AN EVOLVED 'PROVINCE OF ALL MANKIND' FOR HUMANITY'S FUTURE MIGRATION TO OUTER SPACE

Andrew James Butler

BIntSt(Hons) *(Flinders)*, JD, LLM (*Melbourne*),

GCertMigLaw, LLM(LegPrac) (*ANU*)

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Macquarie Law School

Macquarie University

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Almost five centuries ago, shortly after Columbus' first voyage across the Atlantic, two of the main Powers of those times dealt with the division of their spheres of influence in a Treaty that was officially concluded in Tordesillas in 1494. Only two years had elapsed since the discovery of the New World. That Treaty comes naturally to mind when one considers the Treaty on Outer Space now before this world Assembly. For the first time in the history of mankind all countries, and in the first instance the two world Powers of the day, are not searching for new territorial conquests or for the expansion of their sovereign rights. On the contrary, they aim only at scientific and technological conquests in the new continents of outer space, which become not the provinces of single Powers, but the province of mankind as a whole. For the first time in the wake of our first space explorations, national, religious and ideological concepts are put aside, and in their place the ideas of peace and of the unity of all men, regardless of their religion, creed or colour, are solemnly affirmed. Finally, this Treaty has one exploitation only as its aim, that of giving to mankind all the possible benefits that can derive from the opening of a new immense frontier.[1]

Ambassador Piero Vinci,
Permanent Representative of Italy to the United Nations,
19 December 1966, United Nations General Assembly

1 *Provisional Verbatim Record of the Fourteen Hundred and Ninety-Ninth Plenary* Meeting, UN GAOR, 21st sess, 1499 plen mtg, UN Doc A/PV.1499 (19 December 1966) 58.

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ABSTRACT

The eventual migration of humans to outer space appears extremely likely when humanity's development is viewed through the long-term lens of the emerging discipline of 'Big History'. When this future migration occurs, unexamined legal questions will arise at the intersection of international space law and international migration law. One possible governance model assisting such migration to outer space arises from an evolved understanding of the *Outer Space Treaty*, in particular its statement at Article I that the 'exploration and use of outer space … shall be the province of all mankind.' The potential exists, *de lege ferenda,* to recognise the international legal personality of 'mankind' (or humankind), endowing this provision with the important role of investing residual sovereignty and ultimate title over areas of outer space in all of humanity. This thesis advocates such an evolutionary interpretation of the province provision, by recognising that the ordinary meaning of the word 'province' and both the activities of 'exploration' and 'use' all have legal associations with territory. Such a territorial conception can be highly facilitative of future migration to outer space and governance of space communities, by resulting in: 1) freedom of movement in outer space as an individual human right; 2) the bifurcation of sovereignty enabling territorial administration and resource utilisation by other subjects of international law; and 3) the ability for humankind to require acceptance of its compulsory jurisdiction over international disputes arising in outer space. This thesis undertakes a detailed examination of the Treaty's *travaux préparatoires* to find a level of support exists within its negotiation history for this bold interpretation. Finally the term 'the province of all mankind' is analysed in each of the Treaty's official languages, with this territorial conception of the province provision offering a unity of meaning between these five equally authentic texts.

CANDIDATE'S CERTIFICATE

This is to certify that I, Andrew James Butler, have not submitted this research work for a higher degree to any other university or institution other than Macquarie University. This thesis, to the best of my knowledge and belief, contains no copy or paraphrase of work by another person, except where duly acknowledged in the text.

Andrew James Butler

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ABBREVIATIONS

COPUOS	[United Nations] Committee on the Peaceful Uses of Outer Space
ICJ	International Court of Justice
ICSID	International Centre for Settlement of Investment Disputes
IML	[University of Queensland's] Institute of Modern Languages
ISS	International Space Station
ITLOS	International Tribunal for the Law of the Sea
LEO	Low Earth Orbit
NASA	[United States] National Aeronautics and Space Administration
OST	*Outer Space Treaty* [*Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies]*
UAR	United Arab Republic [official name of Egypt from 1958 to 1971, including its period of political union with Syria from 1958 to 1961]
UNCLOS	*United Nations Convention on the Law of the Sea*
UNTAET	United Nations Transitional Administration in East Timor
VCLT	*Vienna Convention on the Law of Treaties*

I INTRODUCTION

> No man can fully grasp how far and how fast we have come, but condense, if you will, the 50,000 years of man's recorded history in a time span of but a half-century. Stated in these terms, we know very little about the first 40 years, except at the end of them advanced man had learned to use the skins of animals to cover them. Then about 10 years ago, under this standard, man emerged from his caves to construct other kinds of shelter. Only five years ago man learned to write and use a cart with wheels. Christianity began less than two years ago. The printing press came this year, and then less than two months ago, during this whole 50-year span of human history, the steam engine provided a new source of power. Newton explored the meaning of gravity. Last month electric lights and telephones and automobiles and airplanes became available. Only last week did we develop penicillin and television and nuclear power, and now if America's new spacecraft succeeds in reaching Venus, we will have literally reached the stars before midnight tonight. This is a breathtaking pace.[1]

This summation of humankind's progress over an imagined 50-year period was delivered by President of the United States, John F Kennedy, at Rice University in 1962. Forming part of his renowned 'We Choose To Go To The Moon' speech, President Kennedy condensed the recorded history of humanity from the Late Stone Age onwards into a digestible frame of reference. Although this famous space oratory provided a selective list of humanity's technological and cultural milestones over 50 millennia, the story of the human species actually begins much earlier, with the emergence of modern humans in East Africa between 200,000 to 250,000 years ago.[2] From there, over our subsequent thousands of generations, humans have migrated to every continent of our planet. Our ongoing movement to and habitation of new destinations forms a consistent feature of the human experience. It has also seen in the last 25 years – or 9 days ago under President Kennedy's half-century standard – the very beginnings of humanity's migration to outer space.

1 John F Kennedy, 'Address at Rice University on the Nation's Space Effort' (Speech delivered at Rice Stadium, William Marsh Rice University, 12 September 1962) <http://er.jsc.nasa.gov/seh/ricetalk.htm>.

2 Hua Liu et al, 'A Geographically Explicit Genetic Model of Worldwide Human-Settlement History' (2006) 79(2) *American Journal of Human Genetics* 230, 230; David Christian, Cynthia Brown Stokes and Craig Benjamin, *Big History: Between Nothing and Everything* (McGraw Hill Education, 2014) 91.

This thesis undertakes a legal examination of the future migration of people beyond Earth. It proposes as *de lege ferenda*[3] an evolutionary territorial interpretation of the words 'the province of all mankind' appearing in Article I of the *Outer Space Treaty*[4] (OST) as a new paradigm for international space law. This territorial conception can, it will be argued, effectively facilitate and regulate this future human migration to outer space and the economic utilisation of discovered resources.

The research methodology adopted in this thesis is predominantly doctrinal or hermeneutic, being focused on bringing to the law of outer space clarity and significance to the five specific words 'the province of all mankind.' This research approach utilises a number of the accepted means of textual interpretation within international law, including analysis of the ordinary meaning of terms, translation of equally authoritative texts in other languages and examination of preparatory works. As this thesis advocates an evolution towards the new territorial conception proposed, instrumental and empirical research is also pursued in both establishing this concept and analysing its merit in facilitating future human migration to outer space. Interdisciplinarity also informs this methodology, with issues not only assessed from differing fields of international law, such as both international space law and international migration law, but also from the foundational perspective of the historical discipline of Big History. A significant focus is placed on primary documents, particularly the treaty text of the OST and its *travaux préparatoires*, but also international judicial decisions and other international legal instruments. A diverse range of secondary sources is also utilised including journal articles, monographs, treaty commentaries and dictionaries. In regard to citation methodology, the Australian Guide to Legal Citation (3rd edition)[5] is followed.

Without realising it, President Kennedy, in his celebrated speech at Rice University, foreshadowed the yet to emerge discipline of Big History.[6] This emerging branch of

3 'Of the law (that is) to be proposed' Aaron X Fellmeth and Maurice Horwitz, *Guide to Latin in International Law* (Oxford University Press, 2009) 76.

4 *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies*, opened for signature 27 January 1967, 610 UNTS 205 (entered into force 10 October 1967) ('*Outer Space Treaty*').

5 Sara Dehm and David Heaton (eds), *Australian Guide to Legal Citation* (Melbourne University Law Review Association, 3rd ed, 2010) <https://law.unimelb.edu.au/__data/assets/pdf_file/0007/1586203/FinalOnlinePDF-2012Reprint.pdf>.

6 President Kennedy going on to famously declare: 'If this capsule history of our progress teaches us anything, it is that man, in his quest for knowledge and progress, is determined and cannot

history examines the story of our universe from a macro and interdisciplinary perspective, encompassing the entirety of time from the Big Bang until the present.[7] By viewing this 13.8 billion years through the lens of Big History, including the very recent arrival of humans, the extent of our species' progress in a tiny fraction of time is astounding. Based on humanity's continuous migration to new destinations, coupled with its enormous 20th century surge in technology, population, production and energy-use in what Big History labels 'the Great Acceleration',[8] our human presence in space will almost certainly expand beyond our current single space station in low earth orbit. From this perspective, it is almost certainly not a question of if, but of when, humankind extends itself further into this frontier through the establishment of permanent settlements in outer space. These space communities will very likely initially be located on the celestial environments of the Moon and Mars and may potentially also orbit the Earth. However, over the macro timescales considered by Big History, the location and diversity of these human settlements are as potentially vast as outer space itself. That somehow humanity's future lies above us has been part of our collective consciousness for generations. From ancient stargazing, which led to celestial navigation, astronomy and even astrology, to modern science fiction, '[s]pace was never seen as a closed, self-contained distant sphere. It was obvious that we belonged to it (or vice versa)'.[9]

A *The Current Beginnings Of Our Migration To Outer Space*

The fact that the beginning of this migration to space has already begun is starkly demonstrated today by the International Space Station (ISS), now entering its 16th year of operation. Constituting the most expensive and complex object our species has ever constructed,[10] it also stands testament to the cosmopolitan nature of the space

be deterred. The exploration of space will go ahead, whether we join in it or not, and it is one of the great adventures of all time'; Kennedy, above n 1.

7 Fred Spier, *The Structure of Big History From the Big Bang Until Today* (Amsterdam University Press, 1996) 2.

8 David Christian, *Maps of Time: An Introduction to Big History* (University of California Press, 2nd ed, 2011) 440-1; Cynthia Brown Stokes, *Acceleration: A Historian Reflects on a Lifetime of Change* (2014) Big History Project <https://school.bighistoryproject.com/media/khan/articles/U9_Acceleration_2014_770L.pdf>.

9 Alexander Soucek, 'The Cultural Dimensions of Space' in Christian Brünner and Alexander Soucek (eds), *Outer Space in Society, Politics and Law* (SpingerWienNewYork, 2011) 34, 37.

10 Richard Hollingham, *How the most expensive structure in the world was built* (15 December 2015) British Broadcasting Corporation <http://www.bbc.com/future/story/20151221-how-the-most-expensive-structure-in-the-world-was-built>; Tim Sharp, *International Space Station: Facts, History & Tracking* (19 March 2015) Space.com <http://www.space.com/16748-international-space-station.html>.

environment, with its construction and operation by 15 different States.[11] This multinational outpost in space, where a miniscule yet continuous human population is now always located,[12] forms part of humanity's earliest steps in its migration beyond Earth. However, even before the first arrivals on the ISS in November 2000, the Soviet (and later Russian) space station *Mir* saw almost a decade of continuous habitation from September 1989 to August 1999, with a cumulative total of 104 people stationed aboard.[13] Apart from a short interlude at the turn of the century, humans have therefore been continuously living and working in space for 25 years. Currently this off-world migration involves a negligible percentage of the human population,[14] with only 547 people having ever travelled to space by the end of March 2016.[15] Significantly though, four[16] can be analogised as meeting the United Nations definition of a 'long-term migrant', having spent at least a year abroad[17] while in space. An additional 130 could similarly be viewed as 'short-term migrants' under the same United Nations standard,[18] spending continuous periods of between 3 to 12 months in

11 11 of which participate through the European Space Agency. Mark Garcia, *International Cooperation – International Space Station* (22 August 2015) *National Aeronautics and Space Administration* <http://www.nasa.gov/mission_pages/station/cooperation/index.html>.

12 With anywhere up to 13 people having been aboard or docked at any one time, although currently the crew complement is usually 6. Tariq Malik, *Population in Space at Historic High: 13* (27 March 2009) Space.com <http://www.space.com/6503-population-space-historic-high-13.html>.

13 Claude A Piantadosi, *Mankind Beyond Earth: The History, Science and Future of Human Space Exploration* (Columbia University Press, 2012) 85.

14 To date only approximately 0.000007% of the world's population have travelled to outer space. *Introduction to Astronomy: Crash Course Astronomy Episode 1* (Directed by Nicholas Jenkins, PBS Digital Studios, 2015) <https://www.youtube.com/watch?v=0rHUDWjR5gg&list=PL8dPuuaLjXtPAJr1ysd5yGIyiSFuh0mIL&index=1>.

15 *Astronaut/Cosmonaut Statistics* (1 April 2016) *World Space Flight* <http://www.worldspaceflight.com/bios/stats.php>. This calculation of the current total number of people who have travelled in space uses the definition adopted by the Fédération Aéronautique Internationale requiring travel at 100km or above the Earth under the *Fédération Aéronautique Internationale Sporting Code, Section 8 - Aeronautics* (2009) clause 2.18.1.

16 *Alphabetical List of Names* (1 April 2016) *World Space Flight* <http://www.worldspaceflight.com/bios/alpha_names.php>.

17 'A person who moves to a country other than that of his or her usual residence for a period of at least a year (12 months), so that the country of destination effectively becomes his or her new country of usual residency. From the perspective of the country of departure the person will be a long-term emigrant and from that of the country of arrival the person will be a long-term immigrant.' Department of Economic and Social Affairs Statistics Division, *Recommendations on Statistics of International Migration – Revision 1*, UN Doc ST/ESA/STAT/SER.M/58/Rev.1 (1998) 10 <http://unstats.un.org/unsd/publication/SeriesM/seriesm_58rev1e.pdf>.

18 'A person who moves to a country other than that of his or her usual residence for a period of at least 3 months but less than a year (12 months) except in cases where the movement to that country is for purposes of recreation, holiday, visits to friends and relatives, business, medical treatment or religious pilgrimage. For purposes of international migration statistics, the country of usual residence of short-term migrants is considered to be the country of destination during the period they spend it in.' Department of Economic and Social Affairs Statistics Division,

space.[19] Clearly however this current trickle of human movement to outer space is, like many initial migrations throughout history, small in number.[20] Yet as analogised by leading Big History academic David Christian:

> [M]igrations to other planets will be reminiscent of the Stone Age that took members of our species into new environments within Africa, and then the undiscovered lands of Australia, Siberia, and the Americas. Or perhaps a better analogy is with the great sea voyages that colonized the Pacific.[21]

Indeed as predicted by Michael Griffin, former administrator[22] of the US National Aeronautic and Space Administration (NASA):

> [O]ne day, I don't know when that day is, but there will be more human beings who live off the Earth than on it. We may well have people living on the moon. We may have people living on the moons of Jupiter or other planets. We may have people making habitats on asteroids.[23]

What though will be vastly different from the past with any future large-scale movement of people to outer space is the international legal regulation that will inevitably accompany this. To date, such future regulation has received minimal attention from scholars, creating a lacuna in legal scholarship.[24] One of the handful of

Recommendations on Statistics of International Migration – Revision 1, UN Doc ST/ESA/STAT/SER.M/58/Rev.1 (1998) 10 <http://unstats.un.org/unsd/publication/SeriesM/seriesm_58rev1e.pdf>.

19 *Alphabetical List of Names* (1 April 2016) *World Space Flight* <http://www.worldspaceflight.com/bios/alpha_names.php>.

20 However by viewing our exploration, use and initial habitation in outer space from Big History's macro perspective, humans have clearly demonstrated that where our first adventurers tread a stream of settlers will likely follow. It should be remembered, for example, that the voyage of Columbus in 1492 and later the Mayflower in 1620, both of which played key roles leading to the 535 million people who call North America home today, each comprised an expedition of only 87 and about 130 individuals respectively. Jerry Woodfill, *The Crews of Columbus's Fleet and Apollo 17* (28 August 2000) *National Aeronautics and Space Administration* <http://er.jsc.nasa.gov/seh/crews.htm>; Caleb H Johnson, *The Mayflower and Her Passengers* (Xlibris, 2006) 30, 33.

21 Christian, above n 8, 483.

22 From 2005 to 2009.

23 Michael D Griffin, 'NASA's Griffin: "Humans Will Colonize the Solar System"', *The Washington Post* (online), 25 September 2006 < http://www.washingtonpost.com/wp-dyn/content/article/2005/09/23/AR2005092301691.html>.

24 See: Marc M Harold, 'Asylum-Seekers in Outer Space, A Perspective on the Intersection Between International Space Law and US Immigration Law' (2006) 32(1) *Journal of Space Law* 15; Hamilton Desaussure, 'The Freedoms of Outer Space and Their Marine Antecedents' in Nandasiri Jasentuliyana (ed), *Space Law: Development and Scope* (Praeger, 1992) 1, 12-13; George S Robinson, 'Humankind Space Migration: While Nero "Fiddles", Will Space Lawyers "Muse"' (2013) 38 *Annals of Air and Space Law* 563; George S Robinson, 'Space Law, Secularism, and the Survival of Humankind "Essence"' (2013) 2(1) *Journal of Space Philosophy* 35; George S Robinson, 'Space Jurisprudence and the Need for a Transglobal Cybernation: The Underlying Biological Dictates of Humankind Dispersal, Migration, and Settlement in Near and Deep Space' (2014) 39 *Annals of Air and Space Law* 487; Michelangelo Landgrave, *Is there a right to migrate to outer space?* (3 February 2015) *Open Borders* <http://openborders.info/blog/right-to-migrate-to-outer-space/>.

legal publicists to contemplate this question was Andrew Haley, who as one of the first practising space lawyers[25] 'also had a considerable reputation as an authority on immigration law'.[26] Haley posed this prescient question during the early days of the Space Age:

> One matter of particular concern to any program of space exploration and settlement is the immigration policy to be followed. Should there be a quota system predicated upon selection from all nations? On what basis will we select the talented men and women required to establish and sustain human civilization on the planets of our conquest?[27]

This relative lack of interest in the legal implications of off-world migration contrasts sharply with the scholarly attention paid to the issue of mining and resource rights in outer space.[28] The enactment by the United States in November 2015 of federal legislation, which allows a US citizen to 'be entitled to any asteroid resource or space resource obtained, including to possess, own, transport, use and sell',[29] has understandably brought renewed focus to questions of resource rights. However legal issues surrounding future migration and settlement in space, which will likely occur in tandem with such resource utilisation, have been notably absent from this debate.[30]

25 Stephen E Doyle, 'Andrew G Haley' in Stephan Hobe (ed), *Pioneers of Space Law* (Martinus Nijhoff, 2013) 71, 71.

26 Tom D Crouch, *Rocketeers and Gentlemen Engineers: A History of the American Institute of Aeronautics and Astronautics and what Come Before* (American Institute of Aeronautics and Astronautics, 2006) 111.

27 Andrew Haley, *Space Law and Government* (Meredith Publishing Company, 1963) 133.

28 See: Ricky J Lee, *Law and Regulation of Commercial Mining of Minerals in Outer Space* (Springer, 2012); Virgiliu Pop, *Who Owns The Moon?: Extraterrestrial Aspects of Land and Mineral Resources Ownership* (Springer, 2009); Tina Hlimi, 'The Next Frontier: an Overview of the Environmental Implications of Near-Earth Asteroid Mining' (2014) 39 *Annals of Air and Space Law* 409; P M Sterns and L I Tennen, 'Privateering and Profiteering on the Moon and Other Celestial Bodies: Debunking the Myth of Property Rights in Space' in *Proceedings of the 45th Colloquium on the Law of Outer Space* (AIAA, 2002) 56; Nandasiri Jasentuliyana, 'International Space Law and Cooperation and the Mining of Asteroids' (1990) 15 *Annals of Air and Space Law* 343; Maureen Williams, 'The Principle of Non-Appropriation Concerning Resources of the Moon and Celestial Bodies' in *Proceedings of the 13th Colloquium on the Law of Outer Space* (AIAA, 1970) 157; Henry R Hertzfeld and Frans von der Dunk, 'Bringing Space Law into the Commercial World: Property Rights without Sovereignty' (2005) 6 *Chicago Journal of International Law* 81; B M Hoffstadt, 'Moving the Heavens: Lunar Mining and the "Common Heritage of Mankind"' (1994) 42 *UCLA Law Review* 575; G Nicholson, 'The Common Heritage of Mankind and Mining: An Analysis of the Law as to the High Seas, Outer Space, the Antarctic and World Heritage (2002) 6 *New Zealand Journal of Environmental Law* 177.

29 *Space Resource Exploration and Utilization Act of 2015*, Pub L 114-90, § 401, 129 Stat 704, § 51303.

30 While questions regarding mining and resource rights in outer space are certainly important, by adopting a Big History perspective it becomes apparent that the true wealth of any environment rests on the human communities located there. Looking at settler societies today, for example the United States, Brazil and Australia, whose history of non-indigenous settlement span half a millennia or less, it is clear that their economic, social and political power does not come from oil drilling in Texas, forestry in the Amazon or iron ore mining in Western Australia.

Once migration to outer space moves beyond its current small cadre of professional astronauts, the international regulation of this off-world movement and settlement will present one of the most significant issues of international law yet faced. The creation of an effective governance regime for frontier migration to destinations beyond Earth will accordingly play a key role in determining the trajectory and success of humankind's expansion into space over the coming centuries.

B *The Coming Intersection Of International Space Law And International Migration Law*

As Marc Harrold observes, '[i]ntersections of existing areas of law and outer space travel and habitation are inevitable and challenging.'[31] This thesis recognises the future nexus of international space law[32] with international migration law.[33] The focus of this work though goes beyond this to the far broader proposal of a governance model for outer space that not only reconciles these two areas of international law, but provides an overarching legal regime for human space settlement.

There are two fundamental conflicts nascent in the future collision of the law of outer space with international migration law. The first conflict relates to state sovereignty which the foundational legal instrument of international space law, the 1967 OST,

Far greater wealth and influence are generated by their global cities of New York, São Paulo and Sydney, each created by centuries of human migration to these locations.

31 Harold, above n 24, 17.

32 In the words of Gennady Zhukov and Yuri Kolosov, 'international space law may be defined as the sum total of the specific rules of international law' that regulate all 'space activities, and [are responsible for] establishing the legal order of outer space, the Moon and other celestial bodies in accordance with the principles of general international law.' Also as they describe '[m]ost of international space law is indeed treaty law; the national and international actors in space need the clarity that can only be provided by written rules.' Gennady Zhukov and Yuri Kolosov, *International Space Law* (Praeger Publishers, 1984) 9-10.

33 As described by Richard Plender, '"international migration law" is an umbrella term for the complex web of legal relationships among persons, groups and States that together regulate the movements of individuals.' Further, as explained by Brian Opeskin and colleagues, 'the three main pillars of this branch of international law involve the human rights and duties of persons undertaking migration, the elements of sovereignty that relate to human movement such as the entry and exit of non-nationals and finally the law's role in promoting cooperation among States to manage the international movement of people.' Richard Plender, *International Migration Law* (Martinus Nijhoff, 2nd ed, 1988) xiv; Brian Opeskin, Richard Perruchoud and Jillyanne Redpath-Cross, 'Conceptualising International Migration Law' in Brian Opeskin, Richard Perruchoud and Jillyanne Redpath-Cross (eds) *Foundations of International Migration Law* (Cambridge University Press, 2012) 1, 6.

seemingly rejects at first glance in relation to territory in outer space.[34] The OST declares in Article II, at what is termed its 'non-appropriation principle':[35]

> **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.**

International migration law is, however, fundamentally premised upon state sovereignty, with a core prerogative conferred upon States, being the sovereign discretion to admit and expel non-nationals, subject only to minimal limitations such as those applying to the international movement of refugees.[36]

The second contradiction arises also from this inherent power to admit and expel, with this ostensibly irreconcilable with the guarantee contained in the second paragraph of Article I of the OST which declares,

> **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 there shall be free access to all areas of celestial bodies.**

It is therefore clear that the international migration law regime in effect on Earth cannot simply be transplanted to regulate the future wave of frontier migration to the outer space environment.

C *The Territorial Conception Of 'The Province Of All Mankind'*

To facilitate future human migration beyond Earth, a new paradigm for the law of outer space is needed. Identifying this, an evolutionary interpretation of the first paragraph of the OST's Article I is proposed in this thesis. Referred to as the Treaty's 'province provision,' this paragraph states:

> **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 <u>shall be the province of all mankind</u>.[37]**

34 As will be examined in detail at Part B of Chapter 3 discussing bifurcated sovereignty the situation is however far more nuanced than this.

35 Steven Freeland and Ram Jakhu, 'Article II' in Stephan Hobe, Bernhard Schmidt-Tedd and KaiUwe Schrogl (eds), *Cologne Commentary on Space Law: Volume 1* (Carl Heymanns Verlag, 2009) 44.

36 Richard Perruchoud, 'State Sovereignty and Freedom of Movement' in Brian Opeskin, Richard Perruchoud and Jillyanne Redpath-Cross (eds) *Foundations of International Migration Law* (Cambridge University Press, 2012) 123, 124-5.

37 [Emphasis added].

As Joanne Gabrynowicz noted, this provision, along with the separate concept of 'the common heritage of mankind' found in the subsequent 1979 *Moon Agreement*[38] and the 1982 *United Nations Convention on the Law of the Sea*,[39] 'has given rise to volumes of competing definitions, arguments and positions regarding the legal ramifications of the mankind provisions.'[40] She went on to observe that '[t]he practical result of this has been the failure to articulate, internationally, the legal substance' of these treaty clauses. Yet crucially she finds that the resultant 'chaotic state of international space law does, however, provide a void that, if implanted with the seed of a transformational idea, can become pregnant with possibility.'[41]

This thesis offers just such a transformational idea as *de lege ferenda*. That 'the province of all mankind' declared in the OST can be interpreted literally, with the full territorial implications ordinarily associated with the word 'province'.[42] This means that mankind – or more appropriately today humankind[43] – as an emerging subject of international law, territorially appropriates those areas of space where humanity ventures. The result of which is that those regions of outer space[44] where the human species extends its presence comprise the literal province of all humankind, with title and residual sovereignty over this territory invested in this legal entity. Accordingly, as humanity's footprint in space grows over the coming decades and centuries, so will our territorial province.

Such an evolved interpretation of Article I also invests Article V of the OST with tangible meaning, with its declaration that parties 'shall regard astronauts as envoys of mankind in outer space'. Furthermore, with humankind endowed with international legal personality and holding ultimate title as the appropriator of specific areas beyond Earth, no conflict is presented with Article II of the OST, which crucially only prohibits 'national appropriation' of outer space, not appropriation entirely. This non-

38 *Agreement Governing the Activities of States on the Moon and Other Celestial Bodies*, opened for signature 5 December 1979, 1363 UNTS 3 (entered into force 11 July 1984) ('*Moon Agreement*').

39 *United Nations Convention on the Law of the Sea*, opened for signature 10 December 1982, 1833 UNTS 3 (entered into force 16 November 1994) ('*UNCLOS*').

40 Joanne Gabrynowicz, 'The Province and Heritage of Mankind Reconsidered' (Paper presented at Second Conference on Lunar Bases and Space Activities of the 21st Century, Houston, 5-7 April 1988) 692 <http://ntrs.nasa.gov/search.jsp?R=19930004830>.

41 Ibid.

42 Oxford University Press, *'Province'* (March 2016) Oxford English Dictionary <www.oed.com>.

43 The terms 'mankind' and the gender neutral 'humankind' are used synonymously in this thesis, with a preference for 'humankind' where material is not being directly quoted.

