

George D. Kyriakopoulos · Maria Manoli  
*Editors*

# The Space Treaties at Crossroads

Considerations de Lege Ferenda

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# Foreword

A pre-Socratic Greek philosopher, Heraclitus, once proclaimed, “the only thing that is constant is change.” On the other hand, in all the legal systems of the world, the principles of legal certainty and non-retroactivity of law have generally been achieved and maintained for almost all situations and relationships among the subjects of law. Thus, from a governance perspective, there is always a constant tussle in all societies, including the international community, to strike a balance between the need to change and the desire to maintain the applicable law. In order words, at the international level, efforts have often been made to ensure that certainty of behavior according to the rule-based international legal system is not threatened and that international law is reformed and changed in order to remain appropriately relevant and meet the varying needs and aspirations of the ever-changing international community. In this regard, international space law is not an exception.

International space law is a special branch of general international law and consists of a collection of binding principles and rules, incorporated in treaties and other sources of international law, that govern outer space and outer space activities. The foremost principles of international space law are embodied essentially in five space-related treaties that have been negotiated through the United Nations General Assembly during the 1960s and 1970s. Since then, the scope and nature of global space activities and the number of space actors have changed. It is, therefore, logical to reassess the efficacy of those treaties during a period which is different from the one when they were adopted.

This book addresses the most obvious, important, and timely question: whether the five UN space treaties can respond adequately to the new dimensions of and directions in space activities. This book is a collection of selected papers by several leading experts in space law and some young professionals. What makes this book an interesting reading is that it contains analysis of various issues and it presents innovative ideas from different perspectives.

In my view, this book is worth reading, especially by those who believe that the rule-based global space governance system is essential for maintaining and strengthening the common interest of all mankind in the progress of the exploration and use of outer space for peaceful purposes.

Montreal, QC, Canada

Ram S. Jakhu

# Preface

Since the beginning of the space age, the relationship between Man and outer space is continuously expanding and becoming complex. Although extensive exploration of deep space has not taken place as it was expected in the 1960s, numerous space applications - telecommunications, broadcasting media, remote sensing of the Earth, meteorology, navigation and security - have direct, important and beneficial impact on daily human life on Earth.

It is apparent that the future relationship of humankind with outer space will be extensive as well as exciting. Most notably and importantly, it is well-recognized that space activities provide practical benefits to all States. Presently, 13 States have independent launch capability, over 60 countries operate their own satellites, and worldwide there are over 70 space agencies. More than 1200 satellites are currently being operated, and thousands of new satellites (especially smallsats) are seriously under development to be launched in the near future.

The current international space law regime reflects international relations of the 1960s and 1970s, and is reflective of the views, the attitudes, the interests as well as the power relations of the space-faring States of that era. This legal regime, which throughout the years has been supplemented by soft law instruments, is mainly composed of the five United Nations space treaties. New space players, mainly consisting of non-governmental entities, which were non-existent when the current international space law regime was initially created, are fast becoming the main thrust of space activities of the future. With the global space industry as an economic activity valued at US\$ 320 billion annually, a growingly influential sector called the “NewSpace Industry” is now spearheading unprecedented developments in space. These developments present serious emerging challenges to the sustainability of space activities of all nations, particularly as the international space law-making process has stagnated since the last formal space law treaty was adopted in 1979.

Within the above context, this book – which is the outcome of the International Conference on New Challenges in Space Law “The Space Treaties at Crossroads: Considerations *de lege ferenda*” held in Athens, Greece, in 2015 – explores whether the five UN Space Treaties can correspond adequately to the new realities of our

time and suggests models for their adjustment to future challenges. Celebrating the 50th anniversary of the Outer Space Treaty, this book constitutes a timely collection of views, arguments, and ideas on how the future of space law should be in order to contribute to the peaceful use and exploration of outer space for the betterment of humanity. This rationale, purpose and questions constitute the crux of this book and are skillfully explored by its authors.

