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Common benefit from a perspective of “Non-traditional Partners”: A proposed agenda to address the status quo in Global Space Governance[☆]

Timiebi Aganaba-Jeanty^{*}

Institute of Air and Space Law, McGill University, Canada

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ABSTRACT

It is presupposed that there is a dominant position in interpreting the freedom of Outer Space which has not given much real significance to the idea of common benefit. The reason that this causes difficulty is that there is an ambiguity to common benefit. This dominant position however sees the issue of benefit sharing in the context of the perceived tension between established space faring nations and emerging and aspirant States and the idea that freedom could take on a different meaning depending on where one is on the scale of development. It fails to recognize that solutions to contemporary and historical governance challenges have been much less oriented towards the interests of less developed States or new entrants, making the accrual and sharing of benefits dependent on the free will of those States able to carry out a variety of space activities independently. As a result of this, the debate around common benefit is exploited to seek individual benefit derived for a State as opposed to what our effort to use space collectively can generate. In recent times, the issue has not received much attention. This is because it is believed to be partly resolved through normative frameworks such as Article 1 of the Outer Space Treaty and the Space Benefits Declaration. While an attempt to re-address historical contentious issues, asserted to be resolved, may appear illusory or futile; such analysis can be useful depending on the account that the reader believes should be given to the normative character of human nature. To this end, the writings of legal, political and social theorists and methodologies from Critical Legal Schools may prove insightful for a deeper contextualization of the historical debate, the current understanding of the freedoms of Outer Space as well as unearth future perspectives to aid in addressing the current pressing space related issue of our time: Sustainability of Space Activities. This article proposes three main issue areas to investigate to find solutions to some of the perceived tensions prevalent in space governance:

- (1) Who are the “Non Traditional Partners”, who is speaking for them and what are their actual issues if any?
- (2) The Potential of Space for “Non Traditional Partners” and others.
- (3) Assessment of South–South cooperation, regional cooperation and other forms of collective collaboration.

The article concludes that that the central issue is the need for stronger central institutions. This takes nothing away from polycentrism, but to get polycentrism to work

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^{*} Tel.: +1 514 297 0203.

E-mail address: timiebi.aganaba@mail.mcgill.ca

there is a need for functioning and not static global institutions. We must see how networks effects to produce in maximizing space benefits and this can only be achieved through the connection between strengthened global institutions and local initiatives.

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1. Introduction

In its report on Government Space Programs,¹ Euroconsult tracks and reports on over 80 countries that are investing in or have announced future plans to invest in space technology development. For the majority of these countries, International Cooperation is one of the cornerstones of the national space program. However, in assessing cooperation initiatives ranging from those of established space fairing nations such as the U.S., to new entrants such as Ghana, it appears that cooperation between entities of varied technical capability may not be as widespread as the increasing numbers of space capable/aspirant countries would lead us to believe. For example, in 2011 50% of NASA's cooperation was with only 8 partners,² with many of the other established space nations only cooperating with traditional partners.

In a bid to increase its cooperation with non-traditional partners, NASA acknowledges that its cooperation guidelines may need modification. According to Ciccarelli,³ space cooperation with developing countries requires three main actions:

- (1) capacity building, education and training;
- (2) access to information and data sharing;
- (3) technical assistance and technology transfer.

Of relevance to these emerging nations primarily interested in capability development, NASA's guidelines dictate that cooperation be structured to protect against unwarranted technology transfer. In a similar light Blasano⁴ states that in cooperation with non-member states, the European Space Agency (ESA) adopts a minimum technology transfer approach only transferring information and data necessary for carrying out a particular project. However, she posits that "it is clear that in the case of cooperating with developing countries, the minimum technology transfer approach will have to be adapted as it makes no sense to cooperate on a quid pro quo basis with countries which do not have the minimum technology needed to derive benefit from ESA's space technology."

As highlighted by Sadeh,⁵ while technology transfer is not traditionally allowed, it would be allowed if it is within the scope of the actor's policy preferences and if it is necessary to technical functions. However, in the face of

acknowledgments that adaption and modification in cooperation guidelines is required and as the need for know-how technology transfer and training opportunities is an increasingly important criterion for emerging space nations, can established space nations be encouraged to view the need for more favorable conditions for the benefit of non-traditional partners as more in line with policy objectives?

To answer this question and if nations are true to their objective of wanting to cooperate more with non-traditional partners, there must be an acknowledgment that some legal aspects of concern are consistently overlooked because foundational disciplinary issues remain unexplored. This article proposes that an assessment of the legal framework governing international cooperation in space activities calls for a re-reading of space law that promotes increased space cooperation between States and various actors that encourages the spread of space benefits to all. It argues that the Declaration on International Cooperation (the Space Benefits Declaration)⁶ develops only part of the significance of the common interest/common benefit principle in Article 1(1)⁷ of the Outer Space Treaty,⁸ thus there is still opportunity to fill in the meaning of the legal right to international space cooperation and space benefit.

2. Sources of law

According to Jakhu and Freeland,⁹ the Outer Space Treaty is not the constitution of Outer Space, but a principal (framework) treaty laying down important principles for outer space governance "that may be confirmed, developed upon, or varied". The work of Duncan Kennedy¹⁰ a Critical Legal Studies Scholar, is instructive in analyzing this point. Kennedy's thesis is that the main barrier to social transformation is the reification and "fetishization" of the law that society has, and that fundamentally, there are two important issues that arise

⁶ 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, GA res. 51/122, UN Doc. A/AC.105/572/Rev. 1 (1996).

⁷ "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."

⁸ Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, 610 U.N.T.S. 205 (Outer Space Treaty/OST).

⁹ Ram Jakhu and Steven Freeland, *The Sources of International Space Law*, 56th IISL Colloquium on the Law of Outer Space, 64th International Astronautical Congress 2013, Beijing, China at 4.

¹⁰ Duncan Kennedy, *Legal Reasoning: Collected Essays* (Davies Group Publishers, 2008).

¹ Euroconsult, *Profiles of Government Space Programs*, 2014 Edition.

² Michael O. Brien, *International Cooperation at NASA*, Presentation at the Asia Pacific Regional Space Agency Forum, December 8, 2011.

³ Silvia Ciccarelli, *Space Cooperation with Developing Countries: The Case of Morocco*, 2006, Available online: (<http://ojs.uniroma1.it/index.php/JMEG/article/viewFile/3130/3114>).

⁴ Anna Maria Balsano, *Technology Transfers and Public International Research Organizations: The Example of ESA*, Proceedings of the 37th Colloquium on the Law of Outer Space (1994) 121–130.

⁵ Eligar Sadeh, *Dynamics of International Space Cooperation*, Unpublished Ph.D. Dissertation, Colorado State University, 1999.

from the indeterminate character of the law that is portrayed by “the system” and society as largely determinate. Firstly, the pretense that law is determinate mystifies social life encouraging people to think that the practices codified in law are fixed and frozen, and that so long as their immediate or fundamental rights are protected they cannot/ should not complain. This in turn discourages them from political action aimed at transforming the content of rights so as to realize the emancipatory potential of law. Secondly, it maintains the status quo which is to the benefit of capitalism and the bourgeoisie because “the system” knows how to hide or use that indeterminacy to its advantage. The system has created “discipline” in the Foucault¹¹ sense in that most people are not willing to challenge it as they have been conditioned to accept the ideologies of capitalism. Thus, despite the acknowledgment that Article I OST appears indeterminate, that it is in a legal form makes it appear determinate so no one knows what to do and thus subject to the very problem that Kennedy is highlighting.