44 Outer space being defined as the physical universe beyond Earth's atmosphere, including both celestial bodies and the void (vacuum) of space that separates them.

appropriation principle is a matter of importance that needs to be addressed and dealt with at the outset of this thesis, as critics of the proposed territorial interpretation of the province provision may well miss this distinction and dismiss out of hand the territorial conception as a violation of Article II.

As C Wilfred Jenks correctly observed in relation to this same prohibition against national appropriation appearing in the earlier United Nations General Assembly resolution, the *Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space*:[45]

> Can the term 'national' be regarded as limitative and if so what does it exclude and thereby permit? In the light of the history of territorial acquisitions on Earth, a number of theoretical possibilities may be distinguished. Territory may be appropriated by or on behalf of a State. It may be appropriated by a body in the nature of a Chartered Company, such as the East India Company or the British South Africa Company. It may be appropriated by an adventurer acting on his own account, such as Rajah Brooke of Sarawak.[46] It may be jointly appropriated by a group of closely associated States or a group of potentially unfriendly States desirous of neutralising each other's influence. Conceivably it might be appropriated by the United Nations acting on behalf of the world community as a whole. It is submitted that the prohibition of 'national appropriation' contained in the Declaration of Legal Principles forbids all but the last of these possible forms of appropriation. The Declaration itself provides that States bear international responsibility for national activities in space;[47] it follows that what is forbidden to

45 *Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space*, GA Res 1962 (XV111), UN GAOR, 18th sess, 1280th plen mtg, UN Doc A/RES/18/1962 (13 December 1963), para 3 ('*Declaration of Legal Principles*'); Reading almost identically to Article II of the OST, the non-appropriation principle in the *Declaration of Legal Principles* passed in 1963 states: '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.' The non-appropriation principle was in fact first introduced by the 1961 *International Co-operation in the Peaceful Uses of Outer Space* resolution of the General Assembly, which held: 'Outer space and celestial bodies are free for exploration and use by all States in conformity with international law and are not subject to national appropriation.' *International Co-operation in the Peaceful Uses of Outer Space*, GA Res 1721 (A) (XVI), UN GAOR, 16th sess, 1085th plen mtg, UN Doc A/RES/1721(XVI) (20 December 1961).

46 The so-called 'White Rajahs' of the Kingdom of Sarawak (on the island of Borneo) from the dynastic Brooke family of England, personally held sovereignty as absolute monarchs from 1841 to 1946. See: Sabine Baring-Gould, *A History of Sarawak Under its Two White Rajahs, 1839-1908* (H Sotheran, 1909).

47 As does Article VI of the *Outer Space Treaty* which holds: 'States Parties to the Treaty shall bear international responsibility for national activities in outer space, including the Moon and other celestial bodies, whether such activities are carried on by governmental agencies or by non-governmental entities, and for assuring that national activities are carried out in conformity with the provisions set forth in the present Treaty. The activities of non-governmental entities in outer space, including the Moon and other celestial bodies, shall require authorization and continuing supervision by the appropriate State Party to the Treaty. When activities are

> a State is not permitted to a chartered company created by a State or to one of its nationals acting as a private adventurer. The Declaration also makes it clear that its provisions are binding upon all States in respect of their collective as well as their individual acts, even when they act through international organisations;[48] from this it follows that a State cannot escape the prohibition of national appropriation by acting jointly with other States. Only as regards a possible appropriation by the United Nations acting on behalf of the world community as a whole can the matter be regarded as an open one for the future.[49]

Jenks rightly identifies 'the world community' as a legal entity uniquely not precluded by the prohibition against national appropriation, which would also include its higher political dimension, humankind itself.[50] As will be discussed in Chapters 2 and 6, at present it is the United Nations (specifically its General Assembly) that can most appropriately act on behalf of this legal entity, as Jenks himself recognises. Furthermore of significance is that a close reading of the non-appropriation principles reveals it does not in fact actually prohibit the exercise of sovereignty in outer space, but rather only claims of sovereignty that amount to national appropriation of territory.[51]

More recently Steven Freeland and Ram Jakhu observe, 'no action, either by a State(s) or a private entity or natural person – be it a claim of sovereignty, a use or occupation or "any other means" – will ever sustain (from a legal perspective) a claim that gives rise to a right of ownership over any part of outer space'.[52] It is clear this prohibition does not though apply to humankind itself through the limitative effect of prefacing

> carried on in outer space, including the Moon and other celestial bodies, by an international organization, responsibility for compliance with this Treaty shall be borne both by the international organization and by the States Parties to the Treaty participating in such organization.'

48 As likewise does Article VI of the *Outer Space Treaty*.

49 C Wilfred Jenks, *Space Law* (Stevens and Sons, 1965) 201.

50 See discussion of Cocca's 'jus humanitatis continuum' involving higher political dimension of the individual as a legal entity in Part G of Chapter 2.

51 Stephen Gorove, *Studies in Space Law: Its Challenges and Prospects* (AW Sijthoff-Leydon, 1977) 45; Linda R Sittenfield, 'The Evolution of a New and Viable Concept of Sovereignty for Outer Space' (1980) 4(1) *Fordham International Law Journal* 204.

52 Steven Freeland and Ram Jakhu, 'Article II' in Stephan Hobe, Bernhard Schmidt-Tedd and Kai-Uwe Schrogl (eds), *Cologne Commentary on Space Law: Volume 1* (Carl Heymanns Verlag, 2009) 44, 53. This prohibition against national appropriation applies to private entities (such as corporations), natural persons and also international organisations because as Freeland and Jakhu explain, '[t]he word "national" is also found in Article VI of the Outer Space Treaty, which provides that States are internationally responsible for "*national* activities in outer space", and particularly "for assuring that *national activities* are carried out in conformity with the provisions set forth in the present Treaty" (emphasis added [by Freeland and Jakhu]). Additionally, States also remain responsible for assuring compliance with the treaty by an international organisation in which they participate.' Ibid 52.

'appropriation' with the word 'national'. Instead as will be articulated in Chapter 2, humankind is explicitly endowed with ownership and titular sovereignty over areas of outer space by the declaration of 'the province of all mankind' at Article I.[53] The OST also importantly does not prohibit all forms of sovereignty, only those which amount to national appropriation, and in fact distinguishes between titular or residual sovereignty and administrative sovereignty, known as jurisdiction and control.[54] Indeed Article VIII of the OST explicitly authorises States to exert 'jurisdiction and control' over objects launched into space 'and over any personnel thereof';[55] thus this administrative form of sovereignty[56] is distinguished by the Treaty itself from sovereignty involving appropriation.[57]

Ultimately the adoption by humanity of the territorial conception of the province provision would result in three significant legal developments affecting our future in space, all of which would be highly favourable to human migration to this next frontier. As will be discussed in detail in Chapter 3 these involve: 1) freedom of movement in outer space as an individual human right; 2) the bifurcation of sovereignty enabling

53 As Aldo Armando Cocca explains in relation to outer space and Article II, 'if no national occupation on the part of States is possible, it is something common to all [h]umankind, considered as a whole.' Aldo Armando Cocca, 'The Advances of International Law Through The Law of Outer Space' (1981) 9 *Journal of Space Law* 13, 14.

54 Elihu Lauterpacht, 'The Contemporary Practice of the United Kingdom in the Field of International Law–Survey and Comment' (1956) 5(3) *International and Comparative Law Quarterly* 405, 410; James Crawford, *Brownlie's Principles of Public International Law* (Oxford University Press, 8th ed, 2012) 206-10; Sir Robert Jennings and Sir Arthur Watts (eds) *Oppenheim's International Law: Volume 1 – Peace* (Longman, 9th ed, 1992) 565-72; Sir Gerald Fitzmaurice, 'The General Principles of International Law Considered From The Standpoint of the Rule of Law'(1957) 92 *Collected Courses of the Hague Academy of International Law* 1, 130-1.

55 Furthermore Article II does not refer to 'jurisdiction and control', thereby differentiating it from the 'sovereignty' to which it does refer. This sovereignty mentioned in Article II is accordingly of the type connected with national appropriation – that of titular or residual sovereignty. Also Article II's insistence that national appropriation cannot occur 'by any other means' ensures that the exercise of administrative jurisdiction and control over territory in outer space cannot in any circumstances lead to national appropriation involving residual sovereignty over any area governed. As is already the case on Earth in circumstances of bifurcated sovereignty under international law, titular and residual sovereignty are entirely separate to administrative sovereignty and territorial jurisdiction and control. See Part B of Chapter 3 discussing the bifurcation of sovereignty enabling territorial administration.

56 The terms 'jurisdiction and control' in international space law certainly 'represent an aspect of sovereignty and incorporate the rights and powers to exercise legislative, judicial and administrative authority towards personnel and objects in space, including celestial bodies'. V S Vereschchetin, 'International Space Law and Domestic Law: Problems of Interrelations' (1981) 9 *Journal of Space Law* 31, 32.

57 As Bernard Schmidt-Tedd and Stephan Mick explain, jurisdiction and control 'avoids a reference to State sovereignty [in the titular sense used by Article II] and national territoriality in outer space – an area of non-appropriation.' Bernard Schmidt-Tedd and Stephan Mick, 'Article VIII' in Stephan Hobe, Bernhard Schmidt-Tedd and Kai-Uwe Schrogl (eds), *Cologne Commentary on Space Law: Volume 1* (Carl Heymanns Verlag, 2009) 146, 156.

territorial administration; and 3) humankind's compulsory jurisdiction over international disputes in outer space.

D *Structure Of Thesis*

This thesis provides an analytical introduction to this new paradigm, while recognising that each and every legal aspect of such a territorial interpretation of the province provision cannot be addressed, given the prescribed size constraints of this work. What can be undertaken however is an explication of this evolutionary interpretation of the OST proposed as *de lege ferenda* and an examination of whether any support exists for this conception in the Treaty and its negotiation history. Divided into six substantive chapters, together they provide an initial detailed introduction to the territorial conception of 'the province of all mankind.'

Charting the existing understandings of the province provision in the law of outer space, Chapter 2 begins with an overview of the current literature, with analysis of the differing interpretations presently offered. Identifying an absence of any settled meaning, this chapter continues with a detailed explanation of the territorial conception being advocated and the core legal argument on which this is based – humankind's emerging international legal personality. The three main legal consequences arising from this territorial conception are then explored in Chapter 3, including the positive effect each would have on human migration to outer space.

Chapter 4 undertakes a detailed examination of the entirety of the OST's *travaux préparatoires*, with a focus on the negotiation of the province provision within the wider treaty deliberations. An analysis of these primary source documents reveals numerous delegate statements supportive of this proposed territorial conception in the UN bodies through which the Treaty was negotiated on its path to signature.

Chapter 5 reviews 'the province of all mankind' terminology in its four other equally authentic treaty texts.[58] For this purpose, the province provision was professionally translated from the Russian, French, Spanish and Chinese languages, with the Russian text found to be particularly supportive of such a territorial application. This is significant given that the wording of the province provision itself was originally drafted

58 *Outer Space Treaty* art XVII.

in the Russian language, being first put forward in the Soviet draft of the OST.[59] Chapter 6 concludes by synthesising these findings and identifying further avenues for research.

Ultimately, this work seeks to provide the intellectual foundation for a future compact in outer space between every human being, humankind as an emerging legal entity, as well as other subjects of international law such as States, international organisations and corporations.[60] The legal consequences of the province provision's territorial application offer an international governance regime that promotes and facilitates human migration to space, while also providing a potential solution to the vexed issue of private property and resource rights in outer space. Most significantly this would all be achieved within the existing textual framework of the OST. As a treaty born from a unique moment in time when widespread agreement among States on the foundational law of outer space was achievable, the OST still stands as humanity's best hope for a peaceful future in our cosmic province. With some commentators already advocating this Treaty's demise,[61] which is a distinct possibility given its explicit withdrawal clause,[62] the OST must evolve to accommodate humanity's future settlement of space or it will eventually be abandoned.[63] The territorial conception of the province provision is therefore put forward in the hope that this Treaty, aptly described as 'the

59 Union of Soviet Socialist Republics, *Draft Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, The Moon and Other Celestial Bodies – Letter Dated 16 June 1966 From the Permanent Representative of the Union of Soviet Socialist Republics to the United Nations Addressed to the Secretary-General*, UN GAOR, 21st sess, UN Doc A/6352 (16 June 1966).

60 These varying subjects of international law each stand to benefit should the law of outer space evolve in this manner, as will be outlined in Chapter 3.

61 John Hickman and Everett Dolman, 'Resurrecting the Space Age: A Space-Centered Commentary on the Outer Space Regime' (2002) 21(1) *Comparative Strategy* 1, 13, 17; Benjamin David Landry, 'A Tragedy of the Anticommons: The Economic Inefficiencies of Space Law' (2013) 38(2) *Brooklyn Journal of International Law* 523, 570; Philip Ball, 'Time to Rethink the Outer Space Treaty', *Nature: International Weekly Journal of Science* (online), 4 October 2007 <http://www.nature.com/news/2007/071004/full/news.2007.142.html>; John Hickman, 'Still Crazy After Four Decades: The Case for Withdrawing from the 1967 Outer Space Treaty', *The Space Review* (online), 24 September 2007 <http://www.thespacereview.com/article/960/1>.

62 'Any State Party to the Treaty may give notice of its withdrawal from the Treaty one year after its entry into force by written notification to the Depository Governments. Such withdrawal shall take effect one year from the date of receipt of this notification.' *Outer Space Treaty* art XVI.

63 Eric C Anderson, co-founder and co-chairman of both the companies Space Adventures (the company responsible for the world's only 7 space tourists who all visited the ISS) and Planetary Resources predicts 'I don't see the Outer Space Treaty living another 100 years.' James Fallows, 'The Coming Age of Space Colonization', *The Atlantic* (online), 20 March 2013 <http://www.theatlantic.com/technology/archive/2013/03/the-coming-age-of-space-colonization/273818/>.

constitution for outer space',[64] will, like any effective constitution, serve as a 'living document'[65] and come to be properly interpreted in light of our species' impending settlement of outer space. This from the macro view of Big History, is not too far away.

64 Ram Jakhu, 'Legal Issues Relating to the Global Public Interest in Outer Space' (2006) 32 *Journal of Space Law* 31, 31.

65 Thurgood Marshall, 'The Constitution: A Living Document' (1987) 30 *Howard Law Journal* 915, 915-6.

II A TERRITORIAL CONCEPTION FOR 'THE PROVINCE OF ALL MANKIND'

As one of the least understood concepts in international space law, 'the province of all mankind' provision, appearing in Article I of the *Outer Space Treaty* (OST),[1] could be considered an unlikely candidate to provide the robust legal foundation needed for the future settlement of outer space. Yet within this provision, dismissed by some as no more than a rhetorical flourish[2] of treaty drafting, lies a foundation for an overarching legal structure under which humanity's eventual expansion into outer space could be governed. Manfred Lachs, Chairman of the Legal Subcommittee of the United Nations Committee for the Peaceful Uses of Outer Space (COPUOS) during the OST's negotiation,[3] rejected the notion that the province provision enjoys only 'a purely moral character' without 'legal consequences', noting that the words 'the province of all mankind' should hold 'clear legal status' with greater precision.[4]

A *An Undetermined Provision*

While Joanne Gabrynowicz rightly observes that the 'mankind provisions' have 'given rise to volumes of competing definitions, arguments and positions',[5] the overwhelming majority of this legal commentary has been in regards to the separate 'common heritage of mankind' provision[6] found in the *Moon Agreement*[7] and most significantly in the *United*

1 *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies*, opened for signature 27 January 1967, 610 UNTS 205 (entered into force 10 October 1967) ('*Outer Space Treaty*').

2 Francis Lyall and Paul Larsen, *Space Law: A Treatise* (Ashgate, 2009) 62.

3 Later Judge of the International Court of Justice (1967-1993), including serving as its President (1973-1976).

4 Manfred Lachs, 'Some Reflections on the State of the Law of Outer Space' (1981) 9 *Journal of Space Law* 3, 9.

5 Joanne Gabrynowicz, 'The Province and Heritage of Mankind Reconsidered' (Paper presented at Second Conference on Lunar Bases and Space Activities of the 21st Century, Houston, 5-7 April 1988) 692 <http://ntrs.nasa.gov/search.jsp?R=19930004830>.

6 See for example: Kemal Baslar, *The Concept of the Common Heritage of Mankind in International Law* (Martinus Nijhoff, 1998); and for a bibliography of scholarship regarding the common heritage of mankind in the context of outer space see: Prue Taylor and Lucy Stroud, *Common Heritage of Mankind: A Bibliography of Legal Writing* (Fondation De Malte, 2012) 59-67.

7 *Agreement Governing the Activities of States on the Moon and Other Celestial Bodies*, opened for signature 5 December 1979, 1363 UNTS 3 (entered into force 11 July 1984) ('*Moon Agreement*') art 11(1).

Nations Convention on the Law of the Sea (UNCLOS).[8] Yet, in comparison, there exists a noticeable dearth of scholarly attention paid to the province provision in the OST, even among space lawyers. This is surprising for two reasons. Firstly, while the great interest UNCLOS's common heritage provision generates is warranted given its central[9] and unamendable[10] position within this 167 member State treaty regime,[11] this centrality is simply not mirrored in international space law. The 'common heritage of mankind' is referred to only once in the corpus of space law's five principal treaties,[12] at Article 11(1) of the *Moon Agreement*. However with only 16 States party to this treaty,[13] none of which are independent launching States,[14] the *Moon Agreement's* applicability is limited. Now, over thirty-five years since its signature, this treaty 'suffers from a chronic – very likely fatal – lack of adherents.'[15] This narrow application of 'the common heritage of mankind' in international space law stands in stark contrast to the OST with its separate province

8 *United Nations Convention on the Law of the Sea*, opened for signature 10 December 1982, 1833 UNTS 3 (entered into force 16 November 1994) ('UNCLOS') art 136; For the copious amount of scholarship examining the common heritage of mankind in the context of the law of the sea, see: Taylor and Stroud, above n 6, 68-84.

9 UNCLOS art 136; 'The Area and its resources are the common heritage of mankind.'

10 Ibid art 311(1); 'States Parties agree that there shall be no amendments to the basic principle relating to the common heritage of mankind set forth in article 136 and that they shall not be party to any agreement in derogation thereof.'

11 *Status – United Nations Convention on the Law of the Sea* (28 March 2016) United Nations Treaty Collection <https://treaties.un.org/pages/ViewDetailsIII.aspx?src=TREATY&mtdsg_no=XXI-6&chapter=21&Temp=mtdsg3&lang=en>.

12 *Outer Space Treaty*; *Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space*, opened for signature 19 December 1967, 19 UNTS 119 (entered into force 3 December 1968) ('*Rescue Agreement*'); *Convention on International Liability for Damage Caused by Space Objects*, opened for signature 29 November 1971, 961 UNTS 187 (entered into force 1 September 1972) ('*Liability Convention*'); *Convention on the Registration of Objects Launched into Outer Space*, opened for signature 12 November 1974, 1023 UNTS 15 (entered into force 15 September 1976) ('*Registration Convention*'); *Moon Agreement*.

13 *Status – Agreement Governing the Activities of States on the Moon and Other Celestial Bodies* (28 March 2016) <https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg_no=XXIV-2&chapter=24&lang=en>.

14 No independent launching states are parties to the *Moon Agreement* (although three are member States of the European Space Agency) and both France and India as launching nations have signed but not ratified this treaty. As signatories that have signed but not ratified, such States are required under Article 18 of the *Vienna Convention on the Law of Treaties* 'to refrain from acts which would defeat the object and purpose' of the *Moon Agreement*. The European Space Agency is also not bound by the obligations of the *Moon Agreement* despite 3 of its 22 member States being party to this treaty, as under Article 16 of the *Moon Agreement* international organisations can only declare their acceptance of this treaty if a majority of their member States are party; *Vienna Convention on the Law of Treaties*, opened for signature 23 May 1969, 1155 UNTS 331 (entered into force 27 January 1980) ('VCLT').

15 Lotta Viikari, 'Natural Resources of the Moon and Legal Regulation' in Viorel Badescu (ed), *Moon: Prospective Energy and Material Resources* 519, 546.

provision, which to date has 103 State parties,[16] including all launching States apart from Iran.[17] It is accordingly 'the province of all mankind' and not 'the common heritage of mankind' that serves as the paramount 'mankind' provision within the law of outer space.

This lack of attention the province provision has garnered is somewhat remarkable given the observation that the Soviet Union and United States only agreed to the province provision 'on the general assumption that it will not really burden their [respective space] programs and, in any case, that they themselves will determine unilaterally how it is to be implemented.'[18] Given the lack of definition clauses in the OST,[19] the then sole space powers appeared to value this ambiguity. As with this deliberate imprecision regarding 'the province of all mankind' and a number of similarly amorphous phrases in the OST,[20] there exists embedded malleability within these provisions. As Eirik Bjorge identifies, where 'parties have used generic terms in a treaty, the parties necessarily having been aware that the meaning of the terms was likely to evolve over time … the parties must be presumed, as a general rule, to have intended those terms to have an evolving meaning.'[21] The International Court of Justice (ICJ) itself, when describing the recognised place of the 'evolutionary interpretation' of treaties, held in its 2009 *Navigational Rights* decision its application to:

> situations in which the parties' intent upon conclusion of the treaty was, or may be presumed to have been, to give the terms used – or some of them - a meaning or

16 *Status – Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies* (28 March 2016) United Nations Treaty Collection <https://treaties.un.org/Pages/showDetails.aspx?objid=0800000280128cbd>.

17 Iran did sign the OST in 1967 but has not ratified, requiring it under Article 18 of the *Vienna Convention on the Law of Treaties* 'to refrain from acts which would defeat the object and purpose' of the *Outer Space Treaty*.

18 Seyom Brown, Nina Cornell, Larry Fabian and Edith Weiss, *Regimes for the Ocean, Outer Space and Weather* (Brookings Institution, 1977) 130.

19 Although a more prevalent feature of treaty drafting in recent years, definition clauses still remained relatively common at the time of the negotiation of the *Outer Space Treaty*. See for example: *Vienna Convention on Consular Relations*, opened for signature 24 April 1963, 596 UNTS 261 (entered into force 19 March 1967) art 1; *International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations*, opened for signature 26 October 1961, 496 UNTS 43 (entered into force 18 May 1964) art 3; *Single Convention on Narcotic Drugs 1961, as amended by the Protocol amending the Single Convention on Narcotic Drugs*, opened for signature 20 March 1961, 976 UNTS 105 (entered into force 8 August 1975) art 1.

20 Such as 'for the benefit and in the interest of all countries' also found in Article I and Article V's 'envoys of mankind'

21 Eirik Bjorge, *The Evolutionary Interpretation of Treaties* (Oxford University Press, 2014) 1.

> content capable of evolving, not one fixed once and for all, so as to make allowance for, among other things, developments in international law.[22]

The interest of legal scholars would normally be piqued by a treaty provision whose flexibility was seemingly a design characteristic. However, it appears that this textual uncertainty has instead led many commentators to conclude that this provision of the OST lacks any real legal significance.[23] Yet the province provision is certainly worthy of attention. It is by influencing the practice of States and other international entities through the debate of new interpretations and legal ideas that scholars can play an important role in generating new norms of international law. With the accepted meaning of 'the province of all mankind' still unresolved almost half a century after its drafting, the proposal of such evolutionary interpretations as *de lege ferenda* can introduce potential new conceptions for the law of outer space. It is for States and others to weigh such interpretations against existing paradigms in the marketplace of ideas as they consider their own future endeavours in space, which will in time come to include human settlement.

B *The Search For Meaning So Far*

Some scholars have however previously attempted to bring clarity to the term 'the province of all mankind.' In the preeminent commentary on the OST, Stephan Hobe finds the provision requires that '[s]pace exploration and use are undertaken for the benefit of all countries whereby all countries shall somewhat benefit from these activities. The fact that *all* countries shall profit is regarded as the final goal of the provision, the "province of all mankind".'[24] Writing elsewhere, Hobe recognises that the broadness of language used in the province provision has 'given room to various interpretations of its exact content',[25]

22 *Dispute regarding Navigational and Related Rights (Costa Rica v Nicaragua) (Judgment)* [2009] ICJ Rep 213, 242.

23 Nicolas Mateesco Matte, 'Legal Principles Relating to the Moon' in Nandasiri Jasentuliyana and Roy S K Lee (eds), *Manual on Space Law: Volume I* (Oceana Publications, 1979) 253, 259; George T Hacket, *Space Debris and the Corpus Iuris Spatialis* (Editions Frontieres, 1994) 80; Boris Mairsky, 'A Few Reflections on the Meaning and The Interrelation of "Province of all Mankind" and "Common Heritage of Mankind" Notions' in *Proceedings of the 29th Colloquium on the Law of Outer Space* (AIAA, 1986) 58, 59; Lyall and Larsen, above n 2, 62.

24 Stephan Hobe, 'Article I' in Stephan Hobe, Bernhard Schmidt-Tedd and Kai-Uwe Schrogl (eds), *Cologne Commentary on Space Law: Volume 1* (Carl Heymanns Verlag, 2009) 25, 39 [Emphasis in original].

25 Stephan Hobe, 'Outer Space as the Province of Mankind – An Assessment of 40 Years of Development' in *Proceedings of the 50th Colloquium on the Law of Outer Space* (AIAA, 2007) 442, 442.

but holds that its aim when drafted was 'to achieve a totally equal use of outer space by all states although the reality did and does not meet this parameter.'[26] Instead Hobe finds today that 'one must realistically conclude that any idea of distributive justice in the sense that had been originally included in Article I para 1 of the Outer Space Treaty has been totally abandoned.' [27] He concludes that in the decades since its initial drafting the practical meaning afforded the province provision has already evolved, so that its conception:

> currently seems to be that by way of the progressive engagement of private actors in outer space activities, the only profit all mankind might have from these activities is made in the common understanding and use of outer space. It is thus the typically utilitarian paradigm of allowing others to somewhat profit from the individual progress.[28]

Bess Reijnen, in an earlier commentary on the OST, considers this benefit-sharing aspect to extend even further than the originally intended meaning that Hobe identifies. She claims that the '"province of all mankind" and "common heritage of mankind" are equivalent terms'[29], finding them to be 'substantively of the same content in all areas beyond national jurisdiction.'[30] This echoes the analysis of Nicolas Matte that the province provision 'may be characterized to be a "common interest" clause or a clause establishing the principle of the "common heritage of mankind" or the "province of all mankind".'[31] Matte concluded that both provisions require that '[b]enefits should be equitably distributed according to an acceptable method.'[32] More recently, Gbenga Oduntan has also conflated these two phrases, by claiming '[t]he CHM [common heritage of mankind] and the province of mankind terminologies are two sides of the same coin.'[33]

Although the exact scope of 'the common heritage of mankind' concept found in the *Moon Agreement* and UNCLOS is itself not clear despite the intense scholarly attention it has

26 Ibid 443.
27 Ibid 448
28 Ibid 447-8.
29 Bess CM Reijnen, *The United Nations Space Treaties Analysed* (Edition Frontieres, 1992) 95-96.
30 Ibid.
31 Nicolas Mateesco Matte, *Aerospace Law: Telecommunications Satellites* (Butterworths, 1982) 77.
32 Ibid.
33 Gbenga Oduntan, *Sovereignty and Jurisdiction in Airspace and Outer Space: Legal Criteria for Spatial Delimitation* (Routledge, 2011) 205.

received, it certainly includes elements beyond Hobe's original distributive justice conception of the province provision. These include international management of benefit-sharing and directly regulated utilisation,[34] such as that implemented by the International Seabed Authority under the UNCLOS regime.[35] Accordingly, as most space law scholars correctly observe,[36] the province and common heritage provisions are not identical.[37]

With the province provision already evolving beyond its initial distributive justice aspirations, David Tan, in proposing his own *de lege ferenda* interpretation of 'the province of all mankind', has so far been alone in recognising its further evolutionary potential.[38] Invoking Justice Oliver Wendell Holmes' reasoning that a 'word is not a crystal, transparent and unchanged, it is the skin of a living thought and may vary greatly in color and content according to the circumstances and the time in which it is used',[39] Tan observes '[t]he meaning that may have been ascribed to the phrase in 1967 may be different from the understanding that should be accorded to it today.'[40] He concludes that

34 Rüdiger Wolfrum, 'Common Heritage of Mankind' (November 2009) Max Planck Encyclopedia of Public International Law – Oxford Public International Law [14]-[21] <http://opil.ouplaw.com/home/EPIL>.