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Maria Manoli

# Acknowledgements

This book constitutes a collection of selected papers that were presented at the International Conference on New Challenges in Space Law “The Space Treaties at Crossroads: Considerations *de lege ferenda*.” The conference took place in Athens, Greece on 28–29 August 2015 and was jointly organized by the *Athens Public International Law Center (Athens PIL)* of the *National and Kapodistrian University of Athens, School of Law*, the *Institute of Air and Space Law at McGill University*, and the *McGill Centre for Research in Air and Space Law*.

Since 2017, the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space has focused a significant part of its works on potential models for the use and exploration of outer space in the future. The purpose of this conference and book explores the same issue from an academic perspective and seeks to contribute to this productive dialogue.

Therefore, we would like to express our utmost appreciation to all the speakers of the conference that engaged in relevant academic exchanges and to all the authors of this book, whose novel ideas will be useful in updating and restructuring the current legal framework on the use and exploration of outer space.

Furthermore, we owe many thanks to the *Athens PIL* and to the *Centre for Research in Air and Space Law* for giving us the opportunity to work on this project.

As always, we are sincerely grateful to Professor Ram Jakhu for his continuous kind advice, aspiring guidance and immense knowledge, and for his support on this work.

Athens, Greece  
Montreal, QC, Canada  
August 2018

George D. Kyriakopoulos  
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# Chapter 1

## Positive Space Law and Privatization of Outer Space: Fundamental Antinomies



George D. Kyriakopoulos

Over the past few years, an intense debate on the development of private commercial activities in outer space has commenced. This discussion presupposes the existence of relevant intentions, the attraction of significant investment, and the development of the necessary technology, in order for planned private activities in outer space, such as space tourism or the exploitation of mineral resources from celestial bodies, to enjoy a promising future.

“Antinomy” is a Greek word (*αντινομία*) that refers to “a fundamental and apparently unresolvable conflict.”<sup>1</sup> The author of this paper believes that this word emerges in every discussion on whether legal support and regulation of private activities in outer space is feasible on the basis of existing legal norms. This happens because positive international space law does not seem to support such initiatives: The fundamental five international space treaties, adopted by the international community from 1967 to 1979, constitute state agreements based, inter alia, on the principle of non-appropriation of outer space, including the Moon and other celestial bodies (Article II of the *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies* (hereafter “Outer Space Treaty”),<sup>2</sup> while requiring the monitoring of States (which, subsequently, take on the relevant responsibility) over any private activities in outer space (Articles VI and VII of the Outer Space Treaty, Articles II and III of

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<sup>1</sup>“Antinomy,” online: Merriam Webster <http://www.merriam-webster.com/dictionary/antinomy> (last accessed on 12 August 2018).

<sup>2</sup>*Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies*, adopted on 19 December 1966, opened for signature on 27 January 1967, entered into force on 10 October 1967, 610/U.N.T.S./205 [Outer Space Treaty].

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the *Convention on International Liability for Damage Caused by Space Objects* (hereafter “Liability Convention”).<sup>3</sup> Consequently, the said treaties leave little room for private activities in outer space.

Furthermore, the existing space law takes the direction of a collective exploration and exploitation of outer space, through the concept of “province of all mankind” (Article I of the Outer Space Treaty) as well as it requires, at least in principle, the adoption of a collective exploitation regime of the Moon and the celestial bodies (Article 11, paragraph 5 of the *Agreement governing the Activities of States on the Moon and Other Celestial Bodies* (hereafter “Moon Agreement”)).<sup>4</sup>

A discussion on the specific manifestations of this antinomic relationship between existing provisions of international space law and the growing desire for involvement of private interests in outer space constitutes the subject of this paper.

## 1.1 Public Law V. Private Activities

It is commonly known that space exploration was initially undertaken by governmental entities, being frequently a field of intense confrontation and rivalry between the two superpowers of the Cold War, the USA and the Soviet Union, which almost monopolized, for a long time, activities in outer space. Even today, the predominantly active space services (NASA, CSA, Roscosmos, JAXA, CNSA) belong to States or intergovernmental organizations, which are composed of States (ESA).