The more obvious way to address this issue is to direct exploration efforts towards identifying any unseen bottlenecks in the Space Law that is preventing International Cooperation in Space and suggesting corrective measures. However, it is clear that finding direct bottlenecks in the text and wording will be difficult because the wording was left purposefully vague. I therefore approach this problem by questioning underlying philosophical and political assumptions: namely, the understanding of freedom of Outer Space for the benefit of all countries¹² that appears to provide the foundation for the whole issue, arguing that the provision of Article I OST may possibly be flexible enough to allow an interpretation in accordance with the current needs of the international community. I identify that the real issue with the current interpretation of the common benefit principle under Article I OST is that it is viewed as a *limitation* to the freedom of Outer Space instead of as a *condition* of freedom. While this distinction may appear as simply semantics or a matter of perspective, the effect of this misnomer is consequential because it makes discussion about equity and fairness circular, and benefit sharing as something of a burden rather than a positive obligation to fulfill to ensure that all can benefit. Some of the perspectives of some notable space law scholars are seen as particularly problematic in this regard because they appear to stress the dominant understandings of this underexplored obligation, without fully considering some underlying nuances. It could be as a result of some of these analyses, of which this current piece could also be guilty that Jakhu and Freeland state that “the contemporary practice of the international judicial bodies shows a

noteworthy reluctance to use scholarly writings as a means to search for the *lex lata* of international law”.¹³

3. Conditions of cooperation

According to Jasentuliyana,¹⁴ the matter of access to space benefits is “ultimately a question of the nature of international cooperation among states.” Underdal¹⁵ however highlights that the important question in the study of International Cooperation is to determine under which conditions cooperation will be effective.

Historically, there has been little need to even discuss know-how technology transfer opportunities when an assessment is undertaken of the forms of cooperation between established space nations such as the U.S. and developing countries. NASA's cooperative activities historically were placed neatly into four categories: information exchange, personnel exchange, operations support and cooperative projects.¹⁶ While NASA credits itself that the other 50% of its cooperation agreements are undertaken with over 100 other countries, Hudiburg's¹⁷ study found that International Cooperation between NASA and the majority of developing countries was predominantly caused by “mere latitude and longitude of a foreign nation”. Essentially, the only requirement for the type of cooperation NASA was engaging in with developing countries was based on an “appropriate global position”. Anecdotal evidence shows that there was plenty of enthusiasm by countries to be involved in operational support for NASA programs because countries could associate themselves with the space age even though they contributed little but their territory.¹⁸

Today, an assessment of the space related cooperation agreements with developing countries currently published by the U.S. State department on its website¹⁹ predominantly show standardized agreements for initiatives such as access to Landsat data and access to networked activities such as the GLOBE initiative. However as more technical cooperation is required, Hudiburg therefore asks “what are the conditions that influence the amount of NASA's international cooperation with often developing country partners?” His answer is centered on the collective good nature of space products.

The collective good rationale can be better explained through Sadeh's²⁰ concept of structural conditioning which he argues happens when a powerful state government entity extends cooperative benefits to others. This

¹¹ Michel Foucault, *Surveiller et Punir* (Paris: Gallimard, 1975); *Discipline and Punishment*, Trans. Alan Sheridan (New York: Random House, 1977).

¹² Despite that Article I OST refers to “countries,” as the beneficiaries, I discuss throughout this thesis of States, to reflect the potential that the totality and multiplicity of actors that can be attributed to a State without being the government, as non-governmental actors are gradually being recognized and considered as vital participants of space governance.

¹³ Jakhu and Freeland, *supra*, note 8.

¹⁴ Nandasiri Jasentuliyana, *Ensuring Equal Access to the Benefits of Space Technology for all Countries*, in Chia-Jui Cheng (Ed.) *The Use of Airspace and Outer Space for all Mankind in the 21st Century*, (The Hague: Kluwer Law International, 1995) p. 207–224 at p. 217.

¹⁵ Arild Underdal, *The Concept of Regime “Effectiveness”*, Working Paper 1992:2.

¹⁶ Don Kash, *The Politics of Space Cooperation*, Purdue Research Foundation, 1967 at p. 50.

¹⁷ John Hudiburg, *Techno-Political Space Cooperation: A Longitudinal Analysis of NASA's Bilateral and Multilateral Agreements*, Proceedings of the 49th Colloquium on the Law of Outer Space (2006).

¹⁸ Don Kash, *supra*, note 16.

¹⁹ Online: (<http://www.state.gov/s/l/treaty/tias/>).

²⁰ Eligar Sadeh, *supra* note 5.

process is structurally generated because a dominant national space agency influences others on the basis of an asymmetric distribution of resources and knowledge to adopt cooperative policies that are congruent with its preferences. Hernades²¹ highlights that the possible benefits for established space nations to cooperate with newcomers in space include

- (1) access to new brains, new ways of thinking, new cultures,
- (2) development of “new markets”,
- (3) improved projects,
- (4) better political links.

In line with point 2 above, some emerging space nations still hold the view that established space nations *simply* cooperate to sell technology to developing countries instead of to share knowledge. For instance, assessment of some MOU's with the UK Space Agency reflects agreements towards this aim.²² As stated by Leister²³ “a true transfer of know how does not take place. This policy is unsatisfactory for developing countries that want to participate in space research and exploration not only as recipients of the benefits to be derived but as partners in formulating decisions which have international implications.”

Over the past 20 years, private industry has sought to step in to provide the much desired know-how technology transfer services. Despite commercial initiatives such as the UK government supported Surrey Satellites Ltd. Know How Technology Transfer (KHTT) Program, perspectives from some emerging space nation commentators²⁴ maintain that the benefits of these initiatives have been limited thus far and real technology transfer is not achieved, rather dependence is bred. Surprisingly little studies exist as to the effectiveness of these KHTT programs. However, based on the results of a survey by Buhl et al.,²⁵ of 20 governments KHTT programs with four companies,²⁶ five programs were successfully completed, four are ongoing, there has been a host change five times and two programs have been stopped. They have identified a number of reasons for what they call the low success rate in technology transfer programs with small satellites, namely: Conflicting goals of client stakeholders, overly complex missions (all in one go), and conflicting goals of host and client (business model).

Conflicting goals however reflects the competitive nature of space engagement between countries. According to space power theory, which is derived from the realist school of thought, “the proliferation of space technology is a foe rather

than a friend, because it contributes to military and economic competition; and, above all, it empowers the exercise of the threat of force in, through and from outer space.”²⁷ The rivalry for leadership between the U.S. and the USSR at the dawn of the space age arguably was not based on their desire to increase their knowledge of outer space but their common aim to gain power-political advantages. Von Welck²⁸ highlights that the most important means of political space power is information and knowledge of outer space, autonomous space transportation systems, human presence in space and the self-determination and willingness to use outer space for the maintenance and extension of a country's status as a world power. When the U.S. had a monopoly on the market for space technology, it used its monopoly in the area of space transportation systems to hamper the entry of other states into the market for communications and remote-sensing satellites and services. Von Welck²⁹ details several examples of this policy including the conditions NASA attached to the launch of the Franco-German communications satellites Symphonie 1 and 2 in the 70s whereby NASA only agreed to launch the satellites on the condition that France and Germany undertook not to use the satellites for commercial purposes.

Such behavior even among allies has in part led to calls for increased South–South cooperation between emerging actors who are more closely aligned with similar objectives. However, apart from extensive discussion of the CBERS earth observation satellite cooperation between China and Brazil,³⁰ there is little literature on South–South cooperation. Cooperation between Thailand's Geo-Informatics and Space Technology Development Agency (GISTDA) and the National Space Organization (NSPO) of Taiwan aims to promote technical activities, human resources development as well as infrastructure development in both countries. However, according to the proponents³¹ “extending the project beyond cooperation of ground station and technology workshop and training, to technology transfer project and IPR partnership can be very beneficial” and may be more likely than with more established space partners.