35 UNCLOS arts 156-85.

36 Gabrynowicz, above n 5, 692; Ram Jakhu, 'Legal Issues Relating to the Global Public Interest in Outer Space' (2006) 32 *Journal of Space Law* 31, 49; Isabella Henrietta Philepina Diederiks-Verschoor and Vladimir Kopal, *An Introduction to Space Law* (Kluwer Law International, 3rd ed, 2008) 50; Fabio Tronchetti, *The Exploitation of Natural Resources of the Moon and Other Celestial Bodies: A Proposal for a Legal Regime* (Martinus Nijhoff Publishers, 2009) 44; Frans von der Dunk, 'International Space Law' in Frans von der Dunk and Fabio Tronchetti (eds), *Handbook of Space Law* (Edward Elgar, 2015) 29, 57; Andrew J Young, *Law and Policy in the Space Stations' Era* (Martinus Nijhoff, 1989) 195.

37 Reijnen's further claim that substantively the same regime applies under both the province and common heritage conceptions in all areas beyond national jurisdiction, such as outer space and the seabed within international waters, is also erroneous. The content of 'the common heritage of mankind' under Article 11(1) of the *Moon Agreement* differs to that applicable to the seabed and ocean floor and subsoil thereof under *UNCLOS*. As Ram Jakhu and colleagues explain, 'the proper meaning of the CHM [common heritage of mankind]can only be determined in the context, and for the purposes, of the applicable regulatory regime that incorporates the principle and creates specific rights and obligations of the concerned States. In other words, applying one meaning to the term CHM does not fit for all systems of international law.' Ram Jakhu et al, 'Article 11 – Moon Agreement' in Stephan Hobe, Bernhard Schmidt-Tedd and Kai-Uwe Schrogl (eds), *Cologne Commentary on Space Law: Volume 2* (Carl Heymanns Verlag, 2013) 389, 395.

38 David Tan, 'Towards a New Regime for the Protection of Space as the "Province of All Mankind"' (2000) 25 *Yale Journal of International Law* 145, 163.

39 *Towne v Eisner*, 245 US 418, 425 (1918).

40 Tan notes that the OST was drafted in a geopolitical climate of Cold War aggression, when the Soviet Union and the US where each determined to deny the other any opportunity to establish permanent habitation in space fearing strategic weapons deployment and economic advantage. However with these same countries 'now cooperating on the ISS' where their astronauts literally live and work side by side, Tan finds 'the "province of all mankind" must mean something different.' Tan, above n 38, 163-4.

Article I's 'province of all mankind' has 'the potential to acquire a legal prescription within a new regime',[41] with his new proposed definition based upon the concept of sustainable development. Tan's own evolved interpretation holds that the province provision should mandate that '[o]ur exploration and use of the outer-space environment should leave it in a substantially unimpaired condition for the enjoyment and benefit of future generations.'[42]

C *A Bold New Conception*

The potential for the province provision to evolve and be reframed within international space law can though be much bolder than an interpretation based solely on environmental protection. The territorial conception of 'the province of all mankind' that this thesis proposes entails a far more radical evolutionary interpretation, which, if accepted, will amount to a paradigm shift for international space law. This involves understanding the province provision to be a legal term of geographic scope. On this interpretation, the provision means that wherever the exploration and use of outer space is undertaken by humanity, [43] this area is appropriated by all of humankind, with ultimate title and legal jurisdiction over this territory invested in this subject of international law. Such an interpretation sees the word 'province' being understood 'in accordance with the ordinary meaning to be given to the terms of the treaty' as required under the general rule of interpretation articulated by the *Vienna Convention on the Law of Treaties*.[44] The English word 'province' is inextricably linked to notions of territory, with its primary meaning according to the *Oxford English Dictionary* '[a] territory, region, or subdivision.'[45] Within this territorial meaning, various definitions exist, including – '[a] country, territory, district, or region'; '[a]n administrative division of certain countries or states; a principal

41 Ibid 146.

42 Ibid 164.

43 As Alexander Soucek explains, '[t]he territorial scope of application of the treaty reasonably stretches only as far as human activity can (or will) go. The treaty is not an expression of human hubris ("Lawyers even regulate the Universe") … [w]here there is no activity, the treaty has no subject any more.' Alexander Soucek, 'International Law' in Christian Brünner and Alexander Soucek (eds), *Outer Space in Society, Politics and Law* (SpingerWienNewYork, 2011) 294, 306.

44 'A treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose.' *Vienna Convention on the Law of Treaties* art 31(1); For a discussion of why the Vienna Rules of treaty interpretation apply to the *Outer Space Treaty* as a treaty concluded before the entry into force of the VCLT see: Chapter 4.

45 Oxford University Press, *'Province'* (March 2016) Oxford English Dictionary <www.oed.com>.

division of a kingdom or empire'; and '[t]he parts of a country outside the capital or chief seat of government.'[46] *Black's Law Dictionary* likewise identifies province's primary meaning as '[a]n administrative district into which a country has been divided.'[47] Kathryn Milun elaborates that the word:

> stems from the Latin term *vincere*, to conquer, and was used by the Romans to designate a country or territory outside of the Roman countryside but under Roman dominion, administered by a governor sent from Rome. 'Province' is a term historically connected to the military extension of empires.[48]

Several space law scholars have identified that territorial definitions form the primary meaning of the word 'province', even if they have not accepted this primary meaning as applying to the province provision.[49] Yet as this primary territorial meaning of the word led Matte to observe, 'this expression … brings with it a notion of occupation and territoriality'.[50]

The secondary meaning of the word 'province' relates to '[a] sphere of action or interest'.[51] This is defined by the *Oxford English Dictionary* as '[a] sphere of action, influence, or responsibility; the proper function or concern of a particular person, or group; duty,

46 Ibid. See also the relevant primary territorial definitions of 'province' in the *Merriam-Webster Dictionary* of American English: 'an administrative district or division of a country'; 'all of a country except the metropolises'; Frederick C Mish (ed), *Merriam-Webster's Collegiate Dictionary* (Merriam-Webster, 11th ed, 2012) 1001; and in the *Macquarie Dictionary* of Australian English: 'an administrative division or unit of a country'; 'a country, territory, district, or region'; Susan Butler (ed), *Macquarie Dictionary* (Macquarie Dictionary Publishers, 5th ed, 2009) 1334-5.

47 Bryan A Garner (ed), *Black's Law Dictionary* (Thomson Reuters, 10th ed, 2014) 1420; The earlier territorial definition afforded by *Black's Law Dictionary* around the time of the OST's drafting was similarly '[t]he district into which a country has been divided; … [a] dependency or colony'; Henry Campbell Black, *Black's Law Dictionary* (West Publishing Co, 4th ed, 1968) 1388.

48 Kathryn Milun, *The Political Uncommons: The Cross-Cultural Logic of the Global Commons* (Ashgate, 2011) 143-4.

49 Henry R Hertzfeld (ed), *A Guide to Space Law Terms* (Space Policy Institute and Secure World Foundation, 2012) 96 <http://swfound.org/media/99172/guide_to_space_law_terms.pdf>; Henry R Hertzfeld, Brian Weeden and Christopher D Johnson, 'How Simple Terms Mislead Us: The Pitfalls of Thinking About Outer Space as a Commons' (Paper presented at the 58th International Institute of Space Law Colloquium on the Law of Outer Space, Jerusalem, 16 October 2015) 4 <http://swfound.org/media/205285/how-simple-terms-mislead-us-hertzfeld-johnson-weeden-iac-2015.pdf>; Timothy Justin Trapp, 'Taking Up Space By Any Other Means: Coming To Terms With The Nonappropriation Article of the Outer Space Treaty' (2013) 4 *University of Illinois Law Review* 1681, 1690.

50 Matte, 'Legal Principles Relating to the Moon', above n 23, 259; See also: David Goldman, 'Settlement and Sovereignty in Outer Space' (1984) 22 *University of Western Ontario Law Review* 155, 157: '"province" in this context means an administrative district or territory, that is, as Ontario is a province of Canada, outer space is a province of mankind'.

51 Oxford University Press, *'Province'* (March 2016) Oxford English Dictionary <www.oed.com>.

business' and also '[a] division or branch of any subject or sphere of knowledge'.[52] The secondary meaning accorded by *Black's Law Dictionary* somewhat similarly states '[a] sphere of activity of a profession such as medicine or law'.[53] It is this secondary meaning that the overwhelming majority of space law scholars today solely accord to the word province in the context of Article I of the OST.[54] The reason offered is that a proper reading of Article I reveals that what 'shall be the province of all mankind' actually refers to the activities of 'exploration and use' appearing at the outset of Article I.[55] That these words 'the province of all mankind' are indeed referring to 'the exploration and use of outer space' is correct and, as will be examined in Chapter 5, is supported by the words adopted in a number of the OST's equally authentic texts in other languages. This relationship to mankind's activities in outer space has led many, such as Henry Hertzfeld, to conclude that it is not the physical domain of outer space itself which is the province of all mankind, but the activity of 'exploration and use' which is addressed: 'The subtlety seems all too often lost on those whom believe that space (both void space and celestial bodies) somehow belongs to humanity.'[56] However, such a position ignores the strong legal connection that these two particular activities have to territory under international law.

D *Exploration And Use's Legal Connection To Territory*

The current common acceptance of 'the province of all mankind' pertaining solely to the activities of exploration and use of outer space, as a 'sphere of action or interest',[57] ignores

52 Ibid; See also relevant definitions of 'province' in this secondary meaning in the *Merriam-Webster Dictionary* of American English: 'proper or appropriate function or scope'; 'a department of knowledge or activity'; Mish above n 46, 1001; and the *Macquarie Dictionary* of Australian English: 'a department or branch of learning or activity'; 'the sphere or field of action of a person'; Butler, above n 46, 1334-5.

53 Garner, above n 47, 1420; The corresponding definition to this 'sphere of activity' given by *Black's Law Dictionary* around the time of the OST's drafting was '[f]iguratively, power or authority'; Black, above n 47, 1388.

54 Diederiks-Verschoor and Kopal, above n 36, 25; Henri A Wassenberg, *Principles of Outer Space Law in Hindsight* (Martinus Nijhoff, 1991) 57; Goldman, above n 50, 158; Armel Kerrest, 'Comments and Remarks – Space Law and Technological Cooperation' in *Disseminating and Developing International and National Space Law: The Latin American Perspective* (Proceedings of the United Nations/Brazil Workshop on Space Law, Rio de Janeiro, 22 to 25 November 2004) 111.

55 Hobe, *Cologne Commentary: Volume 1*, above n 24, 32; Gyula Gál, 'Some Remarks to General Clauses of Treaty Space Law' (2004) 1(1) *Miskolc Journal of International Law* 1, 4; Ricky Lee, *Law and Regulation of Commercial Mining of Minerals in Outer Space* (Springer, 2012) 217; Soucek, above n 43, 327; Lyall and Larsen, above n 2, 62.

56 Hertzfeld, Weeden and Johnson, above n 49, 4.

57 Oxford University Press, *'Province'* (March 2016) Oxford English Dictionary <www.oed.com>.

that these two very activities have been longstanding means of territorial appropriation under international law.[58] Additionally, 'use' remains an accepted legal means of territorial acquisition today. That international law itself applies in outer space to these two very activities is confirmed by the OST which holds at Article III 'States Parties to the Treaty shall carry on activities in the exploration and use of outer space … in accordance with international law, including the Charter of the United Nations'. As Lachs observed regarding the OST during its negotiation:

> [T]here is the confirmation in unequivocal language that international law, including the Charter of the United Nations, has acquired a new dimension. That is the obvious consequence of States having extended their activities into a new domain which could not possibly remain outside the realm of law. There can be no legal vacuum wherever States manifest their activities and come into contact, direct or indirect. That does not imply, of course, that all rules and all provisions of international law, by which we are guided or should be guided on this planet, are automatically, *in toto*, as it were, extended into outer space … [In] the treaty itself one finds a series of important exceptions which should be borne in mind. The most important of them is that outer space, including the moon and other celestial bodies, is not subject to national appropriation. That important provision means obviously that all claims to outer space are barred, whatever the legal title involved … [T]hat applies obviously to outer space as a whole and to any part of it. Here we have, then, a *lex specialis* for outer space.[59]

While indeed Lachs is correct that in some aspects *lex specialis*[60] does apply to international space law, '[t]here can be no doubt that a substantial part of international law applies to outer space' including 'long-established rules of customary international

58 James Crawford, *Brownlie's Principles of Public International Law* (Oxford University Press, 8th ed, 2012) 221-6; Sir Robert Jennings and Sir Arthur Watts (eds) *Oppenheim's International Law: Volume 1 – Peace* (Longman, 9th ed, 1992) 687-91; Stephen Hall, *Principles of International Law* (LexisNexis Butterworths, 4th ed, 2014) 359-66.

59 Verbatim Record of the Fourteen Hundred and Ninety-First Meeting, UN GAOR, 1st Comm, 21st sess, 1491st mtg, UN Doc A/C.1/PV.1491 (26 January 1967, adopted 17 December 1966) 11-2 (Mr Lachs).

60 '"Special law." Law unique to a particular regime or applicable in specific scenarios, such as international trade law disciplines or international humanitarian law, as opposed to law generally applicable in a variety of international relations, such as general rules of treaty interpretation or state liability for wrongful acts.' Aaron X Fellmeth and Maurice Horwitz, *Guide to Latin in International Law* (Oxford University Press, 2009) 176.

law.'[61] These include traditional means of territorial acquisition involving exploration and use of territory, which while clearly non-applicable to '**national** appropriation'[62] in outer space by the *lex specialis* of Article II, continue to apply in outer space generally as core aspects of customary international law. The inclusion of the limiting word 'national' before 'appropriation' in international space law is meaningful and cannot simply be conveniently ignored,[63] as C Wilfred Jenks makes clear in his analysis of its limiting effect detailed in the previous chapter.[64] Lachs himself is also later more explicit in the non-appropriation principle's relevance to only national appropriation by States when examining the applicability of customary means of territorial acquisition to the outer space environment, observing:

> It has been laid down that '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.' Thus States have been barred from extending to them, and exercising within them, those rights which constitute attributes of territorial sovereignty … neither use, nor occupation, can constitute legal titles justifying the extension of sovereign rights by any States over outer space.[65]

As Lachs quotes from Article II of the OST above, this provision itself actually recognises the use of outer space as a means of appropriation by specifically precluding States from undertaking national appropriation of territory 'by means of use or occupation.' That use and occupation are closely tied is clear, given that the use of territory for any significant period necessarily involves the occupation of the area in question. Occupation of territory that is not subject to any existing claim of sovereignty is an established and continuing

61 Olivier Ribbelink, 'Article III' in Stephan Hobe, Bernhard Schmidt-Tedd and Kai-Uwe Schrogl (eds), *Cologne Commentary on Space Law: Volume 1* (Carl Heymanns Verlag, 2009) 64, 67.

62 [Emphasis added].

63 Deliberately included in both Article II of the OST and its 1963 precursor provision; *Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space*, GA Res 1962 (XV111), UN GAOR, 18th sess, 1280th plen mtg, UN Doc A/RES/18/1962 (13 December 1963), para 3.

64 C Wilfred Jenks, *Space Law* (Stevens and Sons, 1965) 201; See: Part C of Chapter 1.

65 Manfred Lachs, *The Law of Outer Space: An Experience in Contemporary Law-Making* (Martinus Nijhoff, 2010) 41-2.

means of appropriation under international law.[66] As described by Sir Robert Jennings,[67] '[t]he main legal problem with regard to occupation has been to define the degree and kind of possession effective to create title and to define the area of territory to which such a possession might be said from time to time to apply.'[68] Although occupation as a means of appropriation ordinarily requires both possession of territory and its administration,[69] as Stephen Hall notes, historically '[t]he requirement of actual settlement was relaxed where the territory involved was particularly inaccessible or its climate especially inhospitable, to such an extent that the establishment of a permanent settlement would be practically very difficult.'[70] Both the Permanent Court of International Justice in its *Eastern Greenland* decision[71] and the International Court of Justice, by upholding the United Kingdom's claim to uninhabited islets and rocks in the English Channel,[72] have demonstrated such flexibility.

Article I's other specified activity of 'exploration' is likewise closely linked to territorial acquisition through the concept of discovery under international law. Up until the 16th century, discovery of new territory through the act of exploration, coupled with an eventual intention to occupy, could itself confer absolute title over territory.[73] Some scholars have insisted that this method of acquisition persisted into the 18th century,[74] with this later date even finding support in the *Island of Palmas* decision.[75] A more modern

66 Sir Robert Jennings, *Acquisition of Territory in International Law* (Manchester University Press, 1963) 20; Jennings and Watts, above n 58, 688-90; Ibid Crawford, 221-3.

67 Later of the International Court of Justice (1982-1995), including serving as its President (1991-1994).

68 Jennings, *Acquisition of Territory*, above n 66, 20.

69 Jennings and Watts, above n 58, 689.

70 Hall, above n 58, 361.

71 *Legal Status of Eastern Greenland (Denmark v Norway) (Judgment)* PCIJ (ser A/B) No 53.

72 *Minquiers and Ecrehos Case (France v United Kingdom) (Judgment)* (1953) ICJ Rep 47.

73 Jennings, *Acquisition of Territory*, above n 66, 4.

74 Arthur S Keller, Oliver J Lissitzyn and Frederick J Mann, *Creation of Rights of Sovereignty Through Symbolic Acts 1400-1800* (Columbia University Press, 1938) 148-9; Henry R Wagner, 'Creation of Sovereignty Through Symbolic Acts' (1938) 7(4) *Pacific Historical Review* 297.

75 'The growing insistence with which international law, ever since the middle of the 18th century, has demanded that occupation shall be effective would be inconceivable, if effectiveness were required only for the act of acquisition and not equally for the maintenance of the right.' *Island of Palmas (Netherlands v United States of America*) *(Awards)* (1928) 2 RIAA 829, [31]; Regardless of whether this situation persisted into only the 16th or indeed the 18th centuries, as described by William Edward Hall, '[i]n the early days of European exploration it was held, or at least every state maintained with respect to territories discovered by itself, that the discovery of previously unknown land conferred an absolute title to it upon the state by whose agents the discovery was made.' William Edward Hall, *A Treatise on International Law* (Clarendon Press, 8th ed, 1924) 126.

view, however, is that such acts of exploration resulting in the discovery of new territory only confer an inchoate title.[76] As stated in the *Island of Palmas* ruling, 'an inchoate title of discovery must be completed within a reasonable period by the effective occupation of the region claimed to be discovered.'[77] The later 1931 *Clipperton Island* arbitral decision, however, appears to recognise a degree of flexibility in discovery as a means of acquisition, based upon the specific nature of the territory discovered. In finding a single French exploratory landing on the island in 1858 as sufficient to acquire absolute title, the arbitrator held:

> [i]f a territory, by virtue of the fact that it was completely uninhabited, is, from the first moment when the occupying state makes its first appearance there, at the absolute and undisputed disposition of that state, from that moment the taking of possession must be considered as accomplished, and the occupation is thereby complete.'[78]

It is clear therefore that both exploration and use can be used to acquire title over territory not currently subject to sovereignty (*terra nullius* – 'nobody's land'[79]). In the case of exploration, this may be limited today to conferring inchoate title, but for a lengthy period of last millennium, discovery resulted in absolute title, just as occupation (and use) continues to acquire today.[80] Therefore the question is not whether the activities of exploration and use, as specified in Article I of the OST, are connected to territory and its acquisition. As this connection has not only always existed under international law but, crucially, served as a consistent feature of the human experience for over 200,000 years. Rather, the main legal issue as identified by Jennings in relation to occupation, but

76 James Crawford, *Creation of States in International Law* (Oxford University Press, 2nd ed, 2006) 258 fn 4; Jennings and Watts, above n 58, 689-90; Hall, above n 58, 366; Melquiades J Gamboa, *A Dictionary of International Law and Diplomacy* (Phoenix Press, 1973) 104.

77 *Island of Palmas (Netherlands v United States of America*) *(Awards)* (1928) 2 RIAA 829, [62].

78 *Clipperton Island Arbitration (France v Mexico) (Awards)* (1949) II RIAA 1105; *Arbitral Award on the Subject of the Difference Relative to the Sovereignty Over Clipperton Island (France v Mexico)* (1932) 26 *American Journal of International Law* 390, 394.

79 'Land or territory over which no state exercises sovereignty but that is open to claims of exclusive rights or peaceful occupation by any state with the intention of acquiring sovereignty over it.' Fellmeth and Horwitz, above n 60, 277; Regions of space currently outside humankind's geographic region of activity fall outside the OST and therefore do not form part of 'the province of all mankind' and can be considered terra nullius. See: footnote 43 above; and Soucek, above n 43, 306.

80 Whether exploration of new territory now only establishes inchoate title that must be subsequently perfected by occupation, or as held in the *Clipperton Island* decision discovery alone is still sufficient in certain circumstances involving uninhabited territory to confer title, exploration still remains tied to territorial appropriation.

applying equally to discovery, is the nature and extent of these activities required for territorial appropriation in outer space and the geographic scope of any areas acquired by humankind. Furthermore, the fact that Article I specifies the broad spatial applicability of this exploration and use, by explicitly 'including the Moon and other celestial bodies', additionally points to the province provision being related to the primary territorial meaning of the word 'province'.

Under this territorial conception 'the exploration and use of outer space … shall be the province of all mankind', still retains a connection to province's secondary meaning with it also remaining 'a sphere of action or interest'[81] of all humankind. However under this conception proposed as *de lege ferenda*, the province provision is primarily interpreted with its full territorial meaning recognised.[82] This results in those areas of outer space where humanity undertakes the activities of exploration and use being territorially appropriated by humankind as a subject of international law.[83] The question for further analysis is the degree and kind of exploration and use necessary for title to be invested in humankind (including whether these activities in outer space can be undertaken independently or must be mutual for territorial acquisition to occur) resulting in the demarcation of our territorial reach in space constituting humankind's province.[84]

81 Oxford University Press, *'Province'* (March 2016) Oxford English Dictionary <www.oed.com>.

82 Ibid.

83 See: Part F of this chapter below which discusses humankind's emerging status as an emerging subject of international law.

84 This is a subject for additional academic enquiry and should this territorial conception be adopted, eventual agreement by the international community. At its most limited, if both the possession and administration of territory for valid occupation are insisted upon in space and exploration relegated to creating only inchoate title, then the current 'province of all mankind' would extend only to low earth orbit (LEO). It is here that there has existed 25 years of possession by humanity, first through human habitation of *Mir* followed by the International Space Station (ISS). This has been coupled with humankind's administration of LEO through such measures as the multinational governance of the ISS, the International Telecommunication Union's regulation of radio frequencies and any associated orbits, such as those utilised by LEO satellites, and the corpus of international space law generally which applies to all of humanity's everyday use of LEO. At the other extreme, humankind's province could potentially constitute the entirety of our Solar System, with our robotic probes having visited the Sun, all its planets, objects in the Kuiper Belt such as Pluto and even journeying out past the Heliosphere with Voyager 1 reaching interstellar space. Such a vast geographic scope of 'the province of all mankind' would require the most liberal form of acquisition by discovery to be applied, with a subsequent intention to occupy either ignored (given the likely lack of other life in the Solar System) or inferred using the long timescales adopted by Big History. Potentially the answer lies somewhere closer to Earth, with the Moon and the void of space in between possibly our current province given this is the extent our human 'envoys of mankind' under Article V of the OST have themselves discovered so far. Whatever initial geographic scope may eventually be agreed upon by humanity, the territorial reach of humankind's province is poised to expand over the coming centuries and even millennia.

E *An Existing Concept*

This proposed territorial conception of 'the province of all mankind' is not entirely new. As Ricky Lee notes, 'the province of all mankind' provision could mean one of two things. It could 'denote some practical form of collective or communal sovereignty and ownership on the one hand or merely an idealistic and declaratory statement intended to negate any possible exercise of sovereignty or appropriation on the other.'[85] He goes on to conclude 'it is the latter position that appears to have wider acceptance.'[86] However a number of scholars, largely confined to an earlier generation of space lawyers, have advocated for the recognition of humankind's legal personality and the possession of ownership and title over outer space by this international legal entity. The most vocal proponent of this was Aldo Armando Cocca, who, while serving as the Argentinian Ambassador before the Legal Subcommittee of COPUOS in its first session following the OST's signature (just prior to its entry into force) declared:

> First, the international community from now on possessed a written law of outer space which, for reasons of time and procedure, was not yet positive law valid for all legal systems, but was nonetheless valid for every inhabitant of the globe considered independently of such systems. Secondly, the international community had recognized the existence of a new subject of international law, namely, mankind itself, and creates a *jus humanitatis*. Thirdly, the international community had, in the persons of the astronauts appointed envoys of mankind in outer space. Fourthly, the international community had endowed that new subject of international law – mankind – with the vastest common property (*res communis humanitatis*) which the human mind could at present conceive of, namely outer space itself, including the Moon and other celestial bodies.[87]

Cocca would later reiterate, '[h]umankind is the owner of the whole Moon and celestial bodies and of outer space. This means that every member of humankind is owner of an undivided part of the whole as member of the collective owner.'[88] He held '[h]umanity

85 Ricky Lee, above n 55, 217.
86 Ibid.
87 Legal Subcommittee – Committee on the Peaceful Uses of Outer Space, *Summary Record*, UN GAOR, 6th sess, UN Doc UN Doc.A/AC.105/C.2/SR.75 (19 June, 1967) 7-8.
88 Aldo Armando Cocca, 'Property Rights on the Moon and Celestial Bodies' in *Proceedings of the 39th Colloquium on the Law of Outer Space* (AIAA, 1996) 9, 17.

shall be a permanent subject of law, created by active members of the international community for the exploration and utilization of outer space and celestial bodies for peaceful purposes, and with a full juridical capacity'.[89] He further found that 'the coming into force of the 1967 [Outer] Space Treaty […] definitely consecrated [m]ankind as the receiver of all the benefits of the exploration and utilization of space and celestial bodies.'[90] Cocca often, however, strayed into conflating the separate province and common heritage provisions,[91] calling them together 'a deep evolution in the field of law'.[92] Cocca seemingly came though to recognise some distinctness in regard to the OST's province provision, eventually declaring 'there are some differences in the interpretation of the terms … for instance the common heritage of mankind principle, enshrined in the Moon Agreement.'[93] These different legal concepts are important to differentiate, with this distinction even more pronounced when a territorial interpretation is applied to the province provision. The amorphous and unsettled 'common heritage of mankind' concept involves notions of international management of benefit-sharing and directly regulated utilization[94] resulting in the communal propertising of outer space in a commercial sense which ultimately involves the equitable redistribution of finances and resources. The territorial conception of 'the province of all mankind' however involves the vesting in humankind of outer space property solely in the strict sense of territorial title and residual sovereignty, avoiding any such pecuniary benefit-sharing. While a common heritage regime could conceivably co-exist with the territorial conception of the province provision, given the widespread rejection of the *Moon Agreement* and the need to financially incentivise settlement projects leading to human migration to outer space, this is not the position advocated.

89 Aldo Armando Cocca, 'Mankind as a New Legal Subject: A New Juridical Dimension Recognized by the United Nations' in *Proceedings of the 13th Colloquium on the Law of Outer Space* (AIAA, 1970) 211, 214.

