit as a client against payment for the product;
(b) one may benefit by receiving full information;
(c) one may benefit by receiving technology;
(d) on may benefit by actually participating in an activity;
(e) one may benefit by receiving a share of the money earned from commercial space activities.

States may wish to claim the benefits mentioned under (b), (c) and (d) above, while private enterprise may claim them all.

Article II of the OST forbids *national appropriation* of outer space, including the celestial bodies. This article does not deal with natural resources, nor with private enterprise, however: that is why Article 11, para 3, of the Moon Agreement specifically adds the non-appropriation of natural resources, and non-governmental entities and natural persons, while limiting that non-appropriation to natural resources 'in place', in order to protect outer space as a free area and medium and keep room for the exploitation of the natural resources under an international regime.
The most natural approach to the problem of the 'haves' and the 'have-nots' with respect to outer space resources would be for the space powers to apply a system of technical assistance and foreign aid also in the field of space exploration and use, *in casu* to the non-space powers, including the developing countries.

Legitimate shares?

It seems futile to try and define a State's *right to participate in space activities or even a State's right to a share of the benefits,* for it is impossible to translate each State's 'territorial, c.q. economic imperative', which drive States' policies, especially if given a free field of action, into an equitable participation in the activities or equitable share of the benefits of the space activities.
Under a regime of freedom the basis of a State's share of the activity, or of the benefits of the activity, is its 'power', its capability to act, c.q. to take its share, or alternatively its qualification for international co-operation as a dependent partner, or simply 'charity'.
Such 'charity', which ultimately may be in the self-interest of the space powers, should be directed to the needs of the non-space powers for specific assistance and to the need to reduce on our planet the gap between the rich and powerful on the one hand and the poor and weak on the other.

To claim parts of outer space, as did the equatorial States with respect to segments of the Geo-orbit, is not the way to go.
Positive discrimination, e.g. in the allocation of parts of scarce resources and participation in limited resources, could be a way to help small States (cf. the slots in the Geo-orbit, allocated to Tonga).

A far better approach than to try and divide (the benefits of) outer space among all States, will be, however, to allow private enterprise direct access to outer space, be it under supervision of the 'home-State' of the enterprise. 3)

The 'infra-structure' (launching sites, spaceports, navigation aids, ground stations, launchers) necessary for private enterprise to reach outer space and be active in outer space, should then be 'internationalized', i.e. be made available by the States to all licensed private undertakings, regardless of their nationality and on a non-discriminatory and national treatment basis.

The privatization of space activities

To the growing extent that 'space activities', that is 'activities in outer space as well as activities elsewhere, but directly related to the activities in outer space', can be deployed profitably, there is a growing interest among private enterprise to become active in such commercial space activities.

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For private enterprise, that is non-governmental entities, to become active in outer space, it is necessary, under present international space law, that a State authorizes, under its national laws, the activity in outer space and supervises the activity.

Private enterprise, being totally dependent on the authorization by a State, while individual States are in totally different positions with respect to space activities, will not find a *level playing field* when entering the private commercial space activities market.
An *international* legal framework for private commercial space activities, so far, does not exist under public international space law, let alone that a level playing field is established beyond Articles I and II of the Outer Space Treaty.

Like in international air transport, trans-border co-operation between private companies of States with different positions in respect of competitiveness, will be necessary for many to be successful in the exploitation of outer space resources under international competitive conditions.
Such international co-operation can create a more level playing field for private enterprise of whichever country.
For no longer on a basis of nationality, but on the basis of international co-operation will the exploitation of outer space resources be developed.

National rivalry between States, the efforts to increase the State's space power is to be replaced by international competitiveness between private, non-governmental entities. Like in aviation this could develop into *regional* competitiveness. 4)

It may be important for States to be the 'home-State' of certain space activities, without, however, becoming the absolutely liable State for damage caused by the private activities to third parties.
This will have to be arranged by agreement between the Parties, i.e. the States having licensed, under their national space legislation, the private companies taking part in the cross-border co-operative venture.
For instance, the liability of the launching State should no longer extend to the total duration of the space activity, originating from the launch. The launch and the liability of the launching State also should legally be considered as to have terminated after the separation of the space object/spacecraft from the launch vehicle. 5)

Conclusion

Present international space law requires an international supplement to cover private space activities, if States wish to promote space activities by ('their') private enterprise.

This supplement must facilitate the international co-operation between private entities licensed under national space legislations, by prescribing standard clauses for such national space legislation, giving private enterprise free access to outer space under similar conditions, and freeing international private enterprise from governmental economic guardianship in outer space.

Private enterprise requires freedom in its own right.

Also present space activities deployed by (inter)governmental organizations should be 'privatized' as much as possible, without affecting the international public interest of the society of States. 6)

We shall have to give a new 'definition' to the role of States and of the international inter-governmental organizations in the world, involved in space activities, and in our case more especially of the European States, Members of the EU, and of such inter-governmental organizations in Europe.

The EU, after the example of the USA, wants privatized air carriers to enjoy the free internal market and benefit from free competition.
The EU, moreover, abolished regionally the nationality of air carriers, i.e. within the Union.

These measures, like in the USA, led to airline concentrations and under open skies regimes to cross-border alliances of air carriers of the US and the EU. Why not go the same way with private companies active in outer space ?

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1) See UN Doc. A/AC. 105/639, 1996, Annex, page 37, resp. articles 3, 5, 4 and 2.

2) See on international space cooperation also Megumu Nakamura: "Review of Article I of the OST." Abstract, IAF/IISL Beijing Conference, 6-11 October 1996.

3) Cf. the Barcelona Traction Case 1970, p. 42: "The traditional rule (of international law. Wh) attributes the right of diplomatic protection of a corporate entity to the State

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under the laws of which it is incorporated and in whose territory it has its registered office. These two criteria have been confirmed by long practice and by numerous international instruments."
In our opinion, the nationality criterion for air carriers and for space companies should be replaced in the international regulation of the economic aspects of international air transportation, resp. the international regulation of private space activities, by these criteria.

4) The Chinese Minister of the Commission of Science, Technology & Industry for national Defense, Mr. Ding Henggao, said that China's space industry is still behind the advanced countries (US, Europe, Japan and Russia) in the technical level, scale of economy, investment scale & industrialization. (See "Aerospace China", Summer 1996.) He sees the space technological industry as a strategic industry, which affects the balance of power. International co-operation is welcome if it serves the development of China's satellite technology and its application.

5) Present outer space law should no longer speak of a State's space object ('its' space object) other than if reference is made to a State space object or any space object during the launch by a State enterprise.

6) E.g. Among telecommunications providers, Intelsat, as an inter-governmental 139 nation organization, deciding by time-consuming consensus as members decide in favour of direct national benefit, may lose out to the competition of fiber optic cable for high-traffic, trunk, point-to-point routes and private enterprise active in satellite communications. This competition is faced not only in the commercial market place, but especially also in the regulatory market place.
(See Maury Mechanick of Comsat, in Via Satellite, pp. 12/14, of February 1996 and 'Intelsat debates restructuring', in Via Satellite of July 1996, p. 12).
Intelsat is to split into two entities, one governmental and one private.