In assessing cooperation agreements presumably based on “mere latitude and longitude” such as those for the use by NASA of foreign territory for space shuttle abort landing sites; according to Nakatani³² the agreements with the developing countries are more favorable to the U.S. than

²⁷ A. Burzykowska, Smaller States and the New Balance of Power in Space, *Space Policy*, 25:3, August 2009, p. 187–192.

²⁸ S.F. von Welck, Outer Space and Cosmopolitics, *Space Policy*, 2:3, August 1986, p. 200–205.

²⁹ S.F. von Welck, The Export of Space Technology: Prospects and Dangers, *Space Policy*, 3:3, August 1987, p. 221–231.

³⁰ Yun Zhao, The 2002 Space Cooperation Protocol Between China and Brazil, *Space Policy* 21:3 (2005) p. 213–219; Laura Delgado, Sino-Latin American Cooperation: A Smart Move, *Space Policy* 28:1 (2012) p. 7–14.

³¹ Pirada Techavijit & Ravit Sachasiri, Towards International Cooperation and Capacity Building between Space Agencies: A Case of GISTDA and NSPO, Proceedings of the Asia-Pacific Advanced Network 2012 v. 33, p. 15–26.

³² K. Nakatani, Bilateral Agreements on Shuttle Contingency Landing Sites: Practical Application of the Basic Concepts and Provisions of the Outer Space Treaty and other Agreements in Air and Space Law, Proceedings of the 40th Colloquium on the Law of Outer Space (1997) 205–211.

²¹ Daniel Hernades, Promoting North–South Partnership in Space Research and Applications, *Advances in Space Research* 34: 10, 2004, p. 2190–2193.

²² See MOU's with Mexico and Kazakhstan.

²³ Valnora Leister, International Cooperation in Outer Space: Extending the European Model, Proceedings of the 24th Colloquium on the Law of Outer Space (1981) p. 207–210 at p. 208.

²⁴ Peter Martinez, Is There a Need for an African Space Agency, *Space Policy*, 28:3, 2012, p. 142–145.

²⁵ Matthias Buhl et al., BST Training Program - A New Paradigm for Successful Technology Transfer, Presented at the 8th IAA Symposium, IAA-B8-0315P.

²⁶ SSTL (UK), TU Berlin (Germany), Astrium (FR), Satrec Initiative (South Korea).

other agreements with its more traditional partners and reciprocity does not exist. For instance, while the U.S. shall notify the landing states in advance of the launch, unlike the other countries, Spain shall reply following request meaning that it can refuse the request for possible landing and France also reserves the right to refuse access to its territory or to terminate visit of the persons for reasons of law order or security. Secondly, while the Senegalese Government shall be held responsible for damage or loss to persons associated with the space shuttle program in Senegalese territory in case of gross negligence or an act or omission committed with malicious intent, the Government of the U.S. shall waive any claims against the French government for any damage that could be caused to its own personnel and equipment or those of its contractors. Nakatani concludes however that while no apparent reciprocity exists it is easily conceivable that the favorable agreements are in exchange for economic aid.

4. Space benefits declaration

What is rarely assessed however is the role interpretation of the legal framework plays in encouraging increased International Cooperation between countries of disparate technological experience?

Frustrated that developing countries were not fully participating in space activities and in a bid to attempt to create a legal regime that would ensure that more of the benefits of space would reach the developing countries through increased international cooperation, in 1986, the Venezuelan delegation proposed a new agenda item for the Legal Subcommittee of COPUOS titled "Equitable access by States to the benefits derived from space technology." The primary objective was to give meaning to Article I of the Outer Space Treaty through codifying the rights and responsibilities of States with respect to equitable sharing of space benefits and international cooperation in outer space activities. The ideological debate the agenda item engendered led to adoption of 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* in 1996.³³

The majority of the adopted provisions are neutral, having no direct preferential bias towards the developing countries. The most substantial and determining provisions in the Declaration, namely that states are free to determine all aspects of their cooperation and would choose the most efficient and appropriate mode of cooperation consolidates the view of the developed countries and appeared to put an end to the objective of the developing countries of a regime that would ensure and obligate developed countries to share benefits in a way that was more meaningful to them.

According to Benko and Shrogl,³⁴ the Declaration had three broad impacts, namely: to provide an authoritative interpretation of Article I of the Outer Space Treaty; to cement the

freedom of outer space while reminding space powers to fulfill their obligation; and it paved the way for avoidance of future ideological debate. But, that it provides an authoritative means of interpreting the Treaty is debateable considering that no specific mention of agreed intent to make the Declaration an authoritative interpretation appears in the text of the Declaration or in the drafting records.³⁵ Lepard³⁶ queries, but does not answer the question, "To what extent have the political and ethical objectives of the Space Benefits Declaration achieved?" Carpanelli and Cohen's³⁷ examination of State practice following adoption of the Declaration indicates consistency between States actual conduct and the principles enshrined in the Declaration, as evidenced through the various bilateral agreements and affirmation in multilateral contexts such as UNISPACE, however in agreement with Tronchetti,³⁸ it is evident that even if the Declaration represented an important contribution to the development of international space law it did not solve the doubts related to the interpretation of Article I(1) OST. In fact according to Djapo,³⁹ the all-important goals of the developing countries in creating indigenous capability in space science and technology, as well as to secure the transfer of space technology were missing and in sum "this document adds very little, if anything, to the body of international law and state practise." More interestingly, upon assessment of the first developing country draft of the Space Benefits Declaration,⁴⁰ it emerges that a fundamental provision is missing from the final draft of the Space Benefits Declaration adopted that the developing States had deemed important in their draft and it is stated in full for emphasis:

"1. All States should pursue their activities in Outer Space with due regard to the need to preserve Outer Space, in such a way as not to hinder its continued utilization and exploration.

2. States should pay attention to all aspects related to the protection and preservation of the Outer Space environment, especially those potentially affecting the Earth's environment.

3. States with relevant space capabilities and with programmes for the utilization and exploration of outer space should share with developing countries on an equitable basis

³⁵ Elena Carpanelli and Brendan Cohen, A Legal Assessment of the 1996 Declaration on Space Benefits on the Occasion of its Fifteenth Anniversary, *Journal of Space Law* 38: 1 (2012) 1–38 at p. 26.

³⁶ Brian Lepard, The Legal Status of the 1996 Declaration on Space Benefits: Are Its Norms Now Part of Customary International Law in Irmgard Marboe (Ed.) *Soft Law in Outer Space* (Bohlaus Verlag, 2012) 289–313 at p. 290.

³⁷ Elena Carpanelli & Brendan Cohen, *supra*, note 35.

³⁸ Fabio Tronchetti, *The Exploitation of Natural Resources of the Moon and Other Celestial Bodies*, (Martinus Nijhoff: Leiden, 2009).

³⁹ Gordana Milinic Djapo *Outer Space Activities, International Cooperation and the Developing Countries* (Unpublished LL.M. Dissertation, McGill University, 1998) at p. 82.

⁴⁰ UNCOPUOS, Principles Regarding International Cooperation in the Exploration and Utilization of Outer Space for Peaceful Purposes, UN Doc A/AC.105/C.2/L.182 (9 April 1991). The working paper is annexed in Kai-Uwe Schrogl, "Legal Aspects Related to the Application of the Principle that the Exploration and Utilization of Outer Space Should be Carried out for the Benefits and in the Interest of All States Taking Into Particular Account the Needs of Developing Countries" in Marietta Benko and Kai-Uwe Schrogl (Eds.) *International Space Law in the Making*, (France: Editions Frontiers, 1993) at 219–224.