Moreover, US and Soviet space activities in the 1950s and the 1960s were of governmental nature. This “public” character of (*lato sensu*) space exploration was universal, since it also affected what was described as “use” of outer space: As it has been rightfully mentioned, “the first concrete application of space use, namely, the use of outer space for telecommunication satellites, was characterized by the public purpose.”<sup>5</sup>

This “public purpose” is the main characteristic of positive international space law even today, since, after the Moon Agreement,<sup>6</sup> there was no other international space legislation of binding nature, while, at the same time, there was a trend toward

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<sup>3</sup> *Convention on International Liability for Damage Caused by Space Objects*, adopted on 29 November 1971, opened for signature on 29 March 1972, entered into force on 1 September 1972, 961/U.N.T.S./187 [Liability Convention].

<sup>4</sup> *Agreement governing the Activities of States on the Moon and Other Celestial Bodies*, 5 December 1979, 1363 UNTS 3 (entered into force 11 July 1984) [Moon Agreement].

<sup>5</sup> S. Hobe, “The Impact of New Developments on International Space Law (New Actors, Commercialization, Privatization, Increase in the Number of “Space-faring Nations”), *Uniform Law Review* (2010), Vol.15 issue 3–4, 869 at 870.

<sup>6</sup> *Agreement Governing the Activities of States on the Moon and Other Celestial Bodies*, adopted on 5 December 1979, opened for signature on 18 December 1979, entered into force on 11 July 1984, 1363/U.N.T.S./3 (hereinafter “Moon Agreement”).

the creation of soft law regulations, through the adoption of “Principles,” “Guidelines,” or “Codes of Conduct.”<sup>7</sup>

Yokaris vividly explained why space law is public law:

In the current level of evolution of space law, the relationships regulated under this branch of international law are relations between subjects of international law, States and international organizations. Therefore, contrary to the law of airspace, whose institutional framework consists of public international law conventions as well as of instruments of international uniform private law regulating activities in airspace, not only of subjects of international law but also of natural or legal persons subject to private or public law..., international space law does not yet appear under this complex form. In the field of space law, there are no such regulations that could systemically be classified under a separate category of “private space law” or “private international space law” through the institutional form of conventions of international uniform law.<sup>8</sup>

Given this “public” nature of positive space law, is there a place for the regulation of private activities in outer space? Article VI of the Outer Space Treaty is eloquent in providing that States shall bear international responsibility “for national activities in outer space, ... *whether such activities are carried on by governmental agencies or by non-governmental entities.*” Moreover, activities by nongovernmental entities in outer space “shall require authorization and continuing supervision by the appropriate State.” It is thus evident that, even when they really exist, private space activities do not comprise an autonomous legal treatment, given that they are legally perceived as “annexes” to a broader activity of State character.

Or, in Yokaris’ words:

This fact is in contrast to the problem of private space activities. Indeed, private companies also participate in the space exploration and exploitation programs of States that have the necessary technology (USA, the group of countries participating in the European Space Agency, Japan), either in research, construction or in issues related to the economic exploitation of outer space – mainly in regards to satellite telecommunications. *But in all these cases, the State keeps the private activities under its control*, whether they are limited to the technical preparation of government space programs or associated with their financial exploitation. Thus, *only the State is present in the international sphere, in respect of the activities undertaken in relation to the exploration and exploitation of space.* In the context of the institutional framework composed by international conventions and agreements of the Law of Outer Space, *only the launching State, having control over all these activities, is a subject of rights and obligations and can be held internationally liable.*<sup>9</sup>

Similarly, Hobe shares the view for a “public” nature of the Outer Space Treaty, which is the fundamental international space law instrument, mentioning that

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<sup>7</sup>...Such as the UN COPUOS Space Debris Mitigation Guidelines (A/RES/62/217, 1 February 2008), the IADC Space Debris Mitigation Guidelines, the Principles Relating to Remote Sensing of the Earth from Outer Space (A/RES/41/65, 3 December 1986) or the EU International Code of Conduct for Outer Space Activities.

<sup>8</sup>A Yokaris, *International Law of Airspace and of Outer Space* (in Greek) (Greece: Ant. N. Sakkoulas, 1996), at 264–265.

<sup>9</sup>*Ibid*, at 265 (emphasis added).