90 Ibid 211.

91 Aldo Armando Cocca, 'The Advances in International Law Through the Law of Outer Space (1981) 9 *Journal of Space Law* 13, 16; Aldo Armando Cocca, 'The Principle of the "Common Heritage of All Mankind" as Applied to Natural Resources From Outer Space and Celestial Bodies' in *Proceedings of the 16th Colloquium on the Law of Outer Space* (AIAA, 1973) 172, 175; Cocca, 'Property Rights on the Moon and Celestial Bodies', above n 88, 11.

92 Cocca, 'Mankind as a New Legal Subject', above n 89, 214.

93 Aldo Armando Cocca, 'Solidarity and Humanism in the Outer Space Treaty' in *Proceedings of the 40th Colloquium on the Law of Outer Space* (AIAA, 1997) 68, 70.

94 Wolfrum, 'Common Heritage of Mankind', above n 34.

Cocca while at times unfortunately muddling these distinct concepts, was though certainly not alone within this cohort of early space law academics in recognising the capability of humankind to constitute a subject of international law. As outlined by Marko Markoff, 'for the first time in history mankind was recognized in positive law by the international legal order as a subject of this order', with humankind the rightful beneficiary of the exploration and use of outer space.[95] Or, as more cautiously predicted by Djurica Krstic in 1977 as *de lege ferenda*, for '[t]he very idea of mankind as a subject of the future law of outer space' to take hold, 'perhaps another twenty or thirty years are needed'.[96]

The mankind referred to in the province provision and the other references to this entity scattered throughout international space law, such as astronauts' appointment as 'envoys of mankind' also within the OST,[97] is well described by Stephen Gorove. As he explains, '[m]ankind as a concept should be distinguished from that of man in general. The former refers to a collective body of people, whereas the latter stands for individuals making up that body.'[98] Or as correctly observed by Cocca, 'most subjects of international law are communities, it is logical that they should decide to gather in a major community, including them all. And this is what, juridically speaking, is called Mankind'.[99] As further elaborated by Maureen Williams, mankind also includes interspatial and intertemporal elements, including not only individuals alive today but those who are to follow.'[100] The 'province of all mankind' under this proposed territorial conception therefore involves title over areas of outer space explored and utilised by humanity being invested in all of humankind as a whole – this being the totality of our species, encompassing all human

95 Marko G Markoff, *Traité de Droit International Public de L'espace* (Editions Universitaires, 1973) 272; See translation in Gál, above n 55, 2.

96 Djurica Krstic, 'Mankind as a Subject of Future Law of Outer Space' in *Proceedings of the 19th Colloquium on the Law of Outer Space* (AIAA, 1977) 72, 73.

97 Article V; 'State Parties to the Treaty shall regard astronauts as envoys of mankind in outer space'.

98 Stephen Gorove, 'The Concept of "Common Heritage of Mankind": A Political, Moral or Legal Innovation?' (1972) 9 *San Diego Law Review* 390, 393.

99 Cocca, 'Mankind as a New Legal Subject', above n 89, 214.

100 Maureen Williams, 'The Law of Outer Space and Natural Resources' (1987) 36 *International & Comparative Law Quarterly* 142, 150-1; In the words also of Kunihiko Tatsuzawa, 'the term mankind is a proper unity of past, present and future generations.' Kunihiko Tatsuzawa, 'Political and Legal Meaning of the Common Heritage of Mankind' in *Proceedings of the 29th Colloquium on the Law of Outer Space* (AIAA, 1986) 84, 86; The intergenerational nature of some aspects of public international law is of course well canvassed in international environmental law literature, see for example: Edith Brown Weiss, 'Implementing Intergenerational Equity' in Malgosia Fitzmaurice, David M Ong and Panos Merkouris (eds), *Research Handbook on International Environmental Law* (Edward Elgar, 2010) 100.

beings who have or will ever be born. Such an intertemporal aspect to humankind results in the considerations of sustainable development advocated by Tan[101] also becoming relevant to safeguarding this territorial province for future generations.[102] Given that such an obligation of sustainability can only have substance and binding force if future generations share in title and ownership over areas of outer space, recognition of an element of environmental preservation forming part of the province provision's meaning supports a future interpretive extension to a full territorial conception.

F *Humankind As A Subject Of International Law*

As outlined, the territorial conception of 'the province of all mankind' is predicated upon humankind's legal personality. Therefore a thorough examination of this international legal status is warranted as title over territory can only be invested under international law in one of its subjects.[103] Only some international actors have traditionally been afforded international legal personality, with those considered subjects of international law defined as entities that are capable of possessing international rights and duties.[104] As described by Roland Portmann, it is a concept 'principally employed to distinguish between those social entities relevant to the international legal system and those excluded from it.'[105] While uniform acceptance exists that States constitute such international subjects, there are varying levels of agreement as to the legal personality of other entities. The ICJ remarked in its 1949 *Reparations for Injuries* advisory opinion, that international personality is a legal premise 'given rise to controversy.'[106] Among the other entities

101 Tan, above n 38, 164.

102 Although not subscribing to the territorial conception, Hobe does recognise that 'the province of all mankind has a certain aspect of preservation of the environment to it. Included in this concept is the idea of inter-generational equity insofar as the environment of outer space and the celestial bodies shall be preserved in order to enable the living generation to hand over this environment in no worse condition as it was received from the previous generation.' Hobe, *Cologne Commentary: Volume 1*, above n 24, 34.

103 As Christian Walter states, 'the traditional concept of international personality relies strongly on the administration of territory'. Thus possession of titular sovereignty which sits above administrative sovereignty over territory (as will be discussed in Chapter 3 these are usually, but not always invested in the same subject of international law) likewise requires international legal personality. Christian Walter, 'Subjects of International Law' (May 2007)
Max Planck Encyclopedia of Public International Law – Oxford Public International Law [11] <http://opil.ouplaw.com/home/EPIL>.

104 Ibid [1].

105 Roland Portmann, *Legal Personality In International Law* (Cambridge University Press, 2010) 1.

106 *Reparation for Injuries Suffered in the Service of the United Nations (Advisory Opinion)* [1949] ICJ Reports 174, 178.

whose international legal personality is contested to varying degrees – including international organisations, individual persons, non-self-governing peoples, transnational corporations and indigenous peoples, etc – the legal personhood of humankind itself is perhaps the most disputed. Yet as the ICJ in *Reparations* held:

> [t]he subjects of law in any legal system are not necessarily identical in their nature or in the extent of their rights, and their nature depends upon the needs of the community. Throughout its history, the development of international law has been influenced by the requirements of international life, and the progressive increase in the collective activities of States has already given rise to instances of action upon the international plane by certain entities which are not States.[107]

Unlike, for example, the law of treaties, there exists no codified law of legal personality within the international legal system. Indeed there is an absence of even established rules of customary international law that conclusively determine questions of personality.[108] The closest international law approaches to an authoritative definition of what constitutes one of its subjects comes from the *Reparations* advisory opinion noted above. Here the ICJ defined a legal entity as 'capable of possessing international rights and duties, and … has capacity to maintain its rights by bringing international claims.'[109] Using this definition, the ICJ ruled that the United Nations as an international organisation constituted 'an international person'. [110] The ability of international organisations to hold legal personality is today now largely settled.[111] Such legal status spreading beyond States to international institutions has also simultaneously enabled the extension of legal personality to other types of entities within the international system in the period following the Second World War.

Most significant perhaps in this broadening of international legal personality is the status of individuals, who today enjoy a growing number of international rights under an

107 Ibid.
108 Portmann, above n 105, 9.
109 *Reparation for Injuries Suffered in the Service of the United Nations (Advisory Opinion)* [1949] ICJ Reports 174, 179.
110 Ibid.
111 With UNCLOS for example stating outright that the International Seabed Authority 'shall have international legal personality and such capacity as may be necessary for the exercise of its functions and the fulfilment of its purposes'. UNCLOS art 176.

increasingly complex system of human rights treaties and customary norms.[112] The growing acceptance of the legal status of transnational corporations has likewise progressed, with States and multinational companies for example considered equal parties before the International Centre for Settlement of Investment Disputes (ICSID).[113] Non-self-governing peoples have also had their international legal personality recognised to varying degrees.[114] Today indigenous peoples are also gradually gaining recognition as subjects of international law.[115] It is therefore clear that the entities regarded as possessing international legal personality are by no means fixed, with a demonstrated ability of international law to accept new subjects. As articulated by the ICJ, the exact nature of the personality conferred upon these emerging subjects of international law has arisen to cater to the changing 'needs of the [international] community.' Accordingly should the international community require recognition of humankind's legal personality in order to best utilise the realm of outer space, as aptly demonstrated from the experience of the past seven decades, international law certainly has the evolutionary ability to accommodate this.

As outlined by Boldizsár Nagy, when considering the question of whether mankind (humankind) possesses international legal personality, four possible stances can be taken. These are –

> a) Mankind as such does not exist. b) Mankind exists, but it is not a subject of international law, it has no legal capacity. c) Mankind has a limited personality in

112 Alongside this are the obligations imposed upon individuals under international criminal law, with the Nuremberg Tribunal observing in 1946 that 'international law imposes duties and liabilities upon individuals as upon States.' *Nuremburg Judgment (France and ors v Göring and ors) (Judgment and Sentence)* [1946] 22 IMT 203, 220.

113 *Convention on the Settlement of Investment Disputes Between States and Nationals of Other States*, opened for signature 18 March 1965, 575 UNTS 159 (entry into force 14 October 1966) art 25.

114 This is demonstrated by the observer status granted by the UN General Assembly formerly to the South West African People's Organization in 1976 and since 1974 to Palestine, with the privileges and nomenclature afforded Palestine within the General Assembly progressively developing since.

115 For example as demonstrated by the six indigenous communities who hold Permanent Participant status alongside Member States, Observer States and Nongovernmental Observers within the Arctic Council. Additionally the international legal personality of indigenous peoples is recognised by the *United Nations Declaration on the Rights of Indigenous Peoples* through its recognition of the right of indigenous self-determination as well as the right to autonomy or self-government in local affairs. *United Nations Declaration on the Rights of Indigenous*, GA Res 61/295, 61st sess, 107th plen mtg, UN Doc A/RES/61/295 (2 October 2007) arts 3-4.

law: it may be the bearer of rights without the capacity to exercise them directly. d) Mankind is a fully-fledged legal subject with active legal capacity.[116]

Nagy goes on to observe that all four positions are represented within space law literature, although usually version a) and b) are conflated by scholars.[117] In his own view, the approach under c) reflects most accurately mankind's current position under international law, concluding that '[t]he passive legal personality of mankind has to be acknowledged.'[118] Indeed Nagy's preferred position is correct,[119] with the conferral of rights upon mankind as a legal entity by the OST's words in Article I of 'shall be the province of all mankind.' This is further supported by this Treaty later appointing representatives of this very entity at Article V, declaring parties 'shall regard astronauts as envoys of mankind in outer space'. Yet as Nagy recognises, humankind has not yet fully developed an independent means to directly exercise and enforce these international rights, which, although limiting the current extent of its personality, cannot preclude its ongoing potential to further emerge and develop as a subject of international law. The fact that humankind can already maintain its rights indirectly through the institution of the UN General Assembly, as explained below, further points to the emergence of its legal personality already being well underway.

G *The Emergence Of Humankind's Legal Personality*

The development of humankind's international legal personality has already been in progress for some time, with Ernst Fasan observing over four decades ago 'mankind is just undergoing the painful process of becoming a new legal subject of international law.'[120] Although Gorove, writing two years earlier, did not yet see humankind's personality materialising quite to the same extent as Fasan and indeed Cocca, he felt it should, viewing this development as *de lege ferenda*.[121] Gorove concluded that 'perhaps the time has come

116 Boldizsár Nagy, 'Common Heritage of Mankind: The Status of Future Generations' in *Proceedings of the 31st Colloquium on the Law of Outer Space* (AIAA, 1988) 319, 321.

117 Ibid. Nagy provides detailed citations of scholars advocating each of these four positions.

118 Ibid.

119 For analysis of the opposite scholarly opinion, that humankind is not a subject of international law, see Part G of this chapter immediately below.

120 Ernst Fasan, 'The Meaning of the Term "Mankind" in Space Legal Language' (1974) 2 *Journal of Space Law* 125, 131.

121 Gorove, above n 98, 402.

for the law to move in the direction of recognizing mankind's interests, its rights and obligations, as distinct from those of the nation state and provide for a fully representative body with appropriate international authority to act on its behalf.'[122] Raising concerns about the ability of humankind to be represented without the existence of such an international authority he asked, '[h]ow could one state, or group of states, or an international organization be a spokesman or representative of all mankind without some formal act of authorization or mandate involving such representation?'[123]

It is on this point that the many scholars who reject humankind's legal personality largely base their criticism.[124] As Hobe states, 'it should be clarified that "mankind", as mentioned in Article I of the Outer Space Treaty, does not become a new subject of international law. "Mankind" is clearly not meant to be a bearer of obligations under international law.'[125] Or, as argued by Rüdiger Wolfrum, 'only States and international organizations have the necessary capabilities to be direct participants within an international community. The replacement of States by mankind would necessitate the establishment of an international organization legitimated to represent mankind as such without the interposition of States.'[126]

Such criticism cannot be ignored as it explains why humankind's status as a subject of international law is still in the process of emerging and so remains *de lege ferenda* before its full legal status is ultimately achieved. Humankind's legal personality will only be firmly cemented by such an express international mandate from States to an existing or new international body. Although this legal personhood must therefore still mature, as observed by Ricardo Maqueda, humankind is currently 'capable juridically, as a minor that exercises his rights and fulfils his obligations by means of his representatives. Thus,

122 Ibid.

123 Ibid 294.

124 Tatsuzawa holds that '[a] State or a group of States can't represent the will of all mankind. It is just the same with the international intergovernmental organizations'. Tatsuzawa, above n 100, 86. See also: Tronchetti, above n 36, 127; Gál, above n 55, 3.

125 Hobe, *Cologne Commentary: Volume 1*, above n 24, 34.

126 Rüdiger Wolfrum, *Die Internationalisierung staatsfreier Räume: Die Entwicklung einer internationalen Verwaltung für Antarktis, Weltraum, hohe See und Meeresboden – The internationalization of common spaces outside national jurisdiction: The development of an international administration for Antarctica, outer space, high seas, and the deep sea-bed* (Springer Verlag, 1984) 712-3.

humanity is subject to rights and obligations and has a guardian of its interests in the States and gradually, in the international organizations.'[127] Yet the most robust intellectual foundation for humankind's developing legal status is that put forward by Cocca with his notion of a '*jus humanitatis* continuum'.[128]

Cocca's *jus humanitatis* both encompasses and translates as a law of and for humankind.[129] This echoes the earlier writings of C Wilfred Jenks who spoke of a 'common law of mankind', which he identified as 'the law of an organised world community.[130] Within this *jus humanitatis,* Cocca perceives the following cyclic continuum of legal subjects premised upon all individual human beings as subjects of international law – 'MAN-SOCIETY-STATE-INTERNATIONAL COMMUNITY-MANKIND'.[131] Each subject within this continuum is a higher political dimension of the individual as a legal entity, with humankind as the embodiment of the entire human race comprising the final 'fourth political dimension of Man.'[132] Cocca rightly sees 'mankind' as the preeminent legal subject along this continuum within the realm of outer space, given the OST's investment of both territorial ownership in it and appointment of its representatives in the form of astronauts.[133]

Although not articulated by Cocca, his continuum also reflects the widespread indirect exercise of legal capacity by subjects within the international system. Apart from the recourse available to a limited number of international human rights complaint

127 Ricardo Maqueda, 'Something More About Humanity as Subject of Law' in *Proceedings of the 13th Colloquium on the Law of Outer Space* (AIAA, 1970) 215, 217.

128 Michael Mineiro, *Space Technology Export Controls and International Cooperation in Outer Space* (Springer, 2012) 183.

129 Cocca, 'The Advances in International Law Through the Law of Outer Space', above n 91, 13; Aldo Armando Cocca, 'Some Reflections on a True Step Toward International Co-Operation: The Treaty of January 27, 1967' (1971) 20 *De Paul Law Review* 581, 584.

130 C Wilfred Jenks, *The Common Law of Mankind* (Stevens and Sons, 1958) 8.

131 Cocca, 'The Advances in International Law Through the Law of Outer Space', above n 91, 13.

132 This continuum conceives of the individual as naturally living within and comprising part of a local society, constituting the first political dimension. This society or a collection of them form a State, as the preeminent political entity on the international stage and the second political dimension of the individual. These States collectively form the third political dimension, with the United Nations the primary 'forum where the international community expresses its views.' Then at the apex of this *jus humanitatis* continuum stands the legal entity of humankind itself. Ibid.

133 Ibid 14. Cocca in fact comprehends outer space to be 'the culmination of the concept MAN-SOCIETY. It is a reflection of the present stage and perhaps the definitive one in the development of man within the community. For this reason Space Law is able to determine advances and progress, which amounts to the perfecting of International Law.' Ibid 13.

mechanisms and some supranational courts of regional jurisdiction,[134] individuals still predominantly exercise their international legal capacity through the institution of the State. Whether this is by voting to determine the composition of a democratically appointed national government with its respective foreign policy platform, or through reliance upon the traditional diplomatic protection of the State in seeking redress at the international level, the overwhelming majority of interactions by individuals with the international system occur through the conduit of the State. Similarly, societies, perhaps best exemplified by the international representation of different polities by the nation-state within a federal political system, likewise primarily enjoy international capacity through this same medium. It must also be remembered that all subjects of international law, be they a State, individual, or any other legal entity, are at their core a collection of one or more persons.[135] Indeed international legal personality cannot ultimately exist without its constitutive building blocks of individual human beings. Humankind as a subject of international law is therefore simply the largest possible collection of individuals, the legal entity quite literally comprising each and every human on (and even off) our planet and their posterity to follow.

In the absence of any directly authorised institution empowered on behalf of all humankind, at present humanity can only exercise its emerging legal capacity through the primary forum of the international community, the United Nations. Such indirect capacity, while providing a more limited degree of personality than the full legal status enjoyed by States, aptly falls under category c) identified by Nagy. This accords with the ICJ position in *Reparations* that '[t]he subjects of law in any legal system are not necessarily identical in their nature or in the extent of their rights'.[136] It is through the near total embodiment of the human species through the 193 UN member States representing primarily their citizenries but also their residents,[137] coupled with the plethora of non-state legal entities

134 For example the United Nations Human Rights Committee, United Nations Committee Against Torture, European Court of Justice and the Inter-American Court of Human Rights.

135 For example as recognised by Enrico Scifoni, '[S]tates are nothing more than an expression of the will of the citizens … international law is destined for and is owned by the latter.' Enrico Scifoni, 'The Principle "Res Communis Omnium" and the Peaceful Use of Space and of Celestial Bodies' in *Proceedings of the 7th Colloquium on the Law of Outer Space* (AIAA, 1964) 50, 52.

136 *Reparation for Injuries Suffered in the Service of the United Nations (Advisory Opinion)* [1949] ICJ Reports 174, 178.

137 Resident encompasses all non-citizens, including stateless persons, within their borders.

that have varying levels of standing within the UN,[138] that the UN today indirectly enables the legal capacity of humankind to be exercised. In particular it is the UN General Assembly, with the deliberative vote it confers on all member States enabling it to exercise legal capacity as a collective voice for all humanity, that most effectively empowers humankind as an emerging subject of international law through Cocca's *jus humanitatis* continuum.[139] For it must be acknowledged that the United Nations has developed to a point today where there is virtual universal representation of all human beings on the planet through its institutional framework, with only three non-disputed sovereign territories on Earth that remain non-members.[140] Therefore excluding the Holy See (Vatican City), Niue and the Cook Islands, the remainder of our species' population, amounting to 99.999% of the worlds' current 7.4 billion people, reside in territory that is claimed by a member State and therefore represented by it within the UN. Furthermore the Holy See enjoys status as a permanent observer state[141] and both the Cook Islands and Niue as associated states of New Zealand receive representation from its permanent mission to the UN.[142] It is this universality of indirect representation of all people in the 21st century within the United Nations, constituting a material difference from the

138 Such as the 93 entities afforded non-state observer status by the General Assembly. See: *List of non-Member States, entities and organizations having received a standing invitation to participate as observers in the sessions and the work of the General Assembly*. UN GOAR, 7th sess, UN Doc A/INF/70/5 (6 January 2016) <http://www.un.org/ga/search/view_doc.asp?symbol=A/INF/70/5>.

139 There are those who dismiss this indirect representation, such as Fabio Tronchetti who finds '[t]he idea that the United Nations could act on behalf of mankind is to be rejected … [as] the activity of the United Nations is influenced by the national interests of single States.' Tronchetti, above n 36, 127. Yet just as a domestic legislature involves politicians pursuing the interests of their respective constituents, with overall policy mandates obtained from a polity's people via the resultant legislative discourse of their representatives, such is the case with the General Assembly. As each States' equal franchise in this key organ of the UN achieves through the process of voting and deliberation a combined representative voice for of all humankind. This analogy best corresponds to those upper chambers of legislatures where there exists equal representation of constitutive states/provinces within a federal system (such as the Senates of the US, Brazil, Argentina, Nigeria, Australia, etc), where wide divergence in the actual number of constituents each legislator represents is accepted in order that all polities have an equal voice.

140 *Member States* (2016) United Nations <http://www.un.org/en/member-states/>.

141 *Permanent Observer Mission of the Holy See to the United Nations* (2015) Holy See <http://www.holyseemission.org/>.

142 New Zealand retaining responsibility for their respective foreign affairs and defence; See: *Cook Islands* (2016) New Zealand Foreign Affairs and Trade <https://www.mfat.govt.nz/en/countries-and-regions/pacific/cook-islands/>; *Niue* (2016) New Zealand Foreign Affairs and Trade <https://www.mfat.govt.nz/en/countries-and-regions/pacific/niue/>; Cook Islanders and Niueans are both also citizens of New Zealand.

prevalence of UN membership[143] that existed during the 1970s when the likes of Gorove[144] and Fasan[145] were writing about the future emergence of mankind's legal personality, that humankind is now firmly within Nagy's category c)[146] and in the process of moving towards category d).[147]

Reiterating Cocca's earlier call for a *jus humanitatis*, where individuals are the 'natural holder' of legal personality at the beginning of his continuum,[148] are the contemporary extra-curial writings and judicial decisions of Judge Antônio Augusto Cançado Trindade, currently of the ICJ.[149] Trindade observes that international law's:

143 *Growth in the United Nations membership 1945-present* (2016) United Nations <http://www.un.org/en/sections/member-states/growth-united-nations-membership-1945-present/index.html>.

144 Gorove, above n 98, 402.

145 Fasan, above n 120, 131.

146 'c) Mankind has a limited personality in law: it may be the bearer of rights without the capacity to exercise them directly'; Nagy, above n 116, 321.

147 'd) Mankind is a fully-fledged legal subject with active legal capacity'; Ibid.

148 Cocca, 'The Advances in International Law Through the Law of Outer Space', above n 91, 13.

149 Formerly of the Inter-American Court of Human Rights (1995-2006), including serving as its President (1999-2003); Judicial decisions where Judge Antônio Augusto Cançado Trindade has recognised the international legal personality of humankind and/or an international law for humankind (similar to Cocca's concept of a *jus humanitatis*) in the International Court of Justice include: *Frontier Dispute (Burkina Faso v Niger) (Judgment)* [2013] ICJ Reports 44, 88, 96 (Judge Trindade); *Ahmadou Sadio Diallo (Republic of Guinea v Democratic Republic of the Congo) (Compensation, Judgment)* [2012] ICJ Reports 324, 382 (Judge Trindade); *Jurisdictional Immunities of the State (Germany v Italy, Greece Intervening) (Judgment)* [2012] ICJ Reports 99, 192, 198 (Judge Trindade); *Judgment No 2867 of the Administrative Tribunal of the International Labour Organization upon a Complaint Filed against the International Fund for Agricultural Development (Advisory Opinion*) [2012] ICJ Reports 10, 72 (Judge Trindade); *Questions relating to the Obligation to Prosecute or Extradite (Belgium v Senegal) (Judgment)* [2012] ICJ Reports 422, 557-8 (Judge Trindade); *Application of the International Convention on the Elimination of all Forms of Racial Discrimination (Georgia v Russian Federation) (Preliminary Objections)* [2011] ICJ Reports 70, 262 (Judge Trindade); *Jurisdictional Immunities of the State (Germany v Italy) (Application for Permission to Intervene)* [2011] ICJ Reports 494, 515-6 (Judge Trindade); *Request for Interpretation of the Judgment of 15 June 1962 in the Case concerning the Temple of Preah Vihear (Cambodia v Thailand) (Provisional Measures)* [2011] ICJ Reports 537, 606 (Judge Trindade); *Ahmadou Sadio Diallo (Republic of Guinea v Democratic Republic of the Congo) (Judgment)* [2010] ICJ Reports 639, 762-3 (Judge Trindade); *Accordance with International Law of Independence in Respect of Kosovo (Advisory Opinion)* [2010] ICJ Reports 403, 153-4, 161, 203, 210 (Judge Trindade); *Pulp Mills on the River Uruguay (Argentina v Uruguay) (Judgment)* [2010] ICJ Rep 14, 195, 204 (Judge Trindade); *Questions relating to the Obligation to Prosecute or Extradite (Belgium v Senegal) (Provisional Measures)* [2009] ICJ Reports 139, 190, 199 (Judge Trindade);
Judicial decisions where Judge Antônio Augusto Cançado Trindade has recognised the international legal personality of humankind and/or an international law for humankind (similar to Cocca's concept of a *jus humanitatis*) in the Inter-American Court of Human Rights include: *Case of the Ituango Massacres v Columbia (Merits)* (2006) IACHR (ser C) no 148, [17] (Judge Trindade); *Case of the Sawhoyamaxa Indigenous Community v Paraguay (Merits)* (2006) IACHR (ser C) no 146, [34] (Judge Trindade); *Case of the Moiwana Community v Suriname (Merits)* (2005) IACHR (ser C) no 124, [7] (Judge Trindade); *Caesar v Trinidad and Tobago (Merits)* (2005) IACHR (ser C) no 123, [92]

> central concern is no longer with States properly, but rather and more appropriately with human beings, "within and across State borders", thus replacing the old State-centric approach of the matter by an anthropocentric one. The concern is, ultimately, with humankind as a whole, pointing … to the new *jus gentium* of our days, the international law for humankind.[150]

Although utilising his own separate reasoning[151] based on a line of legal thinking harking back to the ICJ's recognition of the 'conscience of mankind' in its 1951 *Reservations to the Convention against Genocide* advisory opinion,[152] Trindade reaches the same conclusion as Cocca:

> States are no longer the sole subjects of International Law; they nowadays coexist, in that condition, with international organizations and individuals and groups of individuals; and, moreover, humankind as such has also emerged as a subject of International Law. As a result, humankind coexists with States without replacing them.[153]

Trindade acknowledges that it is States themselves that have contributed to this expansion of international legal personality, as they have progressively relinquished their past monopoly over this legal status.[154] Instead States are increasingly willing to work with these new legal entities in pursuit of shared goals, recognising that many international issues can only be properly addressed through such collaboration. He further lauds the elevation of the human individual as a subject of international law as the 'most precious legacy' to emerge from the international legal thinking of the second half of the 20th century.[155] Conceivably therefore the further development and acceptance of humankind's own legal personality, particularly within the law of outer space but also

(Judge Trindade); *Judicial Condition and Rights of the Undocumented Migrants (Advisory Opinion)* (2003) IACHR (ser A) no 18, [88] (Judge Trindade).

150 Judge Antônio Augusto Cançado Trindade, *International Law for Humankind: Towards a New Jus Gentium* (Martinus Nijhoff, 2nd rev ed, 2013) 403. See also: Judge Antônio Augusto Cançado Trindade, 'International Law for Humankind: Towards a New Jus Gentium (I)' *(*2005) 316 *Collected Courses of the Hague Academy of International Law* 1; Judge Antônio Augusto Cançado Trindade, 'International Law for Humankind: Towards a New Jus Gentium (II)' (2005) 317 *Collected Courses of the Hague Academy of International Law* 1.