³³ Declaration on International Cooperation, *Supra*, note 6.

³⁴ Marietta Benkö and Kai-Uwe Schrogl, History and Impact of the 1996 UN Declaration on 'Space Benefits', *Space Policy*, 13:2 (1997) 139–143.

the scientific and technological knowledge necessary for the proper development of programmes oriented to the more rational utilization and exploration of Outer Space.”

Paragraph 3 here is fundamental and groundbreaking revelation when read in the light of the analysis of Schrogl.⁴¹ Schrogl highlights that Principle V takes up the problem of space debris which might endanger future space utilization to a significant extent, however he also states that “the wish (of the Developing countries) to be informed about debris prevention measures voiced in para. 3 is reasonable but actually **needs no mentioning** since these technological developments are discussions and documented publicly to the greatest extent.”

It is important to stress here that I do not assess developing States perspectives to push for one side of the divide versus the other, due to my acceptance of convergence hypothesis, which acknowledges that what emerging space nations will want from the global system will eventually come to more closely match the preferences of today's established players. Any analysis that relies on the category “Developing State” must necessarily subject its own categories to constant critique and scrutiny, revision, interrogation, deconstruction, and reconstruction. As highlighted by Narain,⁴² categories structure the questions asked and inevitably, the conclusions reached. The importance of reinserting developing States interests into the dialogue becomes critical to reconstruct an understanding of law that can take into account their experiences, but does not seek to let those experiences dominate. As such Hafner's⁴³ view is acknowledged that following adoption of the Space Benefits Declaration, the (established) spacefaring nations are no longer the only ones obliged to ensure benefit sharing, as a positive duty exists to *all* States even if benefit sharing is carried out by other States. While this acknowledges that an obligation did exist for benefits to flow from industrialized to developing States under Article I OST, he argues that it no longer limits activities but ensures positive affirmative action by all, including the developing State. From the developing State perspective, this interpretation creates a burden that does not appear apparent under Article I OST, but it is proposed by this research was always there and these countries helped to express that through their first draft of the Space Benefits Declaration.

This position calls for an opportunity for a re-reading of Article 1 of the Outer Space Treaty that can be used to explain the meaning of the Declaration in a more meaningful way. In essence; an opportunity to read the Declaration in a manner consistent with a positive account for the benefit of all countries.

5. Freedom of Outer Space

Firstly, Article 1 OST should be understood to be hierarchical and a nested provision that goes from general to specific obligations. Article 1 (1) OST sets the general principle to apply to exploration and use – that it should be for the benefit and interests of all. Then, given that activities are carried out for this purpose the provision states how it should be carried out in Article I (2) OST – equality of access to public good in accordance with law. Then in Article I (3) OST it states the specific form that should be the focus of cooperation is scientific investigation.

While States generally agreed that the way Article I OST is to be realized is through International Cooperation, scientific investigation is the only area that a direct and clear pleading for International Cooperation is made within the provision. According to Hafner,⁴⁴ the Outer Space Treaty therefore *restricted* the legal obligation of cooperation to scientific investigation and did not apply it to use and exploitation. It is clear that in cases where the problems sought to be addressed are either non-political with little economic interests such as planetary and space sciences, cooperation outcomes are enabled however Hafner's position is rejected here to enable assessment of a general obligation to cooperate.

Bourbonniere⁴⁵ argues that the freedom of use of outer space has been consistently interpreted as a negative freedom, namely the freedom from constraints in international law to physically achieve and maintain orbit, but that's not the only reason. The dominant understanding of common benefit/interest principle under Article 1(1) OST is that it is a *limitation* on the freedom of outer space granted in Article 1(2) OST. Here the common benefit/interest principle is seen in a negative light as a condition placed on the free will of the state that desires to engage in space activity. Several authors have emphasized this negative conception. According to Jasentilyana,⁴⁶ Article 1(2) OST establishes the freedom to explore and use outer space conditional upon the limitation that the benefits of such exploration and use shall accrue to all countries. In a similar light, Hobe⁴⁷ states that Article 1(1) OST is to be interpreted as a limitation to the freedoms granted subsequently with due regard to the existing state practise. He argues that limitations are evident in the use of the common benefit clause and specific language including “for the benefit and in the interests of all countries” and “the province of mankind”. From these perspectives, the focus is on the curtailment of the rights of the established space fairing nations and places a negative condition on space exploration and use. As Benko and Schrogl⁴⁸ conceptualize it, the

⁴¹ Kai-Uwe Schrogl, “Legal Aspects Related to the Application of the Principle that the Exploration and Utilization of Outer Space Should be Carried out for the Benefits and in the Interest of All States Taking Into Particular Account the Needs of Developing Countries” in Marietta Benko and Kai-Uwe Schrogl (Eds.) *International Space Law in the Making*, (France: Editions Frontiers, 1993) at p. 207.

⁴² Vrinda Narain, “Muslim Women's Equality in India: Applying a Human Rights Framework.” *Human Rights Quarterly* 35.1 (2013): 91–115.

⁴³ Gerhard Hafner, *The Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States*, in Irmgard Marboe (Ed.) *Soft Law in Outer Space* (Bohlaus Verlag, 2012) p. 267–287 at p. 268.

⁴⁴ Gerhard Hafner, *Ibid.*

⁴⁵ Michel Bourbonniere, *Commercialisation of Remote Sensing, U.S. and International Law: Towards a Liberalization of Economic Regulations* (Unpublished LLM. Dissertation, McGill University, 1997).

⁴⁶ Nandasiri Jasentilyana, *Article I of the Outer Space Treaty Revisited*, *Journal of Space Law*, 15:2 (1989) at p. 139.

⁴⁷ Stephan Hobe, *Article I* in Hobe et al. (eds.) *Cologne Commentary on Space Law: Volume 1, Outer Space Treaty* (Koln: Carl Heymanns Verlag, 2009) 25–43 at p. 36–39.

⁴⁸ Marietta Benko & Kai-Uwe Schrogl, *Article I of the Outer Space Treaty Reconsidered After 30 Years “Free Use of Outer Space vs. Space Benefits,”* in G.L. Laferranderie and D. Crowther (Eds.) *Outlook on Space Law over the next 30 Years* (The Hague: Kluwer, 1997) 67–79.

dichotomy is “Free Use of Outer Space versus Space Benefits” and these two concepts are mutually exclusive and are pitted against each other. If an interpretation is taken that this limitation refers to a *means* of conducting space activities, then the legal requirement would be no more than a negative prohibition on States conducting activities that are detrimental to the interests of other countries.

5.1. Rejecting the dominant conception

It is proposed that this conception of the freedom should be rejected for four main reasons. Firstly, Jakhu⁴⁹ states that “the ‘common interest’ in outer space is *reinforced* by other principles of international space law, including the ‘freedom of outer space’ and ‘non-appropriation of outer space.’” By saying Article 1(1) OST is *reinforced* by further provisions itself reinforces the idea of supremacy of the concept and not its view as a negative limiting factor to a greater right. Secondly, taking an objective and teleological approach to interpretation of the provision, to say that Article 1(1) OST is a merely a limitation of Article 1(2) OST does not follow as the placement of the benefit principle in para. 1 and the freedom of outer space principle in para. 2 signifies that para 1 should be taken as the primary liberty. As pointed out by Hobe, the provision has a lead function and is designed not so much through the ambit of the freedoms of respective activities but rather through its respective limitations. Thirdly, as the wording expressly states the reason for space activity; that “exploration and use...shall be carried out for the benefit and in the interests...” it thus gives a rationale for engaging in space activity rather than simply expressing a limitation to space activity driven by the desire to curb self-interest. Fourthly, express limitations outside Article 1 OST are of a different nature to common benefit. Hobe states these limitations outside Article I OST have a different outlook and function and are aimed at the consequences of space activities.