...the Outer Space Treaty does not fulfill [the] task [of forging an international legal order for the commercial use of outer space], given its rudimentary provisions on the freedoms of outer space which reflect the fact that outer space is the province of all mankind.<sup>10</sup>

Even supporters of the existence of private property rights in outer space, such as White, admit that “the paucity or outright absence of law regarding certain key subjects such as property rights, mining, salvage, liability, and dispute resolution is a disincentive to private space activities.”<sup>11</sup>

## 1.2 The Non-appropriation Principle V. Property Rights in Space

Article I (2) of the Outer Space Treaty establishes the principle of freedom of exploration and use of the outer space:

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

This “freedom of exploration and use” is not limitless: It must be interpreted in the light of Article II of the same treaty, which sets out the principle “of non-appropriation”:

“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”. Same principle is contained in art. 11(2) of the Moon Agreement<sup>12</sup>: “The Moon is not subject to national appropriation by any claim of sovereignty, by means of use or occupation, or by any other means.”

The core element in Article II of the Outer Space Treaty is “national appropriation.” Said wording existed in UNGA Resolution 1721(XVI) of 20 December 1961 as well as in UNGA Resolution 1962(XVIII) of 13 December 1963 (principle no 3). According to the opinions expressed during the *travaux préparatoires* of the Outer Space Treaty – and those of distinguished scholars<sup>13</sup> – the expression “national

<sup>10</sup> Hobe, “The Impact...,” *supra* note 5, at 878.

<sup>11</sup> W. White, “The Legal Regime for Private Activities in Outer Space,” paper presented at “Space: The Free Market Frontier” (15 March 2001), online: Space Future [http://www.spacefuture.com/archive/the\\_legal\\_regime\\_for\\_private\\_activities\\_in\\_outer\\_space.shtml](http://www.spacefuture.com/archive/the_legal_regime_for_private_activities_in_outer_space.shtml) (last accessed on 12 August 2018).

<sup>12</sup> It is important that, in accordance with Art. 1 of the Moon Agreement, references to the moon in the treaty shall be understood as applicable to all celestial bodies within the solar system, other than the Earth.

<sup>13</sup> S Freeland and R Jakhu, “Article II,” in S Hobe, B Schmidt-Tedd, K-U Schroggl, and G Meishan Goh Eds, *Cologne Commentary on Space Law*, Vol. 1 Outer Space Treaty (Carl Heymanns Verlag, 2009), at 50; S Hobe, “Adequacy of the Current Legal and Regulatory Framework Relating to the Extraction and Appropriation of Natural Resources,” in Institute of Air and Space Law, McGill University, *Policy and Law Relating to Outer Space Resources: Examples of the Moon, Mars, and*



appropriation” prohibits both the exercise of sovereign rights (by States) and private appropriation (by nongovernmental entities). This conclusion is further strengthened by the clear wording of Article 11(3) of the Moon Agreement, according to which

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.*<sup>14</sup>

Consequently, in view of the principle of non-appropriation, it is hard to see how (State or private) property rights can be legally established in outer space. Of course, in accordance with Article VIII, paragraph 2 of the Outer Space Treaty, “ownership of objects launched into outer space, including objects landed or constructed on a celestial body, and of their component parts, is not affected by their presence in outer space or on a celestial body or by their return to the Earth.” However, this article is inapplicable against resources mined on a celestial body, since they were previously covered by the non-appropriation principle and, obviously, ownership thereon is inconceivable.

### 1.3 Interests of Humankind V. Interests of States and Individuals

Humankind (“mankind” in treaty wording) holds a prominent place in the outer space treaties: According to Article I, paragraph 1 of the Outer Space Treaty, “The exploration and use of outer space, including the Moon and other celestial bodies, shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind.” An analogous provision resides in Article IV, paragraph 1 of the Moon Agreement. Besides, Article V of the Outer Space Treaty considers astronauts as “envoys of mankind in outer space,” while Article 11, paragraph 1 of the Moon Agreement, stipulates that “The Moon and its natural resources are the common heritage of mankind.”