151 Ibid (2013) 281-285.

152 *Reservations to the Convention on the Prevention and Punishment of the Crime of Genocide (Advisory Opinion)* [1951] ICJ Reports 15, 23.

153 Trindade, *International Law for Humankind: Towards a New Jus Gentium*, above n 150, 275.

154 Ibid 639.

155 Ibid.

international law generally, may possibly one day come to be viewed as a comparable achievement of the 21st.

Like Gorove, Trindade also recognises that a subject of international law is generally regarded as not only a bearer of rights and obligations but is endowed with the capacity to act. Concluding that humankind's international capacity is still in a nascent state, Trinidade's position corresponds to Nagy's category c) as an accurate reflection of humankind's current evolution towards a more developed form of legal personality. He finds humankind's 'most advanced form of representation achieved to date' exists within 'the 1982 UN Convention on the Law of the Sea, given the degree of institutionalization achieved (through the creation of the International Seabed Authority).' [156] However although Trindade observes it has already been underway for multiple decades, humankind is still only in the opening stages of its theoretic construction as a subject of international law.[157]

H *Recognition Of Outer Space's 'Res Communis' Nature*

The territorial conception of 'the province of all mankind', by interpreting this term in line with province's primary territorial meaning and humankind's emerging legal personhood, offers a new paradigm for outer space. Yet this is one with firm roots in Roman law which, as all legal scholars are aware, provides the antecedents for much of international law.[158] The new conception perceives that wherever humanity explores and uses outer space, this is territorially appropriated on behalf of all humankind, forming our species' cosmic provincial region beyond our perennial home planet of Earth. This vast expanse, which will extend further into space as time progresses, shall be open to all for migration, settlement and economic opportunities, constituting a *res communis (omnium)* or 'thing of

156 Ibid 286.

157 In Trindade's words, '[w]e are here still in the first steps, and there remains of course a long way to go in order to attain a more perfect and improved system of legal representation of humankind in International Law, so that the rights recognized to it thus far can be properly vindicated on a widespread basis.' Ibid 287.

158 Ancient Rome's *jus gentium* ('law of peoples') providing an early intellectual basis for the development of international law from the time of Hugo Grotius; Gordon E Sherman, 'Jus Gentium and International Law' (1918) 12(1) *American Journal of International Law* 56, 63.

the (entire) community.'[159] The origins of this Latin term can be traced back to ancient Roman times, where it referred to those qualities of nature belonging to all people, such as water, oceans and the air.[160] As Carl Q Christol found, 'the broadly stated province of all mankind principle has constituted a synthesis of human expectations … Mankind, through the utilization of the principle would be able to enjoy the peaceful and orderly use of a *res communis* resource.'[161]

The province provision as articulated by Gorove implies 'for every individual, and not just every nation, the right to have an active part in and to be co-proprietor in the enjoyment of the thing under consideration.'[162] For, as humanity extends its footprint into space through its exploration and use, regions of this immense cosmic environment not yet subject to any sovereign title and accordingly *terra nullius*, will be acquired by the only subject of international law not precluded from territorial appropriation. Rather, humankind as a legal entity is instead explicitly empowered to appropriate areas of outer space through the words 'shall be the province of all mankind.' Therefore humankind will acquire such areas of outer space as *res communis*, on behalf of all members of our species, comprising both those here now and also our descendants to follow. As Michael Dodge explains '[t]he future of space law depends on submission to the *res communis* principle. So long as it governs, in many respects it controls what can be used and owned in space –

159 Fellmeth and Horwitz, above n 60, 250; See also: Gamboa above n 76, 232; 'Res Communes - Things common, incapable of being owned or appropriated by anyone' [but significantly not incapable of being appropriated by everyone].

160 Michael Dodge, 'Sovereignty and Delimitation of Airspace: A Philosophical and Historical Survey Supported by the Resources of the Andrew G Haley Archive' (2009) 35 *Journal of Space Law* 5, 31-2.

161 Carl Q Christol, *The Modern International Law of Outer Space* (Pergamon Press, 1982) 45.

162 Gorove, above n 98, 393. Cocca's preferred self-coined Latin term however for this 'vastest common property' of humankind in outer space is the somewhat different *res communis humanitatis*, as this bears much closer resemblance to the concept of 'the common heritage of mankind'. Legal Subcommittee – Committee on the Peaceful Uses of Outer Space, *Summary Record*, UN GAOR, 6th sess, UN Doc UN Doc.A/AC.105/C.2/SR.75 (19 June, 1967) 7-8 (Mr Cocca); Although in his earlier years Cocca did declare 'that heavenly bodies are considered *res communis omnium* for all mankind'. Aldo Armando Cocca, 'Determination of the Meaning of the Expression "Res Communes Humanitatis" in Space Law' *Proceedings of the 6th Colloquium on the Law of Outer Space* (AIAA, 1964) 1, 1; See also however the further later occasions where Cocca equated his notion of *res communis humanitatis* with 'the common heritage of mankind': Cocca, 'Mankind as a New Legal Subject', above n 89, 212-3; Cocca, Aldo Armando Cocca, 'Some Reflections on a True Step Toward International Co-Operation', above n 129, 585. Baslar, above n 6, 42-3. Aldo Armando Cocca, 'Determination of the Meaning of the Expression "Res Communes Humanitatis" in Space Law' *Proceedings of the 6th Colloquium on the Law of Outer Space* (AIAA, 1964) 1, 1; Cocca, 'Mankind as a New Legal Subject', above n 89, 212-3; Cocca, Aldo Armando Cocca, 'Some Reflections on a True Step Toward International Co-Operation', above n 129, 585.

an issue particularly germane to Nation-States, companies, and individuals interested in utilizing space and the celestial bodies.'[163] This need for ultimate title over territory in space to be formally invested in all of humankind, creating a true *res communius omnium* regime, is the legal governance model that awaits humanity's future endeavours to migrate beyond Earth and settle the space frontier.

[163] Dodge, above n 160, 34.

III THE LEGAL CONSEQUENCES OF THE TERRITORIAL CONCEPTION

Acceptance of the territorial conception of 'the province of all mankind' proposed here as *de lege ferenda* will result in a watershed for the law of outer space. For it presents the 'seed of a transformational idea' that international space law is in need of.[1] It offers a legal paradigm shift through an evolved understanding of the *Outer Space Treaty* (OST)[2] that accommodates humanity's future activities in space which will involve migration, settlement, resource utilisation and other economic endeavours. Importantly, it can achieve this within the existing textual confines of the OST, enabling it to continue its longstanding role as our 'constitution for outer space'.[3] Such a territorial conception also offers an overarching regime for humankind's future activities in outer space that subsequent international agreements and potential new space treaties can build upon.

This proposed governance framework, where those areas explored and utilised by humanity territorially constitute 'the province of all mankind', should result in three major legal consequences, each of which independently promotes and facilitates human settlement of outer space. Two of these are largely resultant from the territorial conception, with the third requiring a deliberate policy choice by humanity. If adopted together though, as the combined outcome of this territorial conception, these three consequences will provide a legal framework that can propel our peaceful expansion into space over the coming centuries. Each of these three legal effects of the territorial conception will now be considered, involving the individual freedom of movement in space, bifurcated sovereignty over space territory and humankind's compulsory jurisdiction over international disputes in outer space.

A *Freedom Of Movement In Outer Space As A Human Right*

Should outer space territorially comprise 'the province of all mankind' where all members of humankind jointly hold title, a consequence arising from this is that every

1 Joanne Gabrynowicz, 'The Province and Heritage of Mankind Reconsidered' (Paper presented at Second Conference on Lunar Bases and Space Activities of the 21st Century, Houston, 5-7 April 1988) 692.

2 *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies*, opened for signature 27 January 1967, 610 UNTS 205 (entered into force 10 October 1967) ('*Outer Space Treaty*').

3 Ram Jakhu, 'Legal Issues Relating to the Global Public Interest in Outer Space' (2006) 32 *Journal of Space Law* 31, 31.

individual should be endowed with freedom of movement throughout space. Given that the ability to travel and cross State borders on Earth is almost entirely determined by the 'birthright lottery'[4] of nationality, such a universal human right would be a unique and tangible benefit arising from the territorial conception conferred on every person. The significance of such a human right applying throughout the geographic realm of outer space, particularly for the world's most disadvantaged who are largely excluded from lawful international mobility today, cannot be underestimated. As Carl Sagan observed:

> Vast migrations of people – some voluntary, most not – have shaped the human condition. More of us flee from war, oppression, and famine today than at any other time in human history. As the Earth's climate changes in the coming decades, there are likely to be far greater numbers of environmental refugees …. But the lands we run to now have already been settled. Other people, often unsympathetic to our plight, are there before us.[5]

Humanity is therefore in need again of a frontier to migrate to, with outer space already constituting the extreme margin of our settled territory with the International Space Station orbiting above. The ability for our species' dispossessed and downtrodden to create new prosperous lives for themselves and their offspring in such pioneer communities has been demonstrated throughout history. One need only look to the millions who pulled themselves out of European poverty by migrating to colonies throughout the Americas, and to the many late 19th century British convicts forcibly transported to the Colony of New South Wales who would during their own lifetime form part of its 'Squattocracy' elite.[6] As Robert Zubrin explains, such migration to frontier destinations has always enabled 'people who did not "fit in" in the Old World' to 'discover and demonstrate that far from being worthless, they were invaluable in the new'.[7] Writing in relation to future human settlement of Mars, he correctly identifies 'that no commodity on twenty-first-century Mars will be more highly valued than human labor time.'[8] Given that labour shortages have been a consistent feature in all frontier settlements, an inherent individualism, dignity and worth will be invested in

4 Ayelet Shachar, *The Birthright Lottery: Citizenship and Global Inequality* (Harvard University Press, 2009) 141.

5 Carl Sagan, *Pale Blue Dot: A Vision of the Human Future in Space* (Random House, 1994) xvi.

6 'The long-established and wealthy landowners who regard themselves as an aristocracy'; Susan Butler (ed), *Macquarie Dictionary* (Macquarie Dictionary Publishers, 5th ed, 2009) 1599.

7 Robert Zubrin, *The Case For Mars: The Plan to Settle the Red Planet and Why We Must* (Free Press, 2nd ed, 2011) 326-7.

8 Ibid 330.

those migrants who, having freely accepted the dangers, pursue economic and social improvement that migration to outer space will offer. It is therefore imperative that such opportunities in space remain open to all, for as Joseph Carens notes, 'freedom of movement is essential for equality of opportunity.'[9]

This legal corollary arising from the territorial interpretation of the province provision is that the freedom of exploration, use and access in outer space, as articulated in the second paragraph of the OST's Article I, is personally held by all individuals and not relegated as a right only exercisable through a State. For as currently understood, the sole beneficiaries of mobility rights in outer space are States, which can transfer these freedoms to individuals[10] and set the conditions for an active participation of private actors.[11] While such State control is appropriate in regulating most space activities,[12] this is not so when it comes to individual migration and travel as the political equality of all members of humankind[13] and the promotion of personal autonomy[14] requires an open border regime in space.

With freedom of movement in space currently only understood as applying to States, governments could conceivably restrict the travel and migration of not only their own citizens, but more likely that of foreign nationals inside their territory.[15] However, as guaranteed under the *International Covenant on Civil and Political Rights*, '[e]veryone

9 Joseph H Carens, 'Migration and Morality: A Liberal Egalitarian Perspective' in Brian Barry and Robert E Goodin (eds), *Free Movement: Ethical Issues in the Transnational Migration of People and Money* (Routledge, 1992) 25, 26.

10 'States benefit from the freedoms and transfer such freedoms to the individuals'; Stephan Hobe, 'Article I' in Stephan Hobe, Bernhard Schmidt-Tedd and Kai-Uwe Schrogl (eds), *Cologne Commentary on Space Law: Volume 1* (Carl Heymanns Verlag, 2009) 25, 35.

11 It is 'in the hands of governments through a respective national space legislation to set the conditions for an active participation of private actors'; Ibid 33.

12 Typical activities in outer space which are rightfully regulated by States include as Hobe explains, 'the launch of satellites, experiments in outer space, inventions in outer space, production of satellite data in outer space or on Earth, broadcasting activities, Earth observation', etc. Ibid 34.

13 Adam Hosein, 'Immigration and Freedom of Movement' (2013) 6(1) *Ethics and Global Politics* 25, 31.

14 Carens, above n 9, 26; Rainer Bauböck, 'Global Justice, Freedom of Movement and Democratic Citizenship' (2009) 50(1) *European Journal of Sociology* 1, 5.

15 This is significant considering that for some time into the future human launch technology will be limited to a select few States. Accordingly should these States prohibit foreign nationals from accessing commercial launch services from their territory this could effectively deprive the majority of the world's population a means to access and migrate to space. There is unlikely to be for some time a large number of launch country options considering that in the current 65 years of human spaceflight only 3 States have launched humans into space – the Soviet Union/Russia (1961), the United States (1961) and China (2003).

shall be free to leave any country' and to (re)enter their own country at any time.[16] Yet, as noted by Richard Perruchoud in relation to international migration here on Earth, 'the right to leave and the right to enter are not symmetrical.'[17] Although a State might find it legally difficult to restrict a person from departing its borders even if outer space is the intended destination, the same end result could be achieved by prohibiting access to launch providers under its jurisdiction (in the absence of another State providing access to human space flight services). A State can currently prohibit any spacecraft launching from its territory from carrying passengers of specified nationalities, including its own. Although more open to challenge due to general anti-discriminatory protections under international human rights law,[18] there is also potential for States to restrict public access to space based on other individual characteristics such as age, gender or political opinion. The recognition of a non-discriminatory[19] freedom of movement to and throughout outer space as a universal human right therefore

16 *International Covenant on Civil and Political Rights*, opened for signature 16 December 1966, 999 UNTS 171 (entered into force 23 March 1976) arts 12(2) and 12(4); This freedom of departure and (re)entry is also guaranteed in a range of other human rights instruments, such as: *International Convention on the Elimination of All Forms of Racial Discrimination*, opened for signature 21 December 1965, 660 UNTS 195 (entered into force 4 January 1969) art 5(d)(ii); *International Convention on the Suppression and Punishment of the Crime of Apartheid*, opened for signature 30 November 1973, 1015 UNTS 243 (entered into force 18 July 1976) art II(c); *Convention on the Rights of the Child*, opened for signature 20 November 1989, 1577 UNTS 3 (entered into force 2 September 1990) art 10(2); *International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families*, opened for signature 18 December 1990, 2220 UNTS 3 (entered into force 1 July 2003) art 8. This same guarantee exist in numerous regional human right instruments: *African Charter on Human and Peoples' Rights*, opened for signature 27 June 1981, 1520 UNTS 217 (entered into force 21 October 1986) art 12(2); *American Convention on Human Rights*, opened for signature 22 November 1969, 1144 UNTS 123 (entered into force 18 July 1978) arts 22(2) and 22(5); *Arab Charter on Human Rights*, opened for signature 15 September 1994, 12 International Human Rights Reports 893 (entered into force 15 March 2008) art 27; *Protocol 4 to the European Convention for the Protection of Human Rights and Fundamental Freedoms*, opened for signature 16 December 1963, ETS 46 (entered into force 2 May 1968) arts 2(2) and 3; Given the broad coverage of this human right to leave any country and (re)enter one's own country of nationality it can be strongly argued this constitutes a customary norm of international law. Such a customary norm should also apply to the territorial environment of outer space.

17 Richard Perruchoud, 'State Sovereignty and Freedom of Movement' in Brian Opeskin, Richard Perruchoud and Jillyanne Redpath-Cross (eds) *Foundations of International Migration Law* (Cambridge University Press, 2012) 123, 129.

18 *International Covenant on Civil and Political Rights* art 26.

19 Although paragraph 2 of Article I of the OST also holds outer space 'shall be free for exploration and use by all States without discrimination of any kind', as Hobe explains this is currently interpreted as meaning '[a]ny exploration and use of outer space shall be undertaken by all States without discrimination of any kind.' This means only that no State can be discriminately prevented from accessing space; Hobe, above n 10, 33; States however are free to discriminate on the basis of nationality within their own space programs, with the US currently excluding those of Chinese citizenship from participation in US programs and therefore preventing their presence on the International Space Station; See: *Consolidated and Further Continuing Appropriations Act* Pub L No 112-55 § 539, 125 Stat 552 (2012); The right does exist however under Article XII of the OST for States to request to visit '[a]ll stations, installations, equipment and space vehicles on the moon and other celestial bodies … on a basis of reciprocity', however this does not apply to facilities in void space such as the ISS.

presents a tremendously worthy legal development,[20] representing an evolution in line with Aldo Armando Cocca's *jus humanitatis*.[21] Should 'the province of all mankind' constitute the territorial province of all humanity, then the ICCPR's recognition that 'within that territory' where an individual is lawfully present they should 'have the right to liberty of movement and freedom to choose his residence' should equally apply in outer space where all individuals are lawful.[22]

Any such freedom however, would, like most human rights, not be absolute, but instead implemented by relevant subjects of international law in accordance with the doctrine of proportionality. This would allow measures limiting an individual's freedom of movement in outer space if a legitimate objective is being pursued and the right-infringing nature of the measure is proportional to this objective.[23] Proportionality essentially involves a balancing of interests and has been described as 'the *jus cogens*

20 The recognition of individual freedom of movement in outer space as a human right would see this guarantee of non-discriminatory treatment gain tangible effect by guaranteeing non-discriminatory access to individuals, as both constitutive members of States guaranteed such non-discrimination and also as members of humankind who collectively and equally hold territorial title in outer space. The application of this human right in a proportional manner would still allow States to impose nationality requirements within their professional astronaut programs, but not upon the general public's access to commercial launch services under their jurisdiction or to any areas in outer space under their territorial administration.

21 Aldo Armando Cocca, 'The Advances in International Law Through the Law of Outer Space (1981) 9 *Journal of Space Law* 13, 13; Aldo Armando Cocca, 'Some Reflections on a True Step Toward International Co-Operation: The Treaty of January 27, 1967' (1971) 20 *De Paul Law Review* 581, 584.

22 Each and every human being is a member of humankind that holds title over those areas of outer space where humanity's presence extends. Therefore no individual can be considered to be unlawfully present in the 'province of all mankind', although as discussed below like any human right this freedom of movement is not absolute; Similar guarantees of freedom of movement and residence within one's own territory are contained in other international human rights instruments, see: *International Convention on the Elimination of All Forms of Racial Discrimination* art 5(1); *International Convention on the Suppression and Punishment of the Crime of Apartheid* art II(c); *International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families* art 39(1);
Furthermore freedom of movement and residence within one's national territory is also contained in a range of regional human rights instruments: *African Charter on Human and Peoples' Rights* art 12(1); *American Convention on Human Rights* art 22(1); *Arab Charter on Human Rights* art 26(1); *Protocol 4 to the European Convention for the Protection of Human Rights and Fundamental Freedoms* art 2(1); Given the similar broad coverage of this freedom of movement and residence within one's national territory, it can be strongly argued this also constitutes a customary norm of international law which should also apply to 'the province of all mankind'.

23 'Most proportionality theorists would define proportionality as a test comprised of four inquiries addressing: (1) the legitimacy of governmental aims, (2) the suitability of the means chosen to achieve those aims, (3) the necessity of the means chosen to achieve the aims, and (4) the overall balance of a state action (sometime referred to as "proportionality in the narrow sense" or "proportionality stricto sensu" or the "law of balancing")'; Martin Luterán, 'The Lost Meaning of Proportionality' in Grant Huscroft, Bradley W Miller and Gregoire Webber (eds), *Proportionality and the Rule of Law* (Cambridge University Press, 2014) 21, 21.

of human rights law.'[24] It could potentially require differing implementations of the freedom of movement to settlements situated on celestial bodies compared with space station communities in the void of space. This could entail more limitations permissible upon entry to the latter, given greater constraints on the numbers of inhabitants that can be safely accommodated within a space station environment. In fact a higher level of mobility rights to celestial bodies can be possibly inferred from the reference to 'free access' in Article I being confined to celestial bodies, while only the freedoms of 'exploration and use' apply to all of outer space.[25]

Finally, recognition of an individual freedom of movement would also invest tangible meaning in the opening paragraph of Article I's further requirement that the exploration and use of outer space 'shall be carried out for the benefit and in the interests of all countries'. By legally empowering all human beings to physically explore and use space, the individual interests of those who do so will be promoted through their ability to travel, live and work in this frontier environment. Furthermore, as demonstrated by migration throughout the world today, those remaining behind in countries of departure will also benefit through the remittances migrants send home and the economic networks and trade fostered. All countries will therefore benefit as required under Article I, not just by the opportunities made available to their citizens by guaranteeing individual access to space, but through the positive flow-on effects to their own national economies through the diaspora of their citizens beyond Earth.

24 Grant Huscroft, Bradley W Miller and Gregoire Webber, 'Introduction' in Grant Huscroft, Bradley W Miller and Gregoire Webber (eds), *Proportionality and the Rule of Law* (Cambridge University Press, 2014) 1, 3.

25 Such proportional limitations on a similar freedom of access are currently applied on the Norwegian archipelago of Svalbard in the Arctic, where under the 1920 *Svalbard Treaty* nationals of its 42 State parties are guaranteed 'equal liberty of access and entry for any reason or object whatever'; *Treaty concerning the Archipelago of Spitsbergen*, opened for signature 9 February 1920, 2 LNTS 7 (entered into force 14 August 1925) art 3 ('*Svalbard Treaty*'); The Norwegian government in executing this treaty commitment in fact voluntarily extends this open immigration regime to all people regardless of nationality; Geir Ulfstein, *The Svalbard Treaty: From Terra Nullius to Norwegian Sovereignty* (Scandinavian University Press, 1995) 178; However some proportional restrictions are imposed, for example expulsion and denial of entry where 'it is believed that the person does not have sufficient financial means to remain or the possibility to support themselves financially on Svalbard by legal means'; *Regulations relating to rejection and expulsion of persons from Svalbard*, no 96 (3 February 1995), under authority of § 4 of Act of 17th July 1925 pertaining to Svalbard <http://www.sysselmannen.no/Documents/Sysselmannen_dok/English/Regulations/Regulations_relating_to_rejection_and_expulsion_of_persons_from_Svalbard_Me16t.pdf>.

B *Bifurcation Of Sovereignty Enabling Territorial Administration*

In the words of Cocca, '[h]umankind is the owner of the whole of the Moon and celestial bodies and of outer space'.[26] As this thesis advocates, this ownership and title extends to those regions of space where humanity's exploration and use occurs. However, the most important legal consequence of humankind's territorial appropriation of outer space has been overlooked by Cocca and other past proponents of humankind's legal personality; the province of all mankind's greatest significance lies in the divisible, or bifurcated nature, of sovereignty itself.

As explained by Sir Elihu Lauterpacht:

> it is necessary to distinguish between the two principal meanings attributed to the word 'sovereignty' in international law. It is used, in one sense, to describe the right of ownership which a State may have in any particular portion of territory. This may be called 'the legal sovereignty' … [t]his kind of sovereignty may be likened to the residual title of the owner of freehold land which is set on a long lease. The word 'sovereignty' is, however, more commonly used, in its second meaning, to describe the jurisdiction and control which a State may exercise over territory, regardless of the question of where ultimate title to the territory may lie. Usually sovereignty in this latter sense is to be found in the same hands as the legal sovereignty, but there is no reason in law why it should be and often it is not.[27]

Alina Kaczorowska-Ireland more recently outlined the divisibility of sovereignty as follows:

> An entity which has the ultimate capacity of disposing of a territory may be said to possess 'titular' or 'residual' sovereignty. The entity which exercises plenary power

26 Aldo Armando Cocca, 'Property Rights on the Moon and Celestial Bodies' in *Proceedings of the 39th Colloquium on the Law of Outer Space* (AIAA, 1996) 9, 17.

27 Elihu Lauterpacht, 'The Contemporary Practice of the United Kingdom in the Field of International Law–Survey and Comment' (1956) 5(3) *International and Comparative Law Quarterly* 405, 410; Similarly Sir Gerald Fitzmaurice, who subsequently served on the International Court of Justice (1960-1973) and European Court of Human Rights (1974-1980) not only found sovereignty divisible, but that sovereignty including residual title over territory could be invested in any subject of international law: '[T]erritory [is] under the sovereignty or jurisdiction of an international person, normally a State, though there may be other possibilities … A State may also have the exclusive administration of a territory virtually indistinguishable from sovereignty, or closely analogous thereto, without actually possessing the abstract or residual sovereignty.' Sir Gerald Fitzmaurice, 'The General Principles of International Law Considered From The Standpoint of the Rule of Law' (1957) 92 *Collected Courses of the Hague Academy of International Law* 1, 130-1.

> over a territory but lacks the capacity of ultimate disposal may be said to possess 'effective' sovereignty[28]

These two concepts, or levels, of sovereignty reflect differing connections between a subject of international law and a territorial unit – an ultimate level of ownership and title on one hand and a subordinate level of administration (what Lauterpacht labels 'jurisdiction and control'[29]) on the other.[30] As Ralph Wilde concludes, one cannot assume 'an automatic connection between sovereignty in the sense of ownership with the exercise of sovereignty in the sense of a right of territorial administration.'[31]

The historical and contemporary occurrences of such bifurcated sovereignty are numerous. Lauterpacht, writing in 1956, pointed to the New Territories of Hong Kong, which although then subject to Chinese residual sovereignty gave jurisdiction and control to Britain under a 99-year lease.[32] British administration of Cyprus from 1878 to 1914 similarly saw the island remain under the titular sovereignty of Turkey and further demonstrating sovereignty's divisibility was South Africa's former administration of the mandate of South West Africa.[33] When the International Court of Justice (ICJ) considered the status of this mandate in 1949, its advisory opinion found it 'did not involve any cession of territory or transfer of sovereignty to the Union of South Africa. The Union Government was to exercise an international function of administration on behalf of the League [of Nations]'.[34] The Court may have even recognised that legal sovereignty over the territory resided, at least in part, with humanity. As it held '[t]he Mandate was created, in the interest of the inhabitants of the territory, and of humanity in general, as an international institution with an international object – a sacred trust of civilization.'[35]

Further historical cases of bifurcated sovereignty abound. For example, the Panama Canal Zone under US administration from 1903 to 1979 remained under Panamanian

28 Alina Kaczorowska-Ireland, *Public International Law* (Routledge, 5th ed, 2015) 249; See also: Sir Robert Jennings and Sir Arthur Watts (eds) *Oppenheim's International Law: Volume 1 – Peace* (Longman, 9th ed, 1992) 565-72: § 170 'Divisibility of territorial sovereignty'; James Crawford, *Brownlie's Principles of Public International Law* (Oxford University Press, 8th ed, 2012) 206-10: 'Territorial Administration Separated From State Sovereignty'.

29 Lauterpacht, above n 27, 410.

30 Ralph Wilde, *International Territorial Administration: How Trusteeship and the Civilizing Mission Never Went Away* (Oxford University Press, 2008) 100.

31 Ibid 101.

32 Lauterpacht, above n 27, 410.

33 Ibid.

34 *International status of South-West Africa (Advisory Opinion)* [1950] ICJ Reports 128.

35 Ibid 132.

titular sovereignty.[36] Likewise the most internationalised example of the numerous concessions granted by China to foreign powers over a span of some 400 years, the Shanghai International Settlement. Existing itself for almost a century until 1943, administrative control over this small portion of Shanghai vested in an executive Municipal Council and Legislative Assembly comprised of foreign expatriates, while legal sovereignty remained with China.[37] In contrast, a vast expanse of Northern Canada, known as Rupert's Land,[38] was from 1670 to 1870 under British title, yet saw jurisdiction and control almost exclusively exercised by the Hudson's Bay Company under its royal charter.[39] An interesting and more recent case is that of East Timor during its 1999-2002 transition to independence under the United Nations Transitional Administration in East Timor (UNTAET). As observed by Wilde, there is no doubt that 'the UN asserted the right of plenary administrative control',[40] with legal sovereignty residing in East Timor itself, constituting 'a special form of territorial unit that was set to become a state within a finite period. In performing governmental acts in the territory, UNTAET acted on behalf of this special juridical entity.'[41] The identification of such a new subject of international law as pre-State East Timor exemplifies the ability of international law to accommodate new international entities in response to the contemporary needs of the international community.[42]

In these opening decades of the 21st century there are fewer examples of such bifurcated sovereignty, yet territories where this divisibility continues still dot the globe. The most prominent yet controversial example is the US Guantanamo Bay Naval

36 *Isthmian Canal Convention between the United States of America and the Republic of Panama*, signed 18 November 1903, 33 Stat 2234 (entered into force 26 February 1904) art 3 ('Hay-Bunau Varilla Treaty'); '[t]he Republic of Panama grants to the United States all the rights, power and authority within the zone … which the United States would possess and exercise if it were the sovereign of the territory'.