5.2. The alternative conception is positive

The alternative conception thus should be a positive conception of the freedom of outer space for the benefit and interests of all countries. That is to say that the apparent limitation (or rather condition) is nested in and is inherent in the freedom. Condition here is understood as something that has a significant influence on or determines the manner or outcome of something or which is indispensable to the existence of something else. This is as opposed to limitation understood as a restriction. As Hobe states, the freedoms get their shape through the conditions (which he calls limitations). The freedom exists through fulfillment of and ‘because of’ the condition. It cannot exist “irrespective of” the condition so as to say that one can choose to exercise the freedom while contravening the condition and choose to pay the consequence. An entity cannot be said to explore and use outer space if it does so purely for its own interest, in that case it is doing something else and not exercising the freedom of outer space. However, the rhetoric has always been that acting unilaterally in space is

simply an extension of national policies on Earth that should be avoided while cooperative action makes a substantial contribution towards “perfecting peace,”⁵⁰ however according to Djapo⁵¹ “regrettably neither the United States nor the Soviet Union, at that time the only space capable nations, followed in practise this wise and humane recommendation”.

The positive conception is in line with Latipulhayat’s⁵² view that “the common benefit clause appears to be an “enabling” clause in the sense that space faring countries should enable the non- space faring countries to participate more actively in space exploration and use.” However, this positive conception of the freedom of outer space does not settle the argument as to whether there is a moral or legal obligation inherent in Article I. The idea of Article I in practise as being no more than a moral obligation is held by authors including Gorove⁵³ who states that the common benefits requirement is simply “an expression of desire that the activities should be beneficial in a general sense”.⁵⁴ Even authors sympathetic to developing country concerns have taken a similar position.⁵⁵ Others have stressed its legally binding nature⁵⁶; however, according to Ferrier,⁵⁷ in concurrence with Hobe, it is State practice that must be seen as the strongest indicator of whether such an obligation exists. Brisibe⁵⁸ highlights an approach⁵⁹ by selecting State practice from “both physical and verbal acts; the practice of the executive, legislative and judicial organs of a State; the practice of international organizations; the negotiation and adoption of resolutions by international organizations or conferences, together with the explanations of voting...”.⁶⁰

⁵⁰ U.S. Congress, Senate Special Comm. On Space & Astronautics, 85th Cong., Space Law – A Symposium, p.558 (Dec 31, 1958)

⁵¹ Gordana Milinac Djapo, *supra*, note 39.

⁵² Atip Latipulhayat, Privatization of Space Law–Negotiating of Commercial and Benefit-Sharing Issues in the Utilization of Outer Space, Proceedings of the 55th Colloquium on the Law of Outer Space (2012) 243-254.

⁵³ Stephen Gorove, Implications of International Space Law for Private Enterprise, 7 Annals of Air & Space Law (1982) at p.319; Bin Cheng, Studies in International Space Law (Oxford: Clarendon Press, 1998) at p. 234-235.

⁵⁴ Stephen Gorove, *ibid*, at p.32; See also B. Maiorsky, A Few Reflections on the Meaning and Significance of ‘Province of All Mankind’ and ‘Common Heritage of Mankind’ Notions, Proceedings of 29th Colloquium of the Law of Outer Space 58, 59 (1986); V. M. Postyshev, On the Question of Space Exploration for the Benefit of Humanity: A Modest Proposal, Proceedings of 33rd the Colloquium of the Law of Outer Space 236, 238 (1990).

⁵⁵ Luis F. Castillo Arganaras, Benefits Arising from Space Activities and the Needs of Developing Countries, Proceedings of the 43rd Colloquium of Outer Space, 50 (2000) at p. 57.

⁵⁶ Marco G. Markov, Implementing the Contractual Obligation of Article 1, Par. 1 of the Outer Space Treaty 1967, Proceedings of the 17th Colloquium of the Law of Outer Space 136, 137 (1975).

⁵⁷ Jill Ferrier, “The Development of International Space Law: International Cooperation in Outer Space: Meeting the Needs of the Developing Countries”, (1995) Unpublished thesis, McGill University.

⁵⁸ Tare Brisibe, Chinese Journal of International Law (2009), Vol. 8, No. 2 at p. 383.

⁵⁹ Based on a methodology set out by the International Court of Justice in the North Sea Continental Shelf Cases, Judgement, 20 February 1969, ICJ Reports, 1969, 3.; Jean Marie Henckaerts and Louise Doswald-Beck, Customary International Humanitarian Law (2005), ICRC, Volume I – Rules, xxxii–xlii.

⁶⁰ Tare Brisibe, Chinese Journal of International Law (2009), Vol. 8, No. 2 at p. 383.

⁴⁹ Ram Jakhu, Legal Issues Relating to the Global Public Interest in Outer Space, Journal of Space Law 32: 1(2006) 31–110 at p. 38.

In analysing state practice, Hobe⁶¹ concludes that the provision is understood to be of a generally utilitarian nature whereby the equitable sharing means that any advantage derived for the space powers is considered to bring also advantages for the other states. Hobe's conclusion highlights how the positive conception of freedom can be divided into strong and weak variants, with his stance signifying the weak variant. This variant, which is the dominant position, acknowledges that there is a general obligation to ensure common benefit but holds that by the simple act of access, benefit is produced. As the space fairing nation engages in space activity which generally adds to development and furthering science, all countries are said to benefit. The opposite variant however is the strong variant. This holds that as there is an obligation to produce benefit, unless it is demonstrated that benefit has been produced, the freedom is not exercised in accordance with the law. In effect, there must be a literal and practical demonstration of benefit for all space activities.

5.3. The weak variant

This variant argues that the simple act of access produces benefit. Through making the results of scientific space missions' available, as well as creating markets for space applications, space fairing nations argue that the benefits of space are in fact made available to all countries.⁶² Sadeh⁶³ explains it that the concept of structural conditioning earlier mentioned, is a "positive sum concept that is premised on the idea that *all states benefit* due to the actions of a hegemon. More generally, it is related to realism which sees cooperation as dependent upon the structure of interstate power: to provide benefits to others. The process is explicit, causal and externally generated in that the hegemon influences other states, based on power asymmetries to follow its policies".

Lee and Bourbonniere⁶⁴ argue that if Article 1(1) indeed would be operative, the legitimacy of the space activity would be conditional on it being "carried out for the benefit and interests of all countries" however Article 1(1) OST does not create a presumption of illegitimacy simply because the space object has not been specifically designed to bring benefit and interests to the international community in general.

5.4. The strong variant

On the opposite spectrum, this variant argues that direct benefits to all countries, particularly developing countries, through special programs and funds is necessary to fulfill the obligation.

During the debate of the 1991 session of the Legal Subcommittee, several developing countries introduced a working paper⁶⁵ with a draft set of principles to give meaning to Article I

(1) OST; (See the Space benefits section above). Hafner⁶⁶ states that the provisions required "obligatory cooperation, automatic transfer of financial and technological resources from North to South and obligatory access to relevant knowledge and information." While the sponsors of the working paper stated that the paper was not intended to limit the freedom of States to enter into cooperative agreements much of the academic (western) analysis of the first draft of the working paper is predicated on the misinterpretation that the provisions would negatively affect state sovereignty despite that other delegations defended the draft principles as consistent with sovereignty. What these analyses fail to highlight are the qualifications to some of the so called unacceptable "demands".