On the basis of these provisions, it seems that humankind per se can be validly considered as a distinct subject of international space law.<sup>15</sup> The acceptance of this assumption inevitably implies a right of every State to require any activity in outer

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*other Celestial Bodies*, Workshop Proceedings, 28–30 June 2006, at 206; S Hobe, “The Legal Framework for a Lunar Base Lex Data and Lex Ferenda,” in Gabriel Lafferranderie and Daphné Crowther, Eds, *Outlook on Space Law over the Next 30 Years: Essays Published for the 30th Anniversary of the Space Treaty* (Springer, 1997), at 138–139.

<sup>14</sup>Emphasis added.

<sup>15</sup>Yokaris, *supra* note 8, at 268–269.

space be exercised in the interest of all States, in other words in the interest of (Hu) mankind.<sup>16</sup>

Nevertheless, some scholars consider that a distinction must be made between the two concepts: “province of all mankind” and “common heritage of mankind.” It is obvious that the supporters of private profit-making activities in space clearly adopt less holistic approaches of these concepts. Brittingham considers that the “province” concept is ambiguous and open to interpretation, as only a few States actually contribute to outer space practice, without sharing the benefits.<sup>17</sup> At best, “province of mankind” should give access to space resources at a fair market price, “for everyone,”<sup>18</sup> whereas “common heritage of mankind” should just impose a space exploration and exploitation for peaceful purposes.<sup>19</sup>

Tronchetti makes a concrete distinction between the two concepts:

Under the ‘province of all mankind’ concept, States are free to explore and use outer space as long as they do not harm other States. Although the exploration and use of outer space shall be carried out for the benefit and in the interests of all States, the ‘province of all mankind’ concept does not establish any obligation to share the benefits derived from outer space activities. By contrast, under the ‘Common Heritage of Mankind’ concept the exploration and exploitation of a certain ‘area’ and its resources shall be carried out in accordance with the rules established by an international regime or authority. Successful explorers, users and exploiters, would be obliged to conform to that international regime and share the benefits derived from their exploitative activities. In such sharing of the benefits, particular regard must be paid to the developing States, regardless of their level of participation in such activities.<sup>20</sup>

Finally, Gabrynowicz considers that a “strategic distinction” exists between the two concepts, as “the ‘province of all mankind’ provision contained in the Outer Space Treaty refers to ‘activities (exploration and use),’” while “the ‘common heritage’ provision as contained in the Moon Treaty refers to ‘material objects.’”<sup>21</sup>

In order to reconcile opposing views on the matter, Goedhuis proposed, as a common denominator, four essential elements of the “heritage” notion that (1) the area under consideration cannot be subject to appropriation, (2) all countries must share in its management, (3) there must be an active sharing of benefits reaped from the exploitation of these resources, and (4) the area must be utilized exclusively for peaceful purposes.<sup>22</sup> However, one could observe that a reference to “sharing” could not be avoided.

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<sup>16</sup> *Ibid.*

<sup>17</sup> Bryon C Brittingham, “Does the World Really Need New Space Law?” (2010) 12 *Oregon R.I.L.*, 37.

<sup>18</sup> *Ibid.*, at 39.

<sup>19</sup> Jeremy L Zell, “Putting a Mine on the Moon: Creating an International Authority to Regulate Mining Rights in Outer Space” (2006), 15 *Minnesota J.I.L.*, at 496.

<sup>20</sup> Fabio Tronchetti, *The Exploitation of Natural Resources of the Moon and Other Celestial Bodies* (the Netherlands: Nijhoff, 2009), at 44–45.

<sup>21</sup> Joanne Irene Gabrynowicz, “The ‘province’ and ‘heritage’ of mankind reconsidered: A new beginning,” NASA Johnson Space Center, Second Conference on Lunar Bases and Space Activities of the twenty-first century, vol. 2, 1992, at 692.