37 Meir Ydit, *Internationalised Territories: From the 'Free City of Cracow' to the 'Free City of Berlin'* (AW Sythoff-Leyden, 1961) 129, 134-7.

38 Rupert's Land encompassed much of the current Canadian territories of Nunavut and the Northwest Territories, as well as crossing over into a number of contemporary Canadian provinces.

39 Chartered companies were corporations formed by investors or shareholders for the purpose of trade, exploration and colonisation that were largely active from the 16th to 19th centuries. Granted diplomatic, legislative and military authority, they often undertook territorial administration on behalf of the sovereign State from which they received their charter. Prominent other examples include the Dutch East India Company, Massachusetts Bay Company and Russian-American Company. See: *Chartered Company* (2016) Encyclopaedia Britannica <http://www.britannica.com/topic/chartered-company>.

40 Wilde, above n 30, 186.

41 Ibid 187-8.

42 As held in *Reparation for Injuries Suffered in the Service of the United Nations (Advisory Opinion)* [1949] ICJ Reports 174, 178.

Base in Cuba. Noting that the detention camp located there is only a relatively recent feature, [43] the sovereignty of this territory has in fact been bifurcated since 1903, with the US exercising exclusive administration and Cuba retaining title.[44] Perhaps the most novel example today is Pheasant Island in the Bidosoa River between France and Spain, with bifurcation having successfully continued for some three and a half centuries. With these two countries sharing legal sovereignty under a condominium established by the 1659 *Treaty of the Pyrenees*,[45] administrative responsibility alternates with the French municipality of Hendaye governing for six months each year followed by the Spanish municipality of Irún.[46] A further contemporary example, essential to humanity's presence in outer space as one of only two facilities where crewed launches currently occur, is the Russian lease of the Baikonur Cosmodrome in Kazakhstan. Extending until at least 2050, this arrangement sees legal sovereignty retained by Kazakhstan, yet administrative responsibility held by the Russian government.[47]

What this historical sample of bifurcated sovereignty highlights is that since the time the modern concept of Westphalian sovereignty itself arose in the mid-17th century, sovereignty has always been treated as divisible, with the ability to distribute its titular and administrative components between different legal entities. As we progress into the 21st century and beyond, with long-term human settlement and resource utilisation in outer space presenting likely new endeavours, bifurcating sovereignty as a means to accommodate these activities therefore builds upon a robust foundation in

43 Located in this leased territory since 2002 in an effort to benefit from its unique status under both international and US domestic law. See: Michael J Strauss, *The Leasing of Guantanamo Bay* (Praeger Security International, 2009) 89.

44 *Agreement between Cuba and the United States for the Lease of Lands for Coaling and Naval Stations*, signed 22 May 1903, 192 ConTS 429 (entered into force 1 July 1904) art III ('*Cuban-American Treaty of Relations*'): 'While on the one hand the United States recognizes the continuance of the ultimate sovereignty of the Republic of Cuba over the above described areas … on the other hand the Republic of Cuba consents during the period of the occupation by the United States of said areas … the United States shall exercise complete jurisdiction and control over and within said areas'; This provision continues under the 1934 bilateral treaty which superseded this 1903 treaty. *Treaty Between the United States of America and Cuba*, signed 29 May 1934, 48 Stat 1682 (entered into force 9 June 1934) art III: 'Until the two contracting parties agree to the modification or abrogation of the stipulation of the agreement in regard to the lease to the United States of America of lands in Cuba for coaling and naval stations … the stipulations of that agreement with regard to the naval station of Guantanamo shall continue in effect.'

45 *Approval and Confirmation of the Treaties of Munster and the Pyrenees*, *and the Treaty between Austria and France of 16 December 1660 by the Archduke of Innsbruck*, signed June 1663, 7 CTS 449.

46 Peter Sahlins, *Boundaries: The Making of France and Spain in the Pyrenees* (University of California Press, 1989) 25; Michael Byers, *International Law and the Arctic* (Cambridge University Press, 2013) 15.

47 Maria Bjornerud, 'Baikonur Continues: The New Lease Agreement Between Russia and Kazakhstan' (2004) 30 *Journal of Space Law* 13, 17.

international law. Dividing sovereignty through an evolved understanding of the province provision enables humankind to be the ultimate repository of legal sovereignty over territory where our species undertakes activities in space. Yet it simultaneously enables the jurisdiction and control over these areas to be exercised by the particular legal entity actually undertaking these activities. For example, should a single State or collection of States jointly undertake a settlement mission to Mars, then while the territorial area where a settlement was established would be appropriated for all of humankind, the actual territorial jurisdiction and control – subject to humankind's titular sovereignty – could be undertaken by the State(s) in question.[48] Similarly in the case of an international organisation or even private corporation[49] establishing an orbital habitat facility for example, administration over the facility itself and the surrounding geographic area could be invested in this subject of international law,[50] yet under the residual sovereignty of humankind.

The practical importance of such a governance arrangement is that those entities incurring the cost in labour and capital of establishing such settlements and outposts in outer space are rightly able to exercise the necessary administrative authority over these communities, while at all times remaining subject to humankind's overarching international legal sovereignty. As Lauterpacht explains regarding these two levels of

48 For example under a condominium where two or more States jointly exercise governmental authority over a territory. The New Hebrides [today known as Vanuatu] was such a case of a condominium where both France and the United Kingdom exercised joint governmental authority from 1906 to 1980 (with both also sharing titular sovereignty under this condominium); See: Fred L Morrison, 'Condominium and Coimperium (June 2006) Max Planck Encyclopedia of Public International Law – Oxford Public International Law [14]-[21] <http://opil.ouplaw.com/home/EPIL>.

49 Corporations involved in the settlement and economic utilisation of outer space present the modern equivalent to chartered companies. See: explanation of chartered companies at footnote 39 above.

50 With international responsibility for activities of such corporate and international organisation entities in exercising this jurisdiction and control as subjects of international law ultimately also bearing upon the relevant State(s) due to Article VI of the Outer Space Treaty which holds: 'States Parties to the Treaty shall bear international responsibility for national activities in outer space, including the Moon and other celestial bodies, whether such activities are carried on by governmental agencies or by non-governmental entities, and for assuring that national activities are carried out in conformity with the provisions set forth in the present Treaty. The activities of non-governmental entities in outer space, including the Moon and other celestial bodies, shall require authorization and continuing supervision by the appropriate State Party to the Treaty. When activities are carried on in outer space, including the Moon and other celestial bodies, by an international organization, responsibility for compliance with this Treaty shall be borne both by the international organization and by the States Parties to the Treaty participating in such organization.'; That ultimate responsibility devolves to States is further supported by Article VIII of the Outer Space Treaty which declares: 'A State Party to the Treaty on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such object, and over any personnel thereof, while in outer space or on a celestial body.'

sovereignty, of greatest everyday significance is 'the question of who is entitled to exercise jurisdiction and control over it, to grant licenses to prospectors seeking to ascertain the existence of its mineral wealth, or to regulate the exploitation of its natural resources.'[51] Regulation and allocation of private property and mining rights in outer space would therefore fall under the authority of the relevant entity exercising jurisdiction and control. Of even greater significance though is the enabling of administrative power over territory, which is a necessity for any functional and harmonious human settlement in outer space. Once the members of our species inhabiting space expand beyond the current cohort of professional astronauts, social services will have to be provided, law and order maintained, and taxation collected to fund the administrative apparatus that provides the local governance integral to any community. Furthermore, once the individuals populating space are members of the ordinary public, settlements will require their own domestic legal systems to resolve the myriad of disputes and issues that accompanies everyday human life, for example covering criminal, family, real estate, employment and commercial law.

The consequence of the repository of titular or legal sovereignty in all of humankind over any area where humans undertake exploration and use in outer space cannot however be underestimated. Although critics of a regime of bifurcated sovereignty could point to comments of then US Secretary of War William Howard Taft,[52] speaking in relation to the Panama Canal Zone, 'that a mere titular sovereignty is reserved in the Panamanian Government' which can be 'characterized as a "barren ideality"',[53] history proves otherwise. In the case of the Canal Zone itself, the legal sovereignty retained by Panama enabled it to conclude the *Torrijos-Carter Treaties* in 1977, which saw the dissolution of the zone and a staged transfer of administrative sovereignty to Panama.[54] Similarly, the legal sovereignty China always retained over foreign concessions within its borders enabled its eventual resumption of administrative

51 Lauterpacht, above n 27, 411.

52 Also subsequently US President (1909-1913) and also Chief Justice of the US Supreme Court (1921-1930).

53 US Senate Committee on Oceanic Canals, Testimony by William Howard Taft, April 18, 1906, in Investigation of Panama Canal Matters, Vol 3 (Government Printing Office, 1906) 2527; Michael J Strauss, *Territorial Leasing in Diplomacy and Law* (Brill Nijoff, 2015) 98.

54 *Torrijos-Carter Treaties*: *Panama Canal Treaty*, United States–Panama, signed 7 September 1977, 1280 UNTS 3 (entered into force 7 September 1977); *Treaty concerning the Permanent Neutrality and Operation of the Panama Canal*, United States–Panama, signed 7 September 1977, 1161 UNTS 183 (entered into force 7 September 1977).

authority over all these territories.[55] This importance is true for all instances of UN territorial administrative authority, with residual sovereignty always residing in another legal subject such as a State or pre-State entity. Accordingly, the possession of titular sovereignty is never a nullity, but has formed the consistent legal basis that has enabled the UN to administer territory without its appropriation. As explained by Anne Orford:

> [t]he consensus in international law since the 1950s has been that if the UN or another organisation takes control over a territory for protection purposes, this has no effect upon the sovereignty or status of that territory. Instead legal scholars agree that the effect of international executive rule on existing states and state territories … has been to affirm the existing status of the territories under administration, while diminishing sovereignty as control.[56]

The same situation would apply to any subject of international law, be it an international organisation, State, corporation or any other legal entity, that was exercising jurisdiction and control over territory in outer space. As established, such administrative authority does not alter the ultimate legal sovereignty of any region where our species' presence extends, which through the province provision is uniformly invested in all of humankind.

As James Crawford explains, each case of territorial administration being separated from titular residual sovereignty is *sui generis*.[57] This results in tremendous flexibility in how a regime of bifurcated sovereignty could be established in outer space, enabling varying legal arrangements if needed for the diverse range of settlements that we can eventually expect.[58] Humankind could, for example, recognise in perpetuity the jurisdiction and control of a State or an international organisation over defined

55 *Sino-British Treaty for the Relinquishment of Extra-Territorial Rights in China*, signed 20 May 1943, 205 LNTS 69 (entered into force 20 May 1943); *Treaty for Relinquishment of Extraterritorial Rights in China,* United States–China, signed 11 January 1943, 10 UNTS 261 (entered into force 20 May 1943); *Joint Declaration of the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the People's Republic of China on the Question of Hong Kong*, signed 19 December 1984, 1399 UNTS 33 (entered into force 27 May 1985); *Joint Declaration of the Government of the People's Republic of China and the Government of the Portuguese Republic on the Question of Macau*, signed 13 April 1987, 1498 UNTS 195 (entered into force 15 January 1988).

56 Anne Orford, *International Authority and the Responsibility to Protect* (Cambridge University Press, 2011) 172.

57 Crawford, above n 28, 206; *Sui generis* – '[o]f its own kind': Aaron X Fellmeth and Maurice Horwitz, *Guide to Latin in International Law* (Oxford University Press, 2009) 272.

58 While the initial human settlements in outer space may have their territorial administration arrangements under humankind's residual sovereignty developed ad-hoc as each new settlement is established, general principles of international law for the exercise of territorial jurisdiction and control over space communities under this titular sovereignty are likely to eventually be developed as such settlements become more commonplace.

territory on Mars where a settlement is established. Alternatively such administrative authority could be for a specified period, such as under a 99-year lease.[59] Terminable jurisdiction and control would also be possible, where administrative authority would be defeasible if certain specified conditions were not met.[60] Prime candidates for such terminable conditions include discontinuance of settlement, use of celestial territory in a manner that is not 'exclusively for peaceful purposes'[61] and the disproportionate restriction of free access. Humankind as a subject of international law could also set limits on the exercise of administrative authority, such as placing specified conditions upon territorial jurisdiction and control relating to taxation, environmental protection and freedom of commerce and industry for example.[62] Additionally restrictions relating to changes in territorial borders as well as domestic governance arrangements could be imposed.[63] Given its residual sovereignty over disposition of territory, all transfers of territorial administrative authority between entities in outer space would also be subject to humankind's consent. Such a case could arise with future recognition

59 While 99-year leases have been common – such as China's leasing of the New Territories in Hong Kong, Kiaochow to Germany and Kuang-chou Wan to France, as well as the Philippines' lease of Subic Bay to the US (the latter 3 leases all though terminating early) – there is no requirement under international law for a specific period of time. For example a 50-year lease was granted over a tract of coastal territory in 1887 to the British East Africa Association by the Sultanate of Zanzibar, a 10-year lease granted to the Hudson's Bay Company in 1839 over a similar coastal tract in Russian Alaska and a 100-year lease over the city of Wismar was granted by Sweden in 1803 to the Grand Duchy of Mecklenburg-Schwerin. See: Strauss, *Territorial Leasing in Diplomacy and Law*, above n 53; Conceivably therefore even a 999-year lease in outer space could be possible, as is a common occurrence with leases over real estate under British common law (for example both Royal Albert Hall and the Millennium Dome in London are subject to 999-year real estate leases).

60 Crawford, above n 28, 206-7; Although involving both terminable residual and administrative/effective sovereignty, as Crawford notes terminable sovereignty 'is exemplified by the status of Monaco before 2005; its independence was conditional, in that if there was a vacancy in the Crown of Monaco it would have become a protectorate of France.'

61 *Outer Space Treaty* art IV; It is important to note that the use of space 'exclusively for peaceful purposes' under Article IV actually only applies to celestial bodies (including the Moon), not void space. See: Kai-Uwe Schrogl and Julia Neumann, 'Article IV' in Stephan Hobe, Bernhard Schmidt-Tedd and Kai-Uwe Schrogl (eds), *Cologne Commentary on Space Law: Volume 1* (Carl Heymanns Verlag, 2009) 70, 81-2.

62 For example such limitations are placed on Norwegian sovereignty over the archipelago of Svalbard under the 1920 *Svalbard Treaty*. See: footnote 25 above.

63 Such as those applying to Austria where 'political or economic union with Germany' is prohibited. *State Treaty for the Re-establishment of an Independent and Democratic Austria*, opened for signature 15 May 1955, 217 UNTS 223 (entered into force 27 July 1955) art 4; Under the earlier *Treaty of Peace between the Allied and Associated Powers and Austria* concluded after the First World War this was expressed somewhat differently in that '[t]he independence of Austria is inalienable otherwise than with the consent of the Council of the League of Nations.' *Treaty of Peace between the Allied and Associated Powers and Austria*, opened for signature 10 September 1919, 226 ConTS 8 (entered into force 16 July 1920) art 88; This revised wording in the 1955 Treaty results from a 1931 advisory decision of the Permanent Court of International Justice which found that a customs union between Austria and Germany did not violate article 88 of the 1919 treaty (although it did violate a later 1922 protocol); *Customs Regime between Germany and Austria (Advisory Opinion)* [1931] PCIJ (ser A/B) no 41.

of the political independence of particular space communities following an expression of self-determination, so that they are self-governing and themselves subjects of international law.[64] The peaceful transfer of jurisdiction and control would be possible under the auspices of humankind's legal sovereignty, avoiding the violent decolonisation process of last century.[65]

Critics of this proposed application of bifurcated sovereignty to outer space will no doubt however point out its connection at points in history with colonialism and the subjugation of local peoples.[66] Yet it must be remembered that at least our immediate vicinity in space is fundamentally different to Earth in one critical respect. As Sagan asks:

> By what right, we might ask ourselves, do we inhabit, alter, and conquer other worlds? If anyone else were living in the Solar System, this would be an important question. If, though, there's no one else in this system but us, don't we have a right to settle it?[67]

Those legal entities who administer territory in space will not offer colonial oppression but rather a new era of opportunity and economic advancement throughout this frontier. These opportunities will be like those presented in the New World of the Americas over the past five centuries, calling out to our species' most adventurous and aspirational, motivating them to migrate. International organisations, States and corporations[68] that will be involved in this endeavour all have historically demonstrated their capacity to successfully administer territory, with the latter two the primary institutional vehicles for the past migration and settlement of frontier destinations on Earth. By empowering these entities,[69] which will be committing the immense effort and expense involved in this undertaking, with the knowledge that

64 For discussion of the value of political independence for future human settlements on Mars (although advocating immediate self-determination rather than an evolution to independence) see: Jacob Haqq-Misra, 'The Transformative Value of Liberating Mars' (2016) *New Space* (forthcoming) <https://arxiv.org/ftp/arxiv/papers/1404/1404.2315.pdf>.

65 As the realisation of self-determination by the local populace would not be at the ultimate discretion of the subject of international law exercising territorial administration.

66 See: Turan Kayaoğlu *Legal Imperialism: Sovereignty and Extraterritoriality in Japan, the Ottoman Empire and China* (Cambridge University Press, 2010) 23; Michelle Burgis, 'Mandated Sovereignty? The Role of International Law in the Construction of Arab Statehood during and after Empire' in Sally N Cummings (ed), *Sovereignty After Empire: Comparing the Middle East and Central Asia* (Edinburgh University Press, 2011) 104, 109;

67 Sagan, above n 5, 376.

68 Corporations being the modern equivalent of chartered companies that during the 16th to 19th centuries were formed by investors or shareholders for the purpose of trade, exploration and colonisation.

69 Alongside others subjects of international law that may emerge in the future.

their administrative jurisdiction and control will be recognised over any territory inhabited, humankind is equipped with its best legal avenue to both incentivise and properly manage its future settlement of outer space.

C *Humankind's Compulsory Jurisdiction Over International Legal Disputes In Outer Space*

The third legal consequence of a territorial 'province of all mankind' is somewhat different in that it does not naturally result from the territorial conception but rather requires a deliberate policy choice by humankind. As the recognition of humankind's residual sovereignty should ideally result in all international legal disputes in outer space falling under the purview of its legal sovereignty. It will be for humankind to insist upon this and determine the manner in which disputes between legal entities should be heard and resolved within its province.

As Cocca notes, the OST 'does not mention the competent jurisdictional organ to act in the solution of controversies arising from the interpretation of the Treaty or transgression of the principles consecrated therein.'[70] This is despite the inclusion of a compromissory clause within the original US draft text, which stated '[a]ny disputes arising from the interpretation or application of this Agreement may be referred by any Contracting Party thereto to the International Court of Justice for decision.'[71] No such compulsory dispute resolution mechanism appeared in the separate Soviet draft text, which instead declared '[i]n the event of disputes arising in connexion with the application or interpretation of the Treaty, the States Parties concerned shall immediately consult with a view to their settlement.'[72] As described by the Lebanese representative to the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space during its negotiation of the OST, as these 'divergent positions which stemmed basically from acceptance or rejection of the compulsory jurisdiction of the

70 Aldo Armando Cocca, 'Fundamental Principles: A Latin American Viewpoint' in Edward McWhinney and Martin A Bradley, *New Frontiers in Space Law (Oceana Publications*, 1969) 61, 65.

71 Draft art 11; United States of America, *Draft Treaty Governing the Exploration of the Moon and Other Celestial Bodies – Letter Dated 16 June 1966 From the Permanent Representative of the United States of America Addressed to the Chairman of the Committee on the Peaceful Uses of Outer Space*, UN GAOR, UN Doc A/AC.105/32 (17 June 1966).

72 Draft art X; Union of Soviet Socialist Republics, *Draft Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, The Moon and Other Celestial Bodies – Letter Dated 16 June 1966 From the Permanent Representative of the Union of Soviet Socialist Republics to the United Nations Addressed to the Secretary-General*, UN GAOR, 21st sess, UN Doc A/6352 (16 June 1966).

Court had been clearly set forth, it was useless to prolong the debate on that subject.'[73] Despite the Soviet ambassador to this subcommittee indicating he was 'prepared to give favourable consideration' to ICJ jurisdiction 'subject to the consent of all parties concerned'[74] and the Romanian delegate's suggestion that '[t]he solution was simple' involving a compromissory clause within '[a]n optional protocol',[75] neither of these alternatives were adopted.

In fact, the OST that was concluded contains no mention whatsoever of dispute settlement.[76] Indeed the closest the Treaty even comes to the proposed Soviet requirement of a duty to consult is a reference to requesting 'consultation' in the event of space activities causing 'potential harmful interference'.[77] This absence of specific conflict resolution mechanisms has largely continued in international space law, with both the 1968 *Rescue Agreement*[78] and the 1974 *Registration Convention*[79] containing no provisions for dispute settlement. The moribund 1979 *Moon Agreement* requires, in the case of interference with other parties on the Moon or other celestial bodies, only 'consultations',[80] which can be escalated to seeking 'the assistance of the Secretary-General'.[81] However, there is no binding obligation on this treaty's 16 parties to accept any resolution proposed by the good offices of the UN Secretary-General. The 1972

73 Legal Subcommittee - Committee on the Peaceful Uses of Outer Space, *Summary Record of the Sixty-Eighth Meeting*, UN GAOR, 5th sess, 68th mtg, UN Doc A/AC.105/C.2/SR.68 (21 October 1966, adopted 26 July 1966) 16 (Mr Chammas).

74 Ibid 14 (Mr Morozoc).

75 Legal Subcommittee - Committee on the Peaceful Uses of Outer Space, *Summary Record of the Seventy-First Meeting*, UN GAOR, 5th sess, 71st mtg, UN Doc A/AC.105/C.2/SR.71 (21 October 1966, adopted 4 August 1966) 19 (Mr Glaser); The Indian delegate similarly 'recalled that in 1958, in connexion with the Conventions on the law of the sea, the States Parties to the Conventions had been given the option of signing or not a separate protocol'; Legal Subcommittee - Committee on the Peaceful Uses of Outer Space, *Summary Record of the Sixty-Eighth Meeting*, UN GAOR, 5th sess, 68th mtg, UN Doc A/AC.105/C.2/SR.68 (21 October 1966, adopted 26 July 1966) 14 (Mr Rao).

76 See discussion regarding the omission of a dispute settlement clause: Gérardine Meishan Goh, 'Article XIV – XVII' in Stephan Hobe, Bernhard Schmidt-Tedd and Kai-Uwe Schrogl (eds), *Cologne Commentary on Space Law: Volume 1* (Carl Heymanns Verlag, 2009) 223, 228-9.

77 *Outer Space Treaty* art IX.

78 *Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space*, opened for signature 19 December 1967, 19 UNTS 119 (entered into force 3 December 1968) ('*Rescue Agreement*')

79 *Convention on the Registration of Objects Launched into Outer Space*, opened for signature 12 November 1974, 1023 UNTS 15 (entered into force 15 September 1976) ('*Registration Convention*').

80 *Agreement Governing the Activities of States on the Moon and Other Celestial Bodies*, opened for signature 5 December 1979, 1363 UNTS 3 (entered into force 11 July 1984) ('*Moon Agreement*') arts 8(3), 15(2).

81 Ibid 15(3).

Liability Convention[82] serves though as the exception, creating, as Géraldine Goh observes, 'the most extensive regulation of dispute settlement available in the framework of international space law.'[83] Its complex dispute resolution mechanism relates solely to claims for compensation for damage arising from space activities with a 'Claims Commission' procedure established.[84] Yet the decision of a Claims Commission shall only be binding if both disputants agree, otherwise serving as only a 'recommendatory award'.[85] Ultimately, therefore, compulsory dispute settlement is currently absent from international space law.[86]

To date the only disputes relating to activities in outer space have either been dealt with at the domestic level or resolved through diplomatic channels.[87] As humanity's presence in space increases with respect to both the numbers of individuals accessing space and the broadening of activities to include migration and settlement, the prospect of disputes between subjects of international law also intensifies. Therefore to ensure in this changing environment that the territorial area of outer space is one of 'international peace and security',[88] an effective dispute resolution procedure for space will eventually be needed. Should the territorial conception gain acceptance as the evolutionary meaning of 'the province of all mankind', subjects of international law administering territory and regulating the use of property and resources in space must recognise that humankind's residual sovereignty is not a legal fiction. For humankind will be fully empowered and responsible for setting conditions upon the jurisdiction and control that it allows others to administer. Such limitations, like when applied to restrictions on sovereignty today,[89] should be established under international law through written legal instrument at the outset of an entity commencing administration. To ensure certainty for the administrating entity and its residents, the specific

82 *Convention on International Liability for Damage Caused by Space Objects*, opened for signature 29 November 1971, 961 UNTS 187 (entered into force 1 September 1972) ('*Liability Convention*').

83 Gérardine Meishan Goh, *Dispute Settlement in International Space Law: A Multi-Door Courthouse for Outer Space* (Martinus Nijhoff, 2007) 33.

84 *Liability Convention* arts XIX-XX.

85 *Liability Convention* art XIX(2).

86 Goh, above n 83, 23; Apart from compulsory ICJ jurisdiction under its optional clause for those States party; *Statute of the International Court of Justice* art 36(2).

87 Goh, above n 83, 3.

88 *Outer Space Treaty* art III.

89 Such as that applied for example to Austria (see: footnote 63 above) and the Norwegian archipelago of Svalbard (see: footnotes 25 and 62 above).

conditions imposed[90] on a space settlement should continue until – a) any possible time limit the conferral of jurisdiction and control is subject to expires; b) there is mutual agreement between the entity and humankind's representatives for an amendment to the conditions; or c) the entity violates the conditions sufficiently that its administrative authority is revoked by humankind. The last of these situations in particular highlights the need for compulsory jurisdiction empowering an international judicial organ to adjudicate such potential breaches of the legally defined bounds of administrative authority.

Therefore, while each human settlement in space will at least initially involve a bifurcation of sovereignty that is likely *sui generis*,[91] one condition should be uniformly applied in all circumstances without exception. This is the imposition upon all administering authorities of the compulsory jurisdiction of an appropriate international judicial body. Such acceptance of this compulsory jurisdiction should not only be required of those legal entities seeking administrative authority for settlement purposes, but also those entities wishing to exert jurisdiction and control over territory solely for resource rights and utilisation. It is this feature of the territorial conception which provides outer space with its best hope of remaining peaceful and ensuring States and other international actors do not acquire *de facto* title by avoiding deference to humankind's overarching legal sovereignty. The specific judicial body (or bodies) to be charged with the responsibility of resolving disputes between subjects of international law in outer space is for humankind to determine. This may, for example, initially be the ICJ in adjudicating State-to-State disputes,[92] as the US originally proposed. It seems appropriate however that the law of outer space will eventually develop its own adjudicative organ, such as the law of the sea's International Tribunal for the Law of the Sea (ITLOS).[93]

90 Although such limitations will be imposed on behalf of humankind, this will involve negotiation between the entity wishing to establish a space settlement and the recognised representatives of humankind (potentially the United Nations General Assembly for example). See: Chapter 6.

91 While the establishment of space settlements remain novel and rare occurrences. Although a standardised application of bifurcated sovereignty may eventually be developed by humankind in regards to the administrative authority that other subjects of international law may exercise over territory in space. This may well occur once the establishment of new settlements in outer space becomes a frequent occurrence.