Ultimately, the developing countries first draft was subsequently rejected. Schrogl⁶⁷ posits that the only constructive but simple reason that this draft was dropped should have been that "international cooperation should not be forced upon countries, because without shared interests cooperation cannot be fruitful". Following the submission of a new working paper by France and Germany⁶⁸ which sought to break the impasse between divergent views of the developing countries on the one hand and industrialized countries on the other, the final text developed from a merger⁶⁹ of the two proposals during the Legal Subcommittee session in 1996 resulting in Space Benefits Declaration discussed above.

5.5. Rejecting weak and strong variants

Both the weak and strong variants of the positive conception of the freedom of outer space must be rejected because each variant benefits greater either the established space fairing nations on the one side or the developing or emerging nations on the other.

That is to say that the weak variant, which is dominant, is favoured by space nations who would continue to argue that (1) many benefits have been recorded from their space activity and (2) as a practical matter no state has asserted claims under the Treaty to results obtained through its space activities. This notion however fails to take into consideration that embedded in this idea that the simple act of access produces benefit is that it is entirely dependent on the will of

(footnote continued)

April 1991. The working paper is annexed in Kai-Uwe Schrogl, Legal Aspects Related to the Application of the Principle that the Exploration and Utilization of Outer Space Should be Carried out for the Benefits and in the Interest of All States Taking Into Particular Account the Needs of Developing Countries in Marietta Benko & Kai-Uwe Schrogl (Eds.) *International Space Law in the Making*, (France: Editions Frontiers, 1993) at 219–224.

⁶⁶ Gerhard Hafner, *supra* note 43 at p. 271.

⁶⁷ Kai-Uwe Schrogl, Legal Aspects Related to the Application of the Principle that the Exploration and Utilization of Outer Space Should be Carried out for the Benefits and in the Interest of All States Taking Into Particular Account the Needs of Developing Countries in Marietta Benko and Kai-Uwe Schrogl, *ibid*.

⁶⁸ UNCOPUOS, Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interests of All States, Taking into Particular Account the Needs of the Developing Countries, Working Paper Submitted by Germany and France, U.N. Doc A/AC.105/EC.2/L.197 of 24 March 1995.

⁶⁹ UNCOPUOS, Draft Resolution, Working Paper Submitted by the Chairman of the Working Group, U.N. Doc A/AC.105/C.2/L.202 of 27 March 1996

⁶¹ Stephen Hobe, *supra* note 47 at p. 42.

⁶² Bryon Bittingham, Does the World Really Need New Space Law, *Oregon Review of International Law*, 12:31, 2010, 31–54 at p. 39.

⁶³ Eligar Sadeh et al., Modeling International Cooperation for Space Exploration, *Space Policy* 12:3 (1996) 207–233 at p. 211.

⁶⁴ Michel Bourbonniere and Ricky Lee, Legality of the Deployment of Conventional Weapons in Earth Orbit, *European Journal of International Law* 18.5 (2007) 873–901.

⁶⁵ UNCOPUOS, Principles Regarding International Cooperation in the Exploration and Utilization of Outer Space for Peaceful Purposes, Working Paper Submitted by Argentina, Brazil, Chile, Mexico, Nigeria, Pakistan, Philippines, Uruguay and Venezuela, UN Doc. A/AC.105/C.2/L.182 of 9

the established space faring nation how and whether benefits flow and what structural biases it may develop to prevent access. This is acknowledged by authors such as Jakhu⁷⁰ and Hurewitz.⁷¹ Jakhu posits that states possessing launch technology attempt to control its proliferation not only for military reasons but also to maintain their political and economic hegemony whilst Hurewitz argues that the strict U.S. implementation of the Missile Technology Control Regime (MTCR) has led to restrictive, discriminatory access to outer space and a de facto appropriation of outer space for the benefit of a few nations. Following this same line of analysis Filho⁷² argues that the MTCR sets up a system of discrimination without the consent of the international community.

These arguments reveal certain realities regarding the relationship between established space faring nations and aspirant countries: that certain countries are able to have access to space technology while others are not so as to “protect” the world from irresponsible users. This idea is apparent in U.S. imposition on launcher development programs of different countries including South Africa⁷³ and India. While existing debates focus on how U.S. industry has been affected by implementation of these rules, a non-traditional partner perspective seems to demand a focus on the use of international regimes to further imperial policies and reveals links between the U.S. security arguments and enduring structural bias in the regime. As highlighted by Jakhu⁷⁴ “from a legal perspective, it is strange to accuse States that are not parties to the MTCR of violating it, especially when this so-called regime is only an ‘understanding’ amongst third States.”

The strong variant must also be rejected as the developing countries particularly could lay claim to the fact that all missions must be designed specifically to produce direct benefits to be shared, which may go contra to the freedom of states to decide their own activities. While Article I OST imposes the positive duty to ensure that the benefits of space exploration and use are made available to all countries, there is a lack of clarity as to what all countries are to benefit from, which could be taken advantage of, resulting in unrealistic demands. Lee⁷⁵ questions whether it is the means of conducting space activities or the ends derived or ends achieved that is subject to the benefit obligation. To Jasentuliyana,⁷⁶ the term “benefits” would appear to be all inclusive and to relate to any kind of information or results obtained which have some usefulness for Earth oriented applications. While this understanding would appear to exclude activities which are not specifically “Earth oriented”,⁷⁷ the

importance of “space oriented” activities such as space situational awareness, space weather monitoring or space tourism could become increasingly important. However, in the near term the important criteria of usefulness can be understood to mean that all countries can make meaning and do something with the information and results of space activity, such that States with the most benefits cannot just share information that is convenient for them to share with little value. To this end, it is unclear if there would be substantial differences between demonstration and sharing of direct, indirect and induced economic benefits; catalytic effects and social benefits. Essentially and obviously, direct economic benefit and social benefits related to defense and security would be the most complex to share, and would go contra to the general operation of most of today’s activities, both in governmental and commercial contexts.⁷⁸ One of the few contexts in which I can think of the sharing of direct benefits is under Impact and Benefit Sharing Arrangements, for well protected indigenous native Indian groups with treaty rights, but this of course applies nationally and is not an international obligation.

Secondly, the strong position fails to convey what is at stake regarding the view of the benefit principle as a contractual condition. It could be absurd that any signatory to the OST (which arguably has customary status and thus is applicable to the world at large) could stop a project that they are not directly involved in where they cannot find some other standing to be able to assert breach of condition. Finally, if the whole idea of positive freedom is to enable an actor to participate and become a full participant, this would need to involve a process with a series of steps. In essence a test would be required to show that one has been enabled and has met various milestones. There cannot just be a right to benefit, but it must be acknowledged where the beneficiary stands in relationship to the right to be enabled; a situation which a strong position may reject.

It is proposed that failure of the initial developing country draft of the Space Benefits Declaration comes primarily from the calls for preferential treatment to the developing countries with no reciprocity from the countries benefiting from such special treatment. The developing countries requested “special and differentiated treatment.” As pointed out by Ferrier,⁷⁹ objection to the wording was made on the basis that the idea of no reciprocity being asked from developing countries benefiting from special and preferential treatment was inconsistent with the concept of cooperation being based on a mutuality of interests among all States. Secondly, the developing countries appeared to make property right like claims which appeared as *entitlements* as opposed to distributive justice claims which would be for the interests of all. Entitlements here are defined by Schlicht as

⁷⁰ Ram Jakhu, *supra*, note 49.