<sup>22</sup> See Daniel Goedhuis, “Some Recent Trends in the Interpretation and Implementation of the

In any case, the cornerstone for the “province” and “heritage” concepts is the “common interest of mankind” provision: According to the Preamble of the Outer Space Treaty, there is a “common interest of all mankind” in the progress of the use of outer space, whereas such “use” “should be carried on for the benefit of all peoples, *irrespective of the degree of their economic or scientific development.*” This “common interest of mankind” in outer space had already been recognized in the “historic” UNGA Resolutions 1348(XIII) of 13 December 1958, 1472(XIV) of 12 December 1959, 1721(XVI) of 20 December 1961, 1962(XVIII) of 13 December 1963, and, relatively recently, 55/122 of 27 February 2001 where a desire for “the energetic promotion” of the “fullest... exploitation of outer space for the benefit of mankind” had also been expressed.<sup>23</sup> Moreover, the first of the famous “principles” contained in Resolution 1962/1963 provides that “...use of outer space shall be carried on for the benefit and in the interests of all mankind.” The third principle also provides that “outer space and celestial bodies are not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means.” In particular, Resolution 1962/1963, in reaffirming previous resolutions, provides, in its Preamble, that “...Use of outer space should be carried on for the betterment of mankind and for the benefit of States irrespective of their degree of economic or scientific development.”

Reference must also be made to the Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States, Taking into Particular Account the Needs of Developing Countries (UNGA Resolution A/RES/51/122 of 13 December 1996. According to one of the included principles:

All States, particularly those with relevant space capabilities and with programmes for the exploration and use of outer space, should contribute to promoting and fostering international cooperation on an equitable and mutually acceptable basis. In this context, particular attention should be given to the benefit and the interests of developing countries and countries with incipient space programmes stemming from such international cooperation conducted with countries with more advanced space capabilities.

Nevertheless, as Jakhu has pointed out, the “international cooperation” mentioned in this resolution is far from taking a mandatory form, given that, according to another of the included principles, “States are free to determine all aspects of their participation in international cooperation in the exploration and use of outer space on an equitable and mutually acceptable basis.”<sup>24</sup> It is indeed remarkable that in the case of A/RES/51/122, the focus is at the “benefit and interest of all *States*” rather than to “mankind.”

In respect of the “common heritage of mankind” provision, it would be useful to look back to the origins of this concept. The relative term first appears in a proposal

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Rules of International Space Law,” (1981) 19 *Columbia J.T.L.*, at 212.

<sup>23</sup> See also Resolution 1348(XIII) of 13 December 1958 (above cited).

<sup>24</sup> Ram Jakhu, “United Nations Principles in Outer Space,” in Proceedings of the United Nations/Nigeria Workshop on Space Law on “Meeting international responsibilities and addressing domestic needs” held on 21–24 November 2005, in Abuja, Nigeria, pat 28–38.

of Malta to the Secretary General of the United Nations, through its representative Arvid Pardo: By note verbale dated 18 August 1967, Malta proposed the inclusion in the agenda of the 22nd Session of the UN General Assembly the adoption of a Declaration concerning the international regulation of the seabed and the ocean floor. In a historic statement before the First Committee of the United Nations, on November 1, 1967, Pardo, *inter alia*, stated:

In the light of current technological developments, however, the compromise turns out to be no compromise at all; it is clear that the sea-bed beyond the 200-metre isobath will soon be subject to exploitation. The only question is, will it be exploited under national auspices for national purposes, or will it be exploited under international auspices and for the benefit of mankind?... The sea-bed and the ocean floor are a *common heritage of mankind* and should be used and exploited for peaceful purposes and for the exclusive benefit of mankind *as a whole*.<sup>25</sup>

It is certainly a fact that the industrialized countries have shown no intention to share the noble aspirations of Arvid Pardo, both with respect to the ocean depths and in relation to the Moon and other celestial bodies.<sup>26</sup> This reluctance, derived from their technological superiority, dictated to them an approach of the “common heritage of mankind” concept, which essentially meant “all States shall have access to the outer space resources (although, for some of them, the Moon is too far).”<sup>27</sup> Thus, the dispute over the interpretation of the “common heritage” doctrine led to the formation of the following dilemma: equitable sharing (of benefits) or equal access (to space resources)?<sup>28</sup>

Through this debate, the fundamental concept is finally put forward:

Whether the outer space is either “the province of all mankind” or “the common heritage of mankind,” in any case the dominant conceptual element remains the same: It is (*hu*)*mankind* that charges both concepts.