92 *Statute of the International Court of Justice* art 34(1); 'Only states may be parties in cases before the Court.'

93 *United Nations Convention on the Law of the Sea*, opened for signature 10 December 1982, 1833 UNTS 3 (entered into force 16 November 1994) (*'UNCLOS'*) art 287(a), Annex VI 'Statue for the International Tribunal for the Law of the Sea'; Such a specialist adjudicative organ for outer

The potential also exists for international space law to mirror the law of the sea further in developing its own 'smorgasbord'[94] of dispute settlement mechanisms,[95] with compulsory jurisdiction under the *United Nations Convention on the Law of the Sea* (UNCLOS) able to be exercised by ITLOS, the ICJ, an Arbitral Tribunal or a Special Arbitral Tribunal.[96] This diversity of dispute settlement mechanisms available to parties reflects, as Donald Rothwell and Tim Stephens observe, 'the importance of consent to international dispute settlement, and the reticence of states to accept one body as the definitive means for resolving law of the sea disputes.'[97] However, unlike with UNCLOS, legal entities in outer space will unlikely need to be enticed to accept compulsory jurisdiction by international space law offering a similar range of adjudicative fora. Instead, given that a prerequisite for exercising any territorial administration in space over settlements, property or resources should be acceptance of humankind's compulsory jurisdiction, the law of outer space should instead be able to focus on the development of a single specialised judicial forum. Given also that entities in space who do not exercise territorial jurisdiction and control will likely want access to this adjudicative body to protect their own rights against those administering space territory, settlements and resources, there will additionally exist a strong incentive for these other subjects to voluntarily accede to its compulsory jurisdiction. The establishment of an international tribunal for space law, as first proposed by the International Law Association's Space Law Committee in 1984, is therefore advisable, rightly specifying that 'in the tribunal as a whole the representation of the principal

space is proposed by Goh – Draft article 5(1)(a), 'Proposed Protocol for the Multi-Door Courthouse for Outer Space to the 1967 Outer Space Treaty', Goh, above n 83, 367.

94 Jonathan I Charney, 'The Implications of Expanding International Dispute Settlement Systems: The 1982 Convention on the Law of the Sea' (1996) 90 *American Journal of International Law* 69, 71; See also: Alan E Boyle, 'Dispute Settlement and the Law of the Sea Convention: Problems of Fragmentation and Jurisdiction' (1997) 46 *International and Comparative Law Quarterly* 37, 40.

95 Such as proposed under the 'Final Draft of the Revised Convention on the Settlement of Disputes Related to Space Activities', Space Law Committee – International Law Association, *Report of the 68th Conference* (Taipei, Taiwan, 1998) 249-67; See: Goh, above n 83, 67; 'The 1998 ILA Taipei Draft Convention reflected the affirmative features of these constructive deliberations. Within the framework of judicial settlement of disputes, it was proposed to create a new Chamber of the International Court of Justice to deal with disputes of commercial or privatized outer space activities and to establish a new International Tribunal for Space Law. In the form of extra-juridical settlement of disputes, the Draft postulated that conciliation and arbitration procedures should be accepted.'

96 UNCLOS art 287.

97 Donald R Rothwell and Tim Stephens, *The International Law of the Sea* (Hart Publishing, 2010) 449.

legal systems of the world and equitable geographical distribution shall be assured'.[98] Although to reinforce and highlight humankind's residual and legal sovereignty over outer space it is preferable that the nomenclature used for such a judicial body is that of 'court'. Given that the diversity of legal actors in space should have access to this specialised international court, whether they be States, international organisations, corporations or even persons,[99] such a court should look to the Sea-Bed Disputes Chamber of ITLOS for inspiration. For in this chamber focusing on disputes concerning the exploration and exploitation of 'the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction',[100] parties may include not only States, but the International Seabed Authority as an international organisation (and its organ The Enterprise), state enterprises and natural and juridical persons.[101]

Such a proposed new interpretation of 'the province of all mankind', with its significant legal consequences for the law of outer space, requires however a foundation within the OST itself from which to evolve. Given the absence of a clear definition from the ordinary meaning of the province provision, this thesis now turns to the further interpretative aids available under international law to assess the territorial conception as *de lege ferenda*.

98 'Draft Convention on Dispute Settlement', Space Law Committee – International Law Committee', *Report of the 61st Conference* (Paris, 1984) 325; See Goh, above n 83, 66.

99 Should individuals be involved in an international (not domestic law) dispute. Although the unique potential also exists given humankind's legal sovereignty that such a specialised international space court could also serve as the ultimate judicial forum of last resort for appeals from the domestic legal systems of settlements throughout the 'province of all mankind' in outer space. This would be an exceptional development within international law, in line with Cocca's conception of a *jus humanitatis*.

100 UNCLOS art 1(1).

101 Ibid art 187.

IV THE PROVINCE PROVISION WITHIN THE *TRAVAUX PRÉPARATOIRES*

A detailed consideration of the *travaux préparatoires*[1] of the *Outer Space Treaty* (OST)[2] is an important step in advocating the territorial conception, since it can help determine whether any basis exists within its negotiation history for 'the province of all mankind' to evolve in this direction. The *Vienna Convention on the Law of Treaties* (VCLT)[3] explicitly provides recourse to 'the preparatory works' of a treaty as a 'supplementary means of interpretation'[4] where, having applied the 'general rule of interpretation',[5] the text remains 'ambiguous or obscure'.[6] Such ambiguity certainly plagues the province provision, given its lack of definition within the OST and the competing ordinary meanings of the English word 'province' as discussed in Chapter 2.[7] Although the VCLT does not technically apply to the OST (it applies only to treaties concluded after its own entry into force in 1980),[8] it reflects many customary norms of treaty law and practice. As Anthony Aust explains, 'the rules set forth in the Convention are invariably relied upon, even when parties are not bound to it'.[9] This preeminent position sees 'international courts and tribunals' consistently consulting this legal instrument when determining customary norms of treaty law,[10] taking 'the Convention as its starting – and normally also its finishing – point.'[11] This has resulted in these 'Vienna rules' of treaty interpretation, as

1 'Travaux Préparatoires – Preparatory works; the documents and proceedings of the meetings where a treaty is drafted.' James R Fox, *Dictionary of International and Comparative Law* (Oceana Publications, 3rd ed, 2003) 327.

2 *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies*, opened for signature 27 January 1967, 610 UNTS 205 (entered into force 10 October 1967) ('*Outer Space Treaty*').

3 *Vienna Convention on the Law of Treaties*, opened for signature 23 May 1969, 1155 UNTS 331 (entered into force 27 January 1980).

4 Ibid art 32.

5 Ibid art 31

6 Ibid art 32.

7 See: Part C of Chapter 2.

8 *Vienna Convention on the Law of Treaties* art 4.

9 Anthony Aust, *Modern Treaty Law and Practice* (Cambridge University Press, 2013) 10.

10 In relation to the use of the *travaux préparatoires* as a pre-existing customary norm codified by Article 32 of the VCLT, international tribunals often consulted the preparatory works of treaties in their interpretation prior to the VCLT's entry into force in 1980. See for example: *The Case of the SS Lotus (France v Turkey) (Judgment)* [1927] PCIJ (ser A) No 10, 16; *Jurisdiction of the European Commission of the Danube (Advisory Opinion)* [1927] PCIJ (ser B) No 14, 28, 31; *Competence of Assembly regarding admission to the United Nations (Advisory Opinion)* [1950] ICJ Rep 4, 8; See also: Lord McNair, *The Law of Treaties* (Clarendon Press, rev ed, 1986) 412-5.

11 Aust, above n 9, 10.

Richard Gardiner observes, becoming 'the rules of customary international law applicable to all treaties, even though the VCLT itself is not retroactive.[12]

Recourse to the 'preparatory work of the treaty and the circumstances of its conclusion' is therefore relevant to the OST, which is an exemplar of a treaty with ambiguous and obscure terms. The entirety of the *travaux préparatoires* from its 1966 negotiations has accordingly been studied,[13] with the deliberations over Article I, and in particular its province provision, the focus of this analysis. Such an examination of the OST's preparatory work with an emphasis on the phrase 'the province of all mankind' has not previously been undertaken in the literature.[14] This chapter elucidates not only what those who drafted this Treaty thought of the province provision's meaning in the context of the proposed territorial conception, but also its more general significance. The *travaux* certainly, though, has a role in evaluating this evolutionary interpretation because, as Gardiner finds, 'reference to preparatory work' in order 'to substantiate an interpretation that is emerging' is as common as using it in 'confirming one which is already pretty much clear'.[15] In regards to 'the province of all mankind' provision, it is unquestionably the former that applies, as since being drafted almost 50 years ago its definition still remains uncertain.

12 Richard Gardiner, 'The Vienna Convention Rules on Treaty Interpretation' in Duncan B Hollis (ed), *The Oxford Guide to Treaties* (Oxford University Press, 2012) 475, 493. See also: *Arbitration regarding the Iron Rhine ('Ijzeren Rijn') Railway (Belgium/Netherlands) (Awards)* (2005) 27 Rep Int'l Arb Awards 35, 62; 'It is now well established that the provisions on interpretation of treaties contained in Articles 31 and 32 of the Convention reflect pre-existing customary international law, and thus may be (unless there are particular indications to the contrary) applied to treaties concluded before the entering into force of the Vienna Convention in 1980. The International Court of Justice has applied customary rules of interpretation, now reflected in Articles 31 and 32 of the Vienna Convention, to a treaty concluded in 1955 … and to a treaty concluded in 1890, bearing on rights of States that even on the day of Judgment were still not parties to the Vienna Convention … There is no case after the adoption of the Vienna Convention in 1969 in which the International Court of Justice or any other leading tribunal has failed so to act.'

13 This *travaux préparatoires* for the *Outer Space Treaty* has been obtained from the United Nations Office of Outer Space Affairs (UNOOSA): *Travaux Préparatoires – Treaty on Principles Governing the Activites of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies* (2016) United Nations Office of Outer Space Affairs <http://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/travaux-preparatoires/outerspacetreaty.html>; The small amount of relevant *travaux préparatoires* not available on this UNOOSA website was obtained in hard copy from the space law collection at the Nahum Gelber Law Library at McGill University in Montreal, Canada.

14 Although an overall study of the *Outer Space Treaty's* preparatory work for Article I has been undertaken by Stephan Hobe. See: Stephan Hobe, 'Article I' in Stephan Hobe, Bernhard Schmidt-Tedd and Kai-Uwe Schrogl (eds), *Cologne Commentary on Space Law: Volume 1* (Carl Heymanns Verlag, 2009) 25, 29-31.

15 Richard Gardiner, *Treaty Interpretation* (Oxford University Press, 2008) 326.

A *Negotiation Within The Legal Subcommittee*

The impetus for negotiating the OST arose from an American desire to have a binding instrument of international law apply to outer space before humans landed on the Moon. This led the United States to finally accept, in 1966, the Soviet Union's longstanding preference for a formal space treaty.[16] On 16 June 1966 the Soviet Union submitted to the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space (COPUOS) a draft treaty containing proposed general principles of space law.[17] This was joined the same day by a separate draft text from the US.[18] These two draft treaties provided the textual architecture for the Legal Subcommittee's deliberations for a general principles treaty for outer space during its Fifth Session in Geneva from 12 July to 4 August 1966. The subcommittee then resumed negotiations the following month in New York from 12 to 16 September.[19] It was here in the Legal Subcommittee, described by its Chairman Manfred Lachs as 'the seat of what I would call *travaux préparatoires* of the law of outer space in the making'[20] that the bulk of the OST was negotiated, which as per established procedure was conducted on the principle of consensus.[21]

16 The United States' change of position arose not only from its self-imposed deadline of achieving a crewed landing on the Moon before the end of the decade, but more significantly the increasing prospect at the time of a Soviet Moon landing following the success of its unmanned Luna 9 and 10 missions in February and March 1966. This sense of urgency was conveyed by US President Lyndon Johnson in a May 1966 statement calling for the need 'to take action now' by concluding 'a treaty laying down rules and procedures for the exploration of celestial bodies.' Lyndon B Johnson, 'Statement by the President on the Need for a Treaty Governing Exploration of Celestial Bodies' (Press Statement, 7 May 1966) <http://www.presidency.ucsb.edu/ws/?pid=27581>; See also: Bin Cheng, *Studies in International Space Law* (Oxford University Press, 1997) 216; Paul G Dembling and Daniel M Arons, 'The Evolution of the Outer Space Treaty' (1967) 33 419, 425-7.

17 Union of Soviet Socialist Republics, *Draft Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, The Moon and Other Celestial Bodies – Letter Dated 16 June 1966 From the Permanent Representative of the Union of Soviet Socialist Republics to the United Nations Addressed to the Secretary-General*, UN GAOR, 21st sess, UN Doc A/6352 (16 June 1966).

18 Although formally dated 17 June 1966. United States of America, *Draft Treaty Governing the Exploration of the Moon and Other Celestial Bodies – Letter Dated 16 June 1966 From the Permanent Representative of the United States of America Addressed to the Chairman of the Committee on the Peaceful Uses of Outer Space*, UN GAOR, UN Doc A/AC.105/32 (17 June 1966).

19 Ivan A Vlasic, 'The Space Treaty: A Preliminary Evaluation' (1967) 55 *California Law Review* 507, 511.

20 *Verbatim Record of the Fourteen Hundred and Ninety-First Meeting*, UN GAOR, 1st Comm, 21st sess, 1491st mtg, UN Doc A/C.1/PV.1491 (26 January 1967, adopted 17 December 1966) 7 (Mr Lachs).

21 Eilene Galloway, 'Consensus Decisionmaking By the United Nations Committee on the Peaceful Uses of Outer Space' (1979) 7 *Journal of Space Law* 3, 8.

It was the Soviet draft, which otherwise largely constituted direct implementation of the General Assembly's 1963 resolution of the *Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space*,[22] that introduced into the lexicon of international space law the phrase 'the province of all mankind'. The Soviet draft's first sentence of its proposed article I declared:

> 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.[23]

The US draft contained no such reference to this 'province'.[24]

In introducing the Soviet draft treaty to the Legal Subcommittee, Soviet delegate Platon Morozov gave voice to the suggested new terminology of 'the province of all mankind'. He explained that the 'Soviet Union, in charting man's course into outer space, had always regarded its achievements in that field of endeavor as belonging to mankind as a whole'.[25] Therefore, it is evident that this 'province' must pertain in some way to its secondary meaning as a sphere of action or interest. Yet there is nothing in Morozov's introductory remarks that precludes 'the province' from also being invested with its primary territorial meaning. As will be discussed in Chapter 5 the original Russian word used for 'province' of достоянием (dostoyanie), which translates to 'property', is supportive of this.[26]

22 *Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space*, GA Res 1962 (XV111), UN GAOR, 18th sess, 1280th plen mtg, UN Doc A/RES/18/1962 (13 December 1963); This resolution states in its first two articles – '1) The exploration and use of outer space shall be carried on for the benefit and in the interests of all mankind. 2) Outer space and celestial bodies are free for exploration and use by all States on a basis of equality and in accordance with international law.'

23 Union of Soviet Socialist Republics, *Draft Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, The Moon and Other Celestial Bodies – Letter Dated 16 June 1966 From the Permanent Representative of the Union of Soviet Socialist Republics to the United Nations Addressed to the Secretary-General*, UN GAOR, 21st sess, UN Doc A/6352 (16 June 1966) 2; The rest of the Soviet draft article I continued as 'The parties to the Treaty undertake to accord equal conditions to States engaged in the exploration of 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 there shall be free access to all regions of celestial bodies.'

24 Apart from its preamble '[r]ecognizing that it is in the interest of all mankind that celestial bodies should be used for peaceful purposes only', the US draft text made no other reference to 'mankind' in any of its propose articles; United States of America, *Draft Treaty Governing the Exploration of the Moon and Other Celestial Bodies – Letter Dated 16 June 1966 From the Permanent Representative of the United States of America Addressed to the Chairman of the Committee on the Peaceful Uses of Outer Space*, UN GAOR, UN Doc A/AC.105/32 (17 June 1966).

25 Legal Subcommittee - Committee on the Peaceful Uses of Outer Space, *Summary Record of the Fifty-Seventh Meeting*, UN GAOR, 5th sess, 57th mtg, UN Doc A/AC.105/C.2/SR.57 (20 October 1966, adopted 12 July 1966) 11-12 (Mr Morozov).

26 See also: Appendices 1.1-1.3 which evidence this translation of the Russian treaty text.

Also as discussed in Chapter 2, the OST contains no definitions.[27] Given this absence, the Swedish delegate found, 'the merit of the United States draft was that its precise language would facilitate interpretation', whereas 'interpretation was difficult' with the Soviet draft 'and would necessitate a very careful analysis of the exact meaning of each article'.[28] The representative of the UK singled out such interpretational difficulty when the subcommittee focused on the Soviet's proposed province provision on 20 June 1966. The British delegate stated there was:

> some difficulty in understanding the phrase 'the province of all mankind' in the first sentence of article I of the text. It would be useful to know what legal meaning was to be attributed to it in the present context.[29]

This followed earlier comments from the Indian delegate that this sentence of the Soviet draft containing the 'province' reference 'might perhaps be transferred to the preamble, since it did not seem to lay down a legal obligation'.[30]

This wish for greater clarity was echoed by Mr José María Ruda of Argentina, who 'considered that the first article of the treaty should be crafted in simple, straightforward terms' and went on to propose a replacement first article that omitted any reference to 'the province of all mankind'.[31] The Canadian representative similarly stressed that his 'delegation was uncertain as to the precise scope of article I of the Soviet draft'.[32] The Brazilian delegate suggested 'the province of all mankind' be omitted or the wording amended to: 'The exploration and use of outer space shall be carried out for the benefit and in the interests of all countries irrespective of the state of their scientific

27 As noted by Hobe, this absence can be explained by 'a general fear' among the negotiating States 'that too many definitions would bear the risk of the Agreement being outdated' and 'that getting consensus on definitions would considerably prolong the negotiating process.' Hobe, above n 14, 29.

28 Legal Subcommittee - Committee on the Peaceful Uses of Outer Space, *Summary Record of the Fifty-Ninth Meeting*, UN GAOR, 5th sess, 59th mtg, UN Doc A/AC.105/C.2/SR.59 (24 October 1966, adopted 14 July 1966) 4 (Mr Kellberg).

29 Legal Subcommittee - Committee on the Peaceful Uses of Outer Space, *Summary Record of the Sixty-Third Meeting*, UN GAOR, 5th sess, 63rd mtg, UN Doc A/AC.105/C.2/SR.63 (20 October 1966, adopted 20 July 1966) 9 (Mr Darwin).

30 Ibid 7 (Mr Krishna Rao).

31 Ibid 8-9 (Mr Ruda).

32 Legal Subcommittee - Committee on the Peaceful Uses of Outer Space, *Summary Record of the Sixty-Fourth Meeting*, UN GAOR, 5th sess, 64th mtg, UN Doc A/AC.105/C.2/SR.64 (24 October 1966, adopted 21 July 1966) 7 (Mr Gotlieb).

development'.[33] However, the Soviet reply was that 'there was no reason to replace the words "and shall be the province of all mankind"' as this would 'weaken the text'.[34] This Soviet insistence on retaining the terminology of 'the province of all mankind' importantly belies any notion that the provision lacks legal significance. The ambiguity of the Soviet's draft article I, including its introduction of the province provision was, though, clearly apparent to numerous delegations, as evidenced above. Yet the mentioned attempted move by India that the province provision be deprived of legal force by its transfer to the preamble, after receiving some initial support from members such as Italy[35] and France,[36] ultimately was not accepted. Similarly, the Brazilian push to remove any reference to 'province' whatsoever was also not successful.

On 24 July the delegation of the United Arab Republic (UAR)[37] expressed its agreement 'that outer space should be the province of all mankind'.[38] It went on to propose a new article I that opened with:

> The Parties to the Treaty recognize outer space as the province of mankind. To this end, the exploration and use of outer space shall be carried out for the benefit, betterment, and in the interest of all nations irrespective of the degree of their economic and scientific development.[39]

The UAR's proposal is revealing in that the requirement that States 'recognize outer space as the province of mankind' stands alone, with reference to exploration and use following separately. Rephrasing the reference to outer space as mankind's province in this way indicates an understanding by the UAR that exploration and use of space give effect to the

33 Ibid 9 (Mr Carvalho Silos).
34 Ibid 9 (Mr Morozov).
35 Ibid 5 (Mr Vinci).
36 Ibid 6 (Mr Deleau).
37 The official title of Egypt from 1958 to 1971, with Syria having seceded from the United Arab Republic in 1961.
38 Legal Subcommittee - Committee on the Peaceful Uses of Outer Space, *Summary Record of the Sixty-Fifth Meeting*, UN GAOR, 5th see, 64th mtg, UN Doc A/AC.105/C.2/SR.65 (24 October 1966, adopted 22 July 1966) 8 (Mr Kassem).
39 Ibid. The UAR's proposed replacement first paragraph for this article stated in its entirety: 'The Parties to this Treaty recognize outer space as the province of mankind. To this end, the exploration and use of outer space shall be carried out for the benefit, betterment, and in the interest of all nations irrespective of the degree of their economic and scientific development. The Parties to the Treaty undertake to accord equal conditions to States engaged in the exploration of outer space undertake to accord and to provide possibilities to the non-space Powers to enable them to participate in and to draw benefit from the exploration and use of outer space with the aim of deriving practical benefits relating to their economic and social development.'

separate declaration that states 'recognize outer space [itself] as the province of mankind'. This proposed rephrasing implies that 'the province' being referred to does not principally relate to a sphere of action or interest, but instead to the territorial and spatial connotations that are ordinarily associated with the word 'province'. That the UAR may not have been alone in such an understanding is indicated by the response of Indian delegate Krishna Rao declaring:

> since his delegation had originally expressed some doubt as to whether the first sentence of article I of the USSR draft should be transferred to the preamble or retained in the article, he wished to say that the arguments advanced by the representatives of the USSR and the United Arab Republic had been very convincing. On second thought, it would be preferable to retain the sentence in question in the article.[40]

That it appears India likewise perceived the concept of 'the province of all mankind' to have geographic implications is supported by earlier statements. At the Legal Subcommittee's opening meeting for 1966, Rao directed members to Andrew Haley's 1963 book *Space Law and Government*.[41] Quoting Haley almost verbatim, Rao urged fellow delegates that 'the limits of territorial jurisdiction should be defined and that beyond them the rule of *res communis* must prevail in cosmic space'.[42]

As introduced in Chapter 2, within international law the accepted meaning of *res communis* is 'that certain areas or resources are vested in the international community as a whole and are not subject to appropriation by any state'.[43] Accordingly, as a thing held in common this inability to acquire does not apply to humankind itself, as is similarly the case with humankind's title over territory not amounting to 'national appropriation' under

40 Ibid 9-10 (Mr Krishna Rao).

41 Quoting Andrew Haley, *Space Law and Government* (Meredith Publishing Company, 1963) 118; 'the interests of humanity demand that limits of terrestrial jurisdiction be defined, and that beyond this point the rule of *res communis* must prevail in cosmic space.'

42 Legal Subcommittee - Committee on the Peaceful Uses of Outer Space, *Summary Record of the Fifty-Seventh Meeting*, UN GAOR, 5th see, 57th mtg, UN Doc A/AC.105/C.2/SR.57 (20 October 1966, adopted 12 July 1966) 19 (Mr Krishna Rao); 'the interests of humanity demand that limits of terrestrial jurisdiction be defined, and that beyond this point the rule of *res communis* must prevail in cosmic space.'

43 John P Grant and J Craig Barker (eds), *Parry & Grant Encyclopaedic Dictionary of International Law* (Oxford University Press, 2009) 520.

the OST's Article II.[44] Within the Legal Subcommittee comments highly supportive of a *res communis* regime were voiced by the Hungarian delegate, who observed:

> The **second paragraph** of article I of the Soviet draft comprised a provision which expressed the *res omnium communis* character of outer space.[45]

Of particular significance is that this description of the Soviet's draft article I came from the Hungarian delegate, one of the six States in the subcommittee from the Soviet-aligned Eastern-bloc. This potentially provides insight into the Soviet Union's own views on the *res communis* nature of its proposed article I. Furthermore Hungary's statement regarding the second paragraph[46] should inform how the first paragraph of this same draft article, where 'the province of all mankind' appears, is understood.[47] This is especially the case when comparing the Article I ultimately adopted in the OST with the second paragraph of the Soviet draft's article I preserved virtually in its entirety.[48]

As observed by Hobe, apart from the limited discussion above, delegates of the Legal Subcommittee in negotiating 'the Outer Space Treaty did not, however, particularly comment on this principle of the common province of all mankind'.[49] Apart from the

44 See: Chapter 1.

45 Legal Subcommittee - Committee on the Peaceful Uses of Outer Space, *Summary Record of the Sixty-Fourth Meeting*, UN GAOR, 5th sess, 64th mtg, UN Doc A/AC.105/C.2/SR.64 (24 October 1966, adopted 21 July 1966) 3 (Mr Partli) [emphasis added]; The addition of the word *omnium* to *res communis* simply altering the translation to 'things of the (entire) community'; Aaron X Fellmeth and Maurice Horwitz, *Guide to Latin in International Law* (Oxford University Press, 2009) 250.

46 This second paragraph of the Soviet's draft article I reads: '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 there shall be free access to all regions of celestial bodies.' Union of Soviet Socialist Republics, *Draft Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, The Moon and Other Celestial Bodies – Letter Dated 16 June 1966 From the Permanent Representative of the Union of Soviet Socialist Republics to the United Nations Addressed to the Secretary-General*, UN GAOR, 21st sess, UN Doc A/6352 (16 June 1966) 2.

47 The first paragraph of the Soviet's draft article I states: '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. The Parties to the Treaty undertake to accord equal conditions to States engaged in the exploration of outer space.' Ibid.

48 The second paragraph of the concluded Article I of the OST holds, '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 there shall be free access to all areas of celestial bodies.' *Outer Space Treaty*.

49 Hobe, 'Article I, above n 14, 30; It should be noted Hobe also mentions here that '[i]n the discussions of the Committee, the Nigerian Delegate explained that the term "province of all mankind" expressed the *res omnium communis* character of outer space and celestial bodies.'[49] This statement is not however correct and may be the result of a typographical error. As described it was the Hungarian delegate who made these remarks which were instead in relation to the second paragraph of the Soviet draft's proposed Article I (although as argued above still of relevance in interpreting the

earlier statement of the Indian delegate supporting Haley's scholarly conclusion as to a regime of *res communis* prevailing in outer space, other members of the Legal Subcommittee neither dismissed nor reiterated outer space's purported *res communis* nature. The total absence of any rejection by other delegations of this clearly expressed position by both the Hungarian representative (reflecting possibly a broader Eastern-bloc view) and the Indian representative also indicates a degree of acquiescence in the Legal Subcommittee to the *res communis* character of outer space. This is particularly so when considering the subsequent statement of the Chairman of COPUOS before the General Assembly's First Committee, as discussed later in this chapter, which unequivocally recognises the *res communis* nature of outer space.

It became clear to delegates during the initial Geneva meetings of the Legal Subcommittee that while consensus existed on the main principles to be included in the first article of the OST, the final wording of article I would require further negotiation. The Legal Subcommittee reconstituted itself as a Working Group to examine from 27 July to 3 August the many proposed articles from both the Soviet and US drafts. As a Working Group it was able to achieve consensus and formally deliver nine agreed articles. Significantly, Article I with its inclusion of 'the province of all mankind', was among these finalised articles. Importantly, the province provision found final agreement within this closed-door Working Group. As Aust observes, the 'most important parts of negotiations, and of drafting, often take place informally with no agreed record being kept',[50] presenting difficulties for later examination of a treaty's *travaux*. Unable to achieve any further agreement though, the Legal Subcommittee suspended itself on 4 August to reconvene for a further two days in September in New York where again no consensus on additional articles could be reached.