⁷¹ Barry Hurewitz, Non-Proliferation and Free Access to Outer Space: The Dual-Use Conflict Between the Outer Space Treaty and the Missile Technology Control Regime, Berkeley Technology Law Journal, Volume 9, Spring 1994.

⁷² Jose Monserrat Filho, The Place of the Missile Technology Control Regime, Proceedings of the 36th Colloquium on the Law of Outer Space (1993), p. 89–92

⁷³ Henri Sokolski, Ending South Africa’s Rocket program: A Non Proliferation Success, NPEC, Online: (http://npolicy.org/article_file/Ending_South_Africas_Rocket_Program-A_Nonproliferation_Success.pdf)

⁷⁴ Ram Jakhu, *supra*, note 49 at p. 28.

⁷⁵ Ricky Lee, Law and Regulation of Commercial Mining of Minerals in Outer Space (Dordrecht: Springer, 2012) at p. 157.

⁷⁶ Nandasiri Jasentuliyana, International Space Law and the United Nations (The Hague: Kluwer Law International, 1999) at p. 175.

⁷⁷ Examples could include space situational awareness, space weather monitoring or space tourism.

⁷⁸ Increasingly countries are engaging in socio-economic benefit assessments of national and international space programs and sectors to determine the benefits derived. As these benefits are more systematically quantified and standardized, the case of the strong position becomes easier to formulate. See Oxford Economics, The Case for Space: Impact of Space Derived Services and Data, online: Oxford Economics (<http://www.oxfordeconomics.com/my-oxford/projects/129029>).

⁷⁹ Jill Ferrier, The Development of International Space Law: International Cooperation in Outer Space: Meeting the Needs of the Developing Countries, (Unpublished LLM, Dissertation, McGill University, 1995).

“Rights, as perceived by the individual. They are not, however, abstract legal rights. Rather they denote the subjectively perceived rights that go along with a motivational disposition to defend them. Obligations are the counterparts of entitlements. They refer to claims of others that are subjectively accepted, and go along with a motivational disposition to respect these claims.”⁸⁰

However, in defending this right to preferential treatment, it is clear that what is controversial under the Treaty is seeking a legal property right but in this case, the entitlement amounts to a moral property right that exists independently of a legal right, possibly bringing it within the purview of the provision. As such, even if the claims seem infeasible, they can be an effective device to influence negotiation processes.⁸¹

This idea may be caused in part by the link between Article 1 of the Outer Space Treaty and the concept of the Common Heritage of Mankind found in the Moon Agreement.⁸² However, bearing in mind that the concept has been rejected by the many nations, linking Article 1(1) OST to the Common Heritage Principle may not be overly helpful. Secondly, the confusion sometimes between the concept of “Province of Mankind” in Article 1(1) OST and Common Heritage of Mankind in Article 11 Moon Agreement should be clarified so that the distinction is clear. Authors including Schmidt⁸³ add to this confusion by positing that “the term “for the benefit and interests of all countries” in Article 1(1) OST refers to the concept of the Common Heritage of Mankind.”

While the Common Heritage of Mankind in the Moon Agreement was meant to *build* on Article 1(1) OST, the two concepts must be distinguished to find a useful interpretation that moves away from the deadlock of the Common Heritage of Mankind Principle. Tronchetti⁸⁴ highlights that ‘as a matter of fact, the Treaty introduces the principle of Province of Mankind as substantially differing from the Common Heritage of Mankind concept.’ Gabryonowicz⁸⁵ posits that the Province of Mankind provision of the Outer Space Treaty is not a specific legal maxim and a strategic distinction exists between the two concepts, specifically that the Province of Mankind provision refers to “*activities*” (exploration and use) and that the Common Heritage provision refers to “*material objects*.” This activities versus materials distinction, according to Gabryonowicz provides a natural rationale to advance real activities such as the establishment of INTELSAT, an intergovernmental organization established to ensure access to satellite communication to all countries and heralded as a great example of implementation of Article 1(1) OST. However with the claim⁸⁶ that the eventual

privatization of INTELSAT could be contrary to Article 1 OST, it appears that the weak and strong variants to the positive conception are not fully adequate positions. What is required therefore is a middle ground variant of the positive conception of the freedom of outer space acceptable to all parties.

6. A proposed agenda

Trying to find a middle ground position between the strong and weak variants of the positive conception of the freedom of outer space forces us to switch from the initial question posed (what is the understanding of the liberty granted from the perspective of both those exercising the freedom of outer space and those countries expecting that the freedom is exercised for their benefit and interests?) to answering the practical question; how can we better understand the conflicting positions between those on the margins of space activity and those gaining the greatest benefit from space? It recognizes that an emphasis on the “legal right” to space benefit sharing is not effective and must be looked at holistically.

A middle ground position proposes the three main issue areas to investigate to find solutions to some of the perceived tensions prevalent in space governance:

6.1. Who are the “Non Traditional Partners”, who is speaking for them and what are their actual issues if any?

My interest is not only in dramatizing disparities between countries or actors but in producing capacity in a domain that has classically been dominated by technically advanced countries. I want to move beyond the direct and important claim that “thou shall share benefit” and move it to an enabling mode that seeks to take the claim to enable partnership and participation. It however recognizes reciprocal obligations. I seek to develop a new lens and conceptual tools to analyze this. I call it Cosmopolitan Approaches to International Law (CAIL), inspired by the Third World Approaches to International Law (TWAAIL) School of Thought. A CAILian approach can deconstruct the existing agenda in light of it obscuring the idea of shared benefits without attributing blame, scepticism or negativity. This is fundamental because TWAAIL can be a polarizing position that can be quickly discounted or rejected. Because of this negative quality, TWAAIL fails to produce constructive change as its characteristic seems to marginalize the very people it seeks to speak for. It is proposed that everyone may eventually have to shift centrally and adopt a more CAILian approach.

6.2. The potential of space for “Non Traditional Partners” and others

Space is not just some distance otherness but is important for the ability for us to perceive ourselves, manage our resources and inspire our potential. It is not simply a tool to show dominance or as part of a hubris of activities that show “development”. But, it must be recognized that there are certain conditions that must be fulfilled as there is no free lunch. Ultimately, participants have to be prepared to consider the following issues:

- (a) It is fundamental to focus on the ability to

⁸⁰ Schlicht Ekkehart, *On Custom in the Economy*. (Clarendon Press, Oxford, 1998).

⁸¹ Simon Gächter and Arno Riedl *Moral Property Rights in Bargaining with Infeasible Claims* (2005) 51:2 *Management Science*.

⁸² Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, Dec. 5, 1979, G.A. Res. 34 68, 34 U.N. GAOR Supp. (No. 46) at 77, U.N. Doc. A 34 46 (1979).

⁸³ Yvonne Schmidt, *International Space Law and Developing Countries*, Christian Brünner & Alexander Soucek (Eds.), in *Outer Space in Society, Politics and Law* 1st Edition, (Springer Verlag, 2011).

⁸⁴ Fabio Tronchetti, *supra*, note 38.

⁸⁵ Richard Lewis, *Space in the 21st Century* (New York: Columbia University Press, 1990) at p. 157–158 citing Joanne Gabryonowicz.

⁸⁶ Francis Lyall, *On the Privatization of INTELSAT*, 28 *Journal of Space Law* 101 (2000).