Humankind, as a notion, is based on consistency, not on division: It is thus a profoundly different concept from “every nation.” According to Baslar, “human-kind” was generally associated with the notion of “all States,” while, according to another view, the term refers to “all peoples.”<sup>29</sup> Gorove also emphasized this sense of community, when he considered that humankind describes “a collective body of peoples wherever they may be found.”<sup>30</sup>

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<sup>25</sup> Statement of Arvid Pardo, 1 November 1967, First Committee, UNGA, 22 UN GAOR, 1515th and 1516th Meeting, at 8–9 (1515th) and 2 (1516th) (emphasis by the author).

<sup>26</sup> Kelly M Zullo, “The Need to Clarify the Status of Property Rights in International Space Law,” (2001–2002) 90 *Georgetown L.J.*, at 2424.

<sup>27</sup> See Ricky J. Lee, *Law and Regulation of Commercial Mining of Minerals in Outer Space* (Switzerland: Springer, 2012), at 15.

<sup>28</sup> Daniel A. Porras, “The ‘Common Heritage’ of Outer Space: Equal Benefits for most of Mankind” (2006), 37:1 *California West.I.L.J.*, at 154.

<sup>29</sup> Kemal Baslar, *The Concept of the Common Heritage of Mankind in International Law* (The Netherlands: Nijhoff, 1998), at 73; Leo B Malagar and Marlo Apalisok Magdosa-Malagar, “International Law of Outer Space and the Protection of Intellectual Property Rights” (1999), 17 *Boston U.I.L.J.*, at 343.

<sup>30</sup> Stephen Gorove, “The Concept of the Common Heritage of Mankind: A Political, Moral, and Legal Innovation?” (1972), 9 *San Diego L.R.*, at 393.

It has already been proposed that humankind constitutes a distinct (from States) subject of international space law. Although States (at least some of them) have tried to overlook the collective element contained in the “(hu)mankind” term<sup>31</sup> – especially since its reference to the Outer Space Treaty takes place the same year that Pardo makes his monumental speech before the First Committee (1967) – its inclusion in the existing international legal instruments adversely affects the acceptance of private business activities in space.

## 1.4 International V. National (Space) Law

Outer space belongs to the category of the so-called global commons, which include areas beyond national jurisdictions<sup>32</sup> (high seas, deep seabed, international airspace, Antarctica). This is clear, *inter alia*, in the combined reading of Article I paragraphs 1 and 2 of the Outer Space Treaty: “The exploration and use of outer space... shall be carried out for the benefit and in the interests of all countries... and shall be the province of all mankind. What is more, ‘outer space... shall be free for exploration and use by all States without discrimination of any kind, on a basis of equality and in accordance with international law, and there shall be free access to all areas of celestial bodies.’” The absence of any national jurisdiction is also patent in the principle of non-appropriation, enshrined in Article II of the Outer Space Treaty, pursuant which “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.”

Any activity in outer space is regulated by international law. This derives from the combined reading of Articles I, III, and VI of the Outer Space Treaty. Although Article VI leaves space for “national” activities in outer space, Article III provides that “States Parties to the Treaty shall carry on activities in the exploration and use of outer space, including the Moon and other celestial bodies, *in accordance with international law, including the Charter of the United Nations*, in the interest of maintaining international peace and security and promoting international cooperation and understanding.” The applicability of international law is further reinforced by Article I, where it is stipulated that “[o]uter space, including the Moon and other celestial bodies, shall be free for exploration and use by all States without discrimination of any kind, on a basis of equality *and in accordance with international law*.” Further, it is important to note that Article III of the Outer Space Treaty sets out a

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<sup>31</sup> As Mineiro observes, “the vast majority of commentary on the Outer Space Treaty that assess the concept of mankind focuses on the operative nature of the relevant treaty provisions as they relate to and among States – overlooking the possibility that mankind is a distinct holder of international legal rights” – Michael Mineiro, *Space Technology Export Controls and International Cooperation in Outer Space* (Switzerland: Springer, 2012), at 182.

<sup>32</sup> Surabhi Ranganathan, “Global Commons,” *European Journal of International Law* (2016), 27:3,1, at 693–717.