- conceptualize first before looking for technology solutions otherwise technological projects will fail and look like white elephant projects.
- (b) There must be a willingness to “pay to play” at certain times because essentially space is a business/industry/sector where profit is an objective.
 - (c) Small players may first focus on developing niche strategies and technologies because “space” is a small and competitive sector and the average population will not understand “big” space projects in a challenging financial environment.
 - (d) There must be recognition that space is no longer just a domain for governmental activity. There must be a multiplicity and diversity of actors ready, willing and enabled to engage. This includes encouraging grassroots initiatives and taking note of the words of Abiodun⁸⁷ that “the acquisition of fundamental scientific knowledge and the evolution of the technologies needed to initiate, develop, design, fabricate, build and test, locally, a variety of hardware and software components, some of which may end up in a variety of products including space-related ones.” In other words, for emerging nations, the immediate focus should be on investing in knowledge generation in the enabling technologies.
 - (e) Perseverance is required!

6.3. Assessment of South–South cooperation, regional cooperation and other forms of collective collaboration

For example, what will be the effect of the African Space Policy and the proposed African Space Agency⁸⁸ on African regional cooperation and the spread of space benefits to African countries and the world at large? This is a fundamental question because it reflects the practical implementation of the issue of monocentric versus polycentric forms of space governance⁸⁹ and which one is most ideal. When talking about monocentrism (Centralized governance institutions such as the United Nations), we must recognise that we are not simply in a monocentric setting with a top down governing institution like UNCOPUOS in one place as this may lead to a legitimacy crisis. It is therefore necessary to understand the limits of monocentrism and necessity of polycentrism. In discussing polycentrism (de-centralized nodes of governance such as regional bodies) we recognize that the character of public goods are in favor of polycentrism but this can lead to a space regime complex⁹⁰ because there is control through devolution which could occur with no direction or concept of common benefit. Certain problems have a scale amenable to either one solution

or multiple solutions but how is this played out in regional space collaboration? This assessment could highlight and identify the limits of polycentrism. An important feature of this to recognise is that international trends start with *bilateral* agreements, particularly through a relinquishment of rights, bold decisions of state actors and setting new standards.⁹¹

7. Conclusion

One of the central claims of this paper is that confusion exists due to the indeterminate nature of the idea of a legal right to benefit from space activities. But what do we make of principles or obligations that on their face appear to be indeterminate and unfulfillable? Does that place them outside the law or give resonance for the law? French⁹² in the context of global justice recognizes three levels of uncertainty: indeterminacy of scope (to what is it relevant?), of content (what does it require?) and of application (is such a concept something that can even be understood at the global level? What are the means, methods and operational principles which might otherwise comprise a framework of implementation)? In recognizing the uncertainty, it is still clear that there is a relationship between justice and law but law will never completely fulfill justice. This doesn't mean that law is not orientated towards justice and that the law will sometimes announce what it is seeking to do to contribute to justice. In other words, “while the recourse to principle in political and legal debate can never anticipate the attainment of justice, this should not marginalize the significance—the relevance—of striving for fairness at the global level, particularly between economically divergent States”. Article I (1) OST announces the form of justice that is sought and it is the aim that space benefits should be available to all that orients itself to a justice outcome.

It is important to ask if the actors have oriented themselves to fulfill this responsibility. Are they looking for inadequacies of their own procedures? How well has this ethic been internalized? Aspirational norms are tested by the extent to which the agent/legal subject has made it part of their identity. However, it is clear that the rhetoric of inclusion is pervasive to the extent that all actors purport to uphold the obligation because they can point to instances of adherence. Even positions from developing States today could uphold this view through acknowledgment that there is a limit to the law. It is proposed that based on the current landscape, a focus on what other States can do for another contributes to the production of legitimacy for empire. It proposes that it is not enough to situate critic on the outside of normative structures but important to enable developing States to produce real change to take account of the existing framework. In other words, how can the existing framework enable all countries to foster capabilities in a way that is of mutual

⁸⁷ Abiodun Adigun Ade, Trends in the global space Arena – Impact on Africa and Africa's response. *Space Policy*, 28(4):283–290.

⁸⁸ Timiebi Aganaba-Jeanty, Precursor to an African Space Agency: Commentary of Dr Peter Martinez “Is there a need for an African Space Agency”, *Space Policy* 29:3 (2013) 168–174.

⁸⁹ Scott Shackelford, Governing the Final Frontier: A Polycentric Approach to Managing Space Weaponization and Orbital Debris, (December 14, 2013). *American Business Law Journal*, Forthcoming. Available at SSRN: <http://ssrn.com/abstract=1972308> or <http://dx.doi.org/10.2139/ssrn.1972308>; Joan Johnson-Freese & Brian Weeden Application of Ostrom's Principles for Sustainable Governance of Common-Pool Resources to Near-Earth Orbit, 3:1 *Global Policy* (February 2012) 72–81.

⁹⁰ Xavier Liao, “Consolidate the global space governance with regional cooperation mechanisms as building blocks” Presentation at SWF 2012 Beijing Space Sustainability Conference (8–9 November 2012).

⁹¹ Lauren Small-Pennefather and Yu Takeuchi, Space Debris Removal as a First Step to Realizing a Legal Framework for Space Traffic Management, 3RD Annual Manfred Lachs Conference, Montreal, Quebec, ICAO Headquarters, (March 16–17, 2015).

⁹² Duncan French, “Global Justice and the (Ir)relevance of Indeterminacy” (2009) 8 *Chinese Journal of International Law*, p. 593.

significance to all? It is proposed that this leads us to analyzing closely the hierarchy of possible benefits and how we can imagine a cycle of positive feedback to build increasing cooperation between those on the margins of space activity and those gaining the greatest benefit from space.

Today, no one current method or one radical solution can work 100% effectively by its self to change society, its views and its legal structures. The important thing therefore, is to educate society that change is within its power. Despite its appearance, the law has not fixed and frozen what one can hope to achieve. The law has immense emancipatory potential and if society acknowledges that it has been conditioned to think that so long as basic rights are protected, there can be no change, and that individually if we increase our efforts, then society can be transformed through the law! As such, there is still room to interpret Article I OST in a way that establishes a middle ground between the strong and weak variants of the positive conception of the freedom of Outer Space, which fulfils the objectives of Space Sustainability. That is that all of us today and future generations can continue to benefit from space activities, while acknowledging that the creation of legal meaning to the concept entails the subjective commitment to an objectified understanding of the demand.

However, even if the relationship to the obligation is perceived as a failure, it is the effort to the approach that makes it worthwhile. The goal is so important that even if it is never

fulfilled, we must continually orient ourselves towards the task. As expressed by Matte⁹³ “even if the benefits derived do not meet expectations, the common efforts made towards the distribution of the benefits on an equitable basis may well prove to be gigantic steps on the path to establishing a new order of international cooperation.” In conclusion and in moving forward we must not fail to alert ourselves to Derrida⁹⁴ and Negri/Hardt⁹⁵ who explained the need to understand and show reverence and acknowledgment to the past and our heritage and that our society has already shaped us to the extent that potentially any new ideas we have may come from that society that we are trying to change and the initial ideas from the original empire may be strong enough to creep in to our new consciousness such that what we think are new ideas are just old ideas explained in a different way. Here I acknowledge my own subjectivity because my engagement in space activities began from a developing country perspective, as a legal affairs and international cooperation trainee at the Nigerian Space Research and Development Agency (NASRDA), however I was born in England and the majority of my academic education and social orientation is European/Canadian. This declaration frees me to step back and say I attempt to speak from an understanding of both sides of the development divide, without being a true master of either.

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⁹³ N.M. MATTE, *Aerospace Law, Telecommunications Satellites*, (Toronto, 1982) p. 215.

⁹⁴ Jacques Derrida. *Les Spectres de Marx* (Paris: Galilée, 1993); *Specters of Marx Trans.* Peggy Kamuf (New York: Routledge, 1994).

⁹⁵ Micheal Hardt & Antonio Negri, *Empire* (Harvard University Press, 2000).