B *Negotiation Within COPUOS*

COPUOS then convened for its single day Eighth Session in New York on 19 September 1966. Here the US explained that in negotiating the remaining articles it was striving 'to

phrase 'the province of all mankind'). Furthermore within both the 24 member Legal Subcommittee and also COPUOS itself there was no delegation from Nigeria.

50 Aust, above n 9, 218.

be consistent with the provisions already agreed upon which declared outer space to be the province of all mankind and provided for international co-operation'. [51] This observation reveals the influential role of the agreed province provision upon the negotiation of the wider Treaty and signposts its importance throughout the OST as a whole. As the Soviet delegate to COPUOS declared of his nation's draft treaty (which had significantly shaped the nine articles already agreed), its 'most important factor' was 'that it is based on the fact that mankind as a whole is interested in progressing towards the peaceful exploration and use of outer space'.[52] Possibly the most notable statement to emerge from COPUOS was France's perceptive observation that the treaty articles agreed in 1966 would require further interpretational work 'to define far-sightedly and realistically certain terms and concepts'.[53]

C *Negotiation Within The First Committee*

With no further progress achieved within COPUOS, the two space powers engaged in direct negotiations, which lasted until 8 December when final agreement was achieved on the text. Part of the compromise between the US and the Soviet Union included insertion of the OST's withdrawal clause requiring only one year's notice for a party to exit from the treaty regime.[54] The final stage of the OST's passage through the United Nations was largely formal with a draft resolution sponsored by 43 members adopted without objection on 17 December by the First Committee.[55] As the US delegate observed before this committee of the General Assembly responsible for disarmament and international security matters:

> The aim of the negotiators of this treaty was not to provide in detail for all contingencies that might arise in the exploration and use of outer space – many of

51 Committee on the Peaceful Uses of Outer Space, *Verbatim Record of the Forty-Fourth Meeting*, UN GAOR, 8th sess, 44th mtg, UN Doc A/AC.105/PV.44 (25 October 1966, adopted 19 September 1966) 21 (Mr Goldberg).

52 Ibid 34-35 (Mr Fedorenko).

53 Ibid 39-40 (Mr Seydoux).

54 Cheng, above n 16, 225.

55 *Official Records of the Fourteen Hundred and Ninety-Third Meeting*, UN GAOR, 1st Comm, 21st sess, 1493rd mtg, UN Doc A/C.1/SR.1493 (17 December 1966) 445.

> which are unforeseeable – but rather to establish a set of basic principles. The treaty's provisions are purposely broad[.][56]

US delegate Goldberg went on to outline the 'basic ground rules' the OST laid down, explaining:

> The keynote is stuck in the very first operative words of the treaty, in article 1: 'the exploration and use of outer space … shall be the province of all mankind.'[57]

The French delegation, again demonstrating its foresight into humanity's future development in outer space, commented that:

> while the principles established by the treaty would no doubt be easy to apply in the case of the exploration of space, their application would be more difficult when space activities involved exploitation[.][58]

The capacity for the OST to evolve and accommodate such a future was potentially recognised by the representative of Cyprus when concluding:

> The spirit that emanates from the provision of the treaty goes even beyond international law and the principles of the Charter, for whereas both international law and the Charter aim at harmonizing the relations of different nations with due regard to their separate and different sovereignties and territorial dominions, the treaty in question takes humanity as a single undivided entity. The exploration and use of outer space not only would be orderly under binding legal obligations, but also would be for the benefit of mankind as a single and undivided entity.[59]

The direction of this evolution was presciently identified by the Kenyan delegate in the First Committee in stating:

> space exploration has also brought about a recognition that space should belong to all and therefore that its full mustering requires the joint effort of all.[60]

This shared ownership of outer space was also alluded to by the representative of Mexico who held that embedded within the OST's articles was 'recognition that outer space and

56 *Verbatim Record of the Fourteen Hundred and Ninety-Second Meeting*, UN GAOR, 1st Comm, 21st sess, 1492nd mtg, UN Doc A/C.1/PV.1492 (27 January 1967, adopted 17 December 1966) 11 (Mr Goldberg).
57 Ibid 16.
58 Ibid 36 (Mr Seydoux).
59 *Verbatim Record of the Fourteen Hundred and Ninety-Third Meeting*, UN GAOR, 1st Comm, 21st sess, 1493rd mtg, UN Doc A/C.1/PV.1493 (2 February 1967, adopted 17 December 1966) 97-100 (Mr Rossides).
60 Ibid 68 (Mr Odhiambo).

celestial bodies belong to all of mankind'.[61] The delegate from the Philippines similarly identified the 'international character of the domain of outer space, which article II of the treaty clearly and explicitly guarantees' and that 'by internationalizing outer space we remove it as a subject of contention'.[62]

One statement, though, that critics of the proposed territorial conception of the province provision will inevitably point to comes from none other than Manfred Lachs, who remarked to the First Committee:

> The exploration and use of outer space is carried out for the benefit and in the interest of all countries, irrespective of the degree of their economic and scientific development; and it shall be the province of mankind. That means that freedom of action of States limited by general international law, is subjected to a further consideration. It is not only that the right of States must not be abused or misused but also that the equal rights of all others have to be respected. The great achievements of science should serve mankind as a whole and those who for one reason or another are unable to explore or use outer space should not be deprived of the benefits. Access to outer space is being opened to man. Thus **all those methods known and practised in what an international court once described as the 'era of adventure and <u>exploitation</u>' are barred.**[63]

These words could be construed as indicating Lachs would perceive bifurcated sovereignty and the territorial conception from which it arises as not permissible under Article I. Yet this same statement of Lachs', with its '[a]ccess to outer space is being opened to man', equally could be seen as supportive of an evolutionary interpretation towards an individual right of free movement. Critics, though, will likely refer to 'methods known and practiced in what an international court once described as "the era of adventure and exploitation" are barred'[64] to suggest that the divisibility of sovereignty (widely practised during European colonial settlement from the 17th to 19th centuries) is specifically

61 Ibid 52 (Mr Garcia Robles).
62 Ibid 106-7 (Mr Lopez).
63 *Verbatim Record of the Fourteen Hundred and Ninety-First Meeting*, UN GAOR, 1st Comm, 21st sess, 1491st mtg, UN Doc A/C.1/PV.1491 (26 January 1967, adopted 17 December 1966) 12 (Mr Lachs) [Emphasis added].
64 Ibid.

precluded. Lachs, though, misquotes[65] the Permanent Court of International Justice here in its *Eastern Greenland* decision, as the Court was in fact not critical of this era, finding:

> That period was an era of adventure **and exploration [not exploitation]**. The example set by the navigators of foreign countries was inspiring.[66]

Ultimately, however, the equal access to outer space that Lachs obviously values will at some point require administration over territory when ordinary people settle in fixed locations. To base administrative jurisdiction over large settled populations on any other principle would simply prove unworkable.[67] Lachs does furthermore recognise that '[s]ome of the principles laid down' in the Treaty 'will require further clarification.'[68] He is, though, correct in that pioneer settlement has historically involved exploitative elements. However, with no indigenous peoples to displace in outer space and the territorial conception opening this frontier to all regardless of whichever entity is exercising jurisdiction and control, there is every reason future migration beyond Earth will be an 'era of adventure and exploration', rather than one of exploitation.

65 Lachs also makes this same misquote in published academic work from 1964, where he clearly identifies this judicial statement as from the Permanent Court of International Justice's *Eastern Greenland* decision. See: Manfred Lachs, 'The International Law of Outer Space' (1964) 113 *Collected Courses of the Hague Academy of International Law* 1, 68; 'if one recalls the operations conducted by colonial companies at a period which was so rightly defined as "an era of adventure and exploitation" – *The Legal Status of Eastern Greenland*, *P.C.I.J. Judgment* (1933), *A/B 53*, p. 47'; Lachs appears to have taken this misquote directly from the earlier work of Georg Schwarzenberger who also cites the *Eastern Greenland* decision – Georg Schwarzenberger, *International Law: Volume 1 – International Law As Applied By International Courts And Tribunals* (Stevens & Sons, 2nd ed, 1949) 37.

66 *Legal Status of Eastern Greenland (Denmark v Norway) (Judgment)* PCIJ (ser A/B) No 53, [105] [emphasis added].

67 Undertaking effective administration of a civilian population residing in a space community under the alternatives of personal or quasi-territorial jurisdiction would be completely impractical. In the case of personal jurisdiction this would see each resident of a space settlement carry the different laws of their nationality (or possibly launching state) around with them as they move about the settlement and interact with other residents who different national laws may apply to. In the case of quasi-territorial jurisdiction this would involve the jurisdiction and control over residents changing as they moved between different areas of a single space settlement, akin to if different laws applied as one moved between skyscrapers in a single city. Although a form of quasi-territorial jurisdiction applies on the International Space Station (ISS) as astronauts move between different modules of the ISS, this would prove unfeasible for a much larger civilian population. For a detailed description of these three different types of administrative jurisdiction (personal, quasi-territorial and territorial) see: Cheng, above n 16, 72-9.

68 *Verbatim Record of the Fourteen Hundred and Ninety-First Meeting*, UN GAOR, 1st Comm, 21st sess, 1491st mtg, UN Doc A/C.1/PV.1491 (26 January 1967, adopted 17 December 1966) 13-5 (Mr Lachs).

Also delivered before the First Committee are the words of Kurt Waldheim, Chairman of COPUOS and a future UN Secretary-General, [69] which stand as the most compelling evidence within the preparatory work for the *res communis* nature of outer space and its vesting 'in the international community as a whole'.[70] The COPUOS Chairman found:

> Outer space and celestial bodies have thus become *res communes omnium*. This means that the territorial sovereignty of States does not extend into outer space; in other words, outer space is not subject to a legal régime like that of the territorial sea or airspace. Exemption from territorial sovereignty would not by itself, however, make outer space and celestial bodies *res communes omnium*. They would rather become *res nullius*, free to be appropriated by any State in accordance with international law. To exclude this contingency, it is clearly stated 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. *Res communes omnium* cannot, however, exist in a legal vacuum. The principle that outer space and celestial bodies are free for exploration and use by all States therefore had to be linked to a definite legal order. The treaty consequently provides that international law, including the Charter of the United Nations applies to outer space and celestial bodies.[71]

Mr Waldheim went on to declare that to 'create, as is proposed, a vast theoretically unlimited zone of activity reserved exclusively for scientific research and for the benefit of all mankind is indeed a step that deserves the support of all peace-loving nations'.[72] Such a geographic area for humankind was also clearly expressed by the Eastern-bloc delegate from Bulgaria, stating 'outer space should be considered and respected as the province of all mankind'.[73] With him then declaring '[t]he very concept of the whole instrument is that outer space should be the domain of all States, of all people.'[74]

69 Later UN Secretary-General 1972-1981.

70 Fellmeth and Horwitz, above n 45.

71 *Verbatim Record of the Fourteen Hundred and Ninety-Second Meeting*, UN GAOR, 1st Comm, 21st sess, 1492nd mtg, UN Doc A/C.1/PV.1492 (27 January 1967, adopted 17 December 1966) 46 (Mr Waldheim).

72 Ibid 51 (Mr Waldheim) ; This allusion to outer space as a 'zone' by the COPUOS Chairman, with its ordinary meaning of '[a] definite region or area of the earth, or of any place or space, distinguished from adjacent regions by some special quality or condition', further indicates a territorial and geographic dimension inherent in 'the province of all mankind'; Oxford University Press, *'Zone'* (March 2016) Oxford English Dictionary <www.oed.com>.

73 *Verbatim Record of the Fourteen Hundred and Ninety-First Meeting*, UN GAOR, 1st Comm, 21st sess, 1491st mtg, UN Doc A/C.1/PV.1491 (26 January 1967, adopted 17 December 1966) 83 (Mr Yankov).

74 Ibid 84-5.

D *Negotiation Within The General Assembly*

The OST reached the General Assembly on 17 December 1966. The Assembly proceeded to commend the Treaty and express 'its hope for the widest possible adherence' through its unanimous adoption of Resolution 2222 to which it was attached.[75] Aware that the exact status of outer space was, though, not definitively resolved by the OST as agreed, this resolution asks COPUOS to continue 'the study of questions relative to the definition of outer space and the utilization of outer space and celestial bodies'.[76] The Tanzanian representative, while expressing concern about 'some inconsistencies, unexplained loop-holes, and missing links'[77] within the Treaty, observantly remarked:

> There is a hint of a global legislative authority in certain articles [of] the draft treaty, notably article 1, 2 and 12.[78]

A territorial and spatial dimension to Article I was again clearly indicated, this time by Italian Ambassador Piero Vinci, who recognised before the Assembly that the conclusion of the OST demonstrated that the two superpowers:

> aim only at scientific and technological conquests in the new continents of outer space, which become not the provinces of single Powers, but the province of mankind as a whole.[79]

While noting that the two then sole space powers were 'not searching for new territorial conquests or for expansion of their sovereign rights',[80] he goes on to eloquently sum up what is in fact the intended effect of the territorial conception with its full resultant consequences:

> this Treaty has one exploitation only as its aim, that of giving to mankind all the possible benefits that can derive from the opening of a new immense frontier.[81]

75 *Resolution Adopted by the General Assembly – Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies*, GA Res 2222 (XXI), UN GAOR, 21st sess, 1499th plen mtg, UN Doc A/RES/21/2222 19 December 1966) [3].

76 Ibid para [4(b)].

77 *Provisional Verbatim Record of the Fourteen Hundred and Ninety-Ninth Plenary* Meeting, UN GAOR, 21st sess, 1499 plen mtg, UN Doc A/PV.1499 (19 December 1966) 67 (Mr Malecela).

78 Ibid 66.

79 Ibid 58 (Mr Vinci); See full quote here of Ambassador Piero Vinci, Permanent Representative of Italy to the United Nations, at the epigraph at the beginning of this thesis.

80 Ibid.

81 Ibid.

Indeed this summation of the OST by Ambassador Vinci also encapsulates the ultimate aim of the proposed territorial conception of 'the province of all mankind' that this thesis proposes.

This close analysis of the *travaux préparatoires* finds quite remarkably that no concrete definition for 'the province of all mankind' was offered by any representative throughout the OST's four institutional levels of negotiation through the UN.[82] Despite the scant discussion of the province provision during this Treaty's negotiation, there is, though, a body of statements that can be seen as supportive of the territorial conception and the *res communis* nature of outer space. This recognition of *res communis* in particular is significant, as the entire territorial interpretation of 'the province of all mankind' is built upon this notion where the geographic area explored and utilised by humankind constitutes an object owned by the entire human race. Support for this comes not only from the Chairman of COPUOS himself, but is also expressed by a member of the Soviet-aligned Eastern-bloc countries. This potentially reveals the Soviet Union's internal thinking on the language of 'province', which it both drafted and insisted remain in the final text. The Russian language adopted for the province provision, which as will be shown in Chapter 5 refers to 'the property of all mankind', further provides credibility to this view. As is often the case when examining the preparatory works of any treaty, there is no silver bullet that incontrovertibly holds the territorial conception as the single legitimate interpretation, or evidence that dismisses outright this potential meaning. What this focused analysis of the *travaux* does reveal, however, is scope for the province provision to evolve in this direction. As these original declarations of outer space's *res communis* nature by a number of the Treaty's drafters provide a solid foundation from which the territorial conception can develop.

[82] As described above the OST was negotiated through the United Nations institutions of the Legal Subcommittee, COPUOS itself, the First Committee and finally the General Assembly.

V THE PROVINCE PROVISION IN ITS EQUALLY AUTHENTIC LANGUAGES

The *Outer Space Treaty* (OST)[1] provides at Article XVII that its 'English, Russian, French, Spanish and Chinese texts are equally authentic'. It is the customary practice of international tribunals to give equal consideration and authority to each authentic text where ambiguity exists,[2] with this now codified in the *Vienna Convention on the Law of Treaties* (VCLT).[3] As Mala Tabory explains, 'since words lack the precision of a mathematical formula and the nuances of each language are inherently different, reference to more than one version will ensure the accuracy of interpretation.'[4] The comparison of authentic texts has however been described as 'a rule of last resort: where [if] a difference of meaning remain[s] after applying all the other Vienna rules'[5] then Article 33(4) of the VCLT should be followed where 'the meaning which best reconciles the texts, having regard to the object and purpose of the treaty, shall be adopted.' Given that the ordinary meaning of the English term 'province of all mankind' is not apparent, nor does recourse to the OST's preparatory works definitively settle the matter, an examination of the potential territorial interpretation requires consideration of this provision in its other equally authentic languages.

1 *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies*, opened for signature 27 January 1967, 610 UNTS 205 (entered into force 10 October 1967) ('*Outer Space Treaty*').

2 For example in the *Case concerning Military and Paramilitary Activities in and against Nicaragua (Nicaragua v United States of America*) (*Jurisdiction*) [1984] ICJ Rep 392, 406 where the International Court of Justice examined all five equally authentic texts of its Statute (in the same five languages as the OST) in determining its jurisdiction in this case; International tribunals have also undertaken such examination of equally authentic treaty texts before the application of Article 33 of the VCLT, evidencing a pre-existing customary norm of international law applicable to the OST, for example: *Mavrommatis Palestine Concessions (Greece v Great Britain (Jurisdiction)* [1924] PCIJ (ser A) No 2, 19; *Flegenheimer Case (Italy v United States)* (1958) 14 Rep Int'l Arb Awards 327; *Stauder v City of Ulm* (C-29/69) [1969] ECR 419, 424; *Regina v Bouchereau* (C-30/77) [1977] ECR 1999; See also: Dinah Shelton, 'Reconcilable Differences? The Interpretation of Multilingual Treaties' (1997) 20 *Hastings International and Comparative Law Review* 611, 628-32; Lord McNair, *The Law of Treaties* (Clarendon Press, rev ed, 1986) 432-5.

3 *Vienna Convention on the Law of Treaties*, opened for signature 23 May 1969, 1155 UNTS 331 (entered into force 27 January 1980) art 33(4).

4 Mala Tabory, *Multilingualism in International Law and Institutions* (Sijthoof & Noordhoff, 1980) 199.

5 Richard Gardiner, 'The Vienna Convention Rules on Treaty Interpretation' in Duncan B Hollis (ed), *The Oxford Guide to Treaties* (Oxford University Press, 2012) 475, 490.

Analysis of the wording of this provision in the OST's non-English languages has only previously been undertaken by two scholars, Vladimir Kopal[6] and Boris Maiorsky[7], with Aldo Armando Cocca also scrutinising the provision in his native Spanish. No complete English translations of Article I have yet been published in this scholarly discourse, something which this thesis addresses. By obtaining professional translations[8] of Article I from the University of Queensland's Institute of Modern Languages (IML)[9] (see: Appendix A)[10] and consulting a series of translation dictionaries, a holistic assessment of the province provision in all its original texts is presented here.

A *Russian Text*

Given it was the Soviet Union that initially proposed the province provision in its original draft treaty,[11] the meaning of 'the province of all mankind' in the Russian text of the OST is particularly pertinent. As Maiorsky explains, the Russian text confirms that 'the province of all mankind' refers to '[t]he exploration and use of outer space' which appears at the opening of this article. A grammatical analysis reveals that 'the verb "yavlyayusta" [являются] (shall be) which is in the plural unquestionably links the word "province" to the words "exploration and use".'[12] In translating the text, Kopal finds the Russian province provision 'phrase "dostoyanie vsego chelovechestva" [достоянием всего человечества]' means 'indivisible property/or wealth/of all mankind.'[13] Maiorsky offers no similar direct translation in his native Russian,

6 Vladimir Kopal, 'Outer Space as a Global Common' in *Proceedings of the 40th Colloquium on the Law of Outer Space* (AIAA, 1997) 108.

7 Boris Maiorsky, 'A Few Reflections on the Meaning and the Interpretation of "Province of all Mankind" and "Common Heritage of Mankind" Notions' in *Proceedings of the 29th Colloquium on the Law of Outer Space* (AIAA, 1986) 58.

8 All translations were undertaken by translators engaged by the Institute of Modern Languages at the University of Queensland, with all fully accredited by the National Accreditation Authority for Translators and Interpreters (NAATI) which is Australia's accreditation authority for foreign language translators. See: *Homepage*, National Accreditation Authority for Translators and Interpreters < www.naati.com.au>.

9 *NAATI Translation Services*, Institute of Modern Languages – University of Queensland <http://iml.uq.edu.au/translation.html>.

10 See: Appendices 1 to 4.

11 Union of Soviet Socialist Republics, *Draft Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, The Moon and Other Celestial Bodies – Letter Dated 16 June 1966 From the Permanent Representative of the Union of Soviet Socialist Republics to the United Nations Addressed to the Secretary-General*, UN GAOR, 21st sess, UN Doc A/6352 (16 June 1966).

12 Maiorsky, above n 7, 58.

13 Kopal, above n 6, 110.

although he does note the equivalent word for 'province' '(dostoyanie [достоянием])' is commonly used in Russian, although 'not in the way it is done in the Treaty.'[14]

Due to the historical importance of the Russian text as the original language in which the province provision was proposed, four Russian translations of Article I were obtained from four different translators at the IML.[15] Of these, three translated the province provision as 'the exploration and use of outer space[16] "are the property of all"[17] mankind';[18] while a single translation found '[t]he exploration and exploitation of cosmic space … are the heritage of all humankind.'[19] As one of the translators remarks in her notes, the primary translation of the equivalent word for English's 'province', достоянием (dostoyanie), 'would be property or belonging, but heritage is possible'.[20] This translation of province's corresponding word in the Russian text to 'property' by both Kopal and three of the IML translators is further supported by the direct translation provided in numerous Russian-English dictionaries which also hold достоянием to mean 'property'.[21] That the province provision in its equally authentic Russian text states the exploration and use of outer space shall be 'the property of all mankind' is strongly supportive of the territorial conception as a legitimate evolutionary interpretation of Article I. For 'property', as translated, patently relates primarily to an object such as territory rather than 'a sphere of action or interest'.[22]

14 Maiorsky, above n 7, 59.

15 Appendices 1.1-1.4.

16 There was some divergence in the direct translation of the opening words of Article I, with Appendix 1.1 finding this to be '[t]he exploration and use of outer space'; Appendix 1.2 '[t]he investigation and utilisation of outer space'; and Appendix 1.3 '[r]esearch and use of space'.

17 Appendices 1.1,1.2 and 1.13 all directly translated the Russian words 'достоянием всего' as 'property of all'.

18 Appendix 1.1 and 1.3 translated the Russian word 'человечества' as 'mankind'; while Appendix 1.2 as 'humanity'.

19 Appendix 1.4.

20 Appendix 1.2; This translator goes on to explain in relation to the meaning of достоянием (dostoyanie)' as 'property or belongings', that '[w]hen pertaining to national or public property, it is an interdisciplinary legal category indicating the general social significance of objects (be they tangible or intangible), regardless of anyone holding a right of ownership to them. The recognition of some property, e.g. land, mineral assets or cultural values, etc., by society (either national or international), which gives rise to certain legal consequences, primarily allowing a certain group of individuals the right to make use of its privileges without limitations in a predetermined legal way. Additionally, if there is an owner, it recognises the owner's obligation to safeguard the property for future generations.' A Y Sukharev, V E Krutskikh and A Y Sukhareva, *The Great Legal Dictionary* (Infra-M, 2003) [Большой юридический словарь] <http://dic.academic.ru/dic.nsf/lower/14622>.

21 Marcus Wheeler, Boris Unbegaun and Paul Falla (eds), *The Oxford Russian Dictionary* (Oxford University Press, 3rd ed, 2000) 108; Howard H Keller, *Random House Russian-English English-Russian Dictionary* (Random House, 1999) 51; W F Ryan and Peter Norman, *The Penguin Russian Dictionary* (Penguin Group, 1996) 661.

22 Oxford University Press, *'Province'* (March 2016) Oxford English Dictionary <www.oed.com>.

Ultimately the province provision in its Russian text can be readily interpreted as investing territorial title in humankind.

B *French Text*

The language of 'elles sont l'apanage de l'humanité tout entière' is adopted by the province provision in its French text at Article I.[23] As Maiorsky notes, 'the grammatical analysis of the text in French 'makes clear that "the province" being referred to involves the exploration and use of space',[24] which the IML translation confirms.[25] Maiorsky holds the French noun 'apanage' as equivalent to the English text's 'province', although he finds it 'an archaic term with some metaphorical hint'.[26] Kopal translates the entire phrase as meaning 'in the figurative sense "appurtence" or "privilege" of all mankind.'[27] This corresponds well to the IML's translation where it is held as 'the prerogative of humanity as a whole.'[28] Indeed Kopal and the IML are far closer to French dictionary translations than Maiorsky, which provide 'prerogative' and 'privilege' as the direct translation for 'apanage'.[29] In fact, the French translation of the English word 'province' in the sense of 'sphere of action or interest'[30] is the French 'domain'[31]. Yet the Treaty in its French text's use of 'apange' rather than 'domain' sees the exploration and use of outer space referred to as the prerogative and privilege of all humankind. This could be viewed as a deliberate choice to focus on the special rights (as pertain to both 'prerogative'[32] and 'privilege' in English[33]) conferred on humankind when undertaking

23 Appendix 2.A.
24 Maiorsky, above n 7, 58.
25 Appendix 2.1.
26 Maiorsky, above n 7, 59.
27 Kopal, above n 6, 110.
28 Appendix 2.1.
29 *Harrop's Unabridged Dictionary* (Chambers Harrop Publishers, 2001) vol 2, 55; *Le Robert & Collins Grand Super Senior Grand Dictionnaire* (HarperCollins, 2000) vol 1, 44; Faye Carney (ed), *French-English English-French Dictionary* (Larousse, 1993) 42; Marie-Hélène Corréard and Valerie Grundy (eds), *The Oxford-Hachette French Dictionary: French-English, English-French* (Oxford University Press, 4th ed, 2007) 40.
30 Oxford University Press, *'Province'* (March 2014) Oxford English Dictionary <www.oed.com>.
31 Corréard and Grundy (eds), *The Oxford-Hachette French Dictionary: French-English, English-French*, above n 29, 1579; Carney (ed), *French-English English-French Dictionary*, above n 29, 674; *Le Robert & Collins Grand Super Senior Grand Dictionnaire* vol 2, above n 29, 753; *Harrop's Unabridged Dictionary* vol 1, above n 29, 935.
32 Oxford University Press, *'Prerogative, n'* (March 2016) Oxford English Dictionary <www.oed.com>; 'A distinctive attribute or ability which gives its possessor a superiority or advantage over others, an inherent advantage or privilege ... A prior, exclusive, or peculiar right or privilege ... A special right or privilege possessed by a particular person, group, class or institution.'
33 Oxford University Press, *'Privilege, n'* (March 2016) Oxford English Dictionary <www.oed.com>; 'A right, advantage, or immunity granted to or enjoyed by an individual, corporation of individuals, etc., beyond the usual rights or advantages of others; … A grant to an individual,

these activities. With the long connection of exploration and utilisation to territorial acquisition under international law, the choice of 'apanage' in the French text could well be interpreted as pointing to such a unique right of appropriation. Given that this right or privilege would indeed be special, as it is unavailable to all other subjects of international law,[34] the French text can indeed be interpreted in a manner consistent with the territorial conception.

C *Spanish Text*

Cocca remarks that the province provision in its 'Spanish expression' may be the most authentic text among the OST's five official languages as it 'is maybe the more precise in the legal sense because it means: it belongs to Mankind and it is not transferable'.[35] However, in the opinion of Maiorsky:

> in the Spanish version of the Treaty the notion of 'province of all mankind' is absent altogether, since the equivalent word 'province' or another noun equivalent to it is not used. In the Spanish text the noun … is replaced by a verb – 'incumbir', which means 'to be within someone's responsibility'.[36]

Kopal, analysing the Spanish text a decade later, does not similarly find the unique use of a verb problematic, instead holding that '[a] similar idea is spelled out in the Spanish text' to the French reference to the privilege of all humankind.[37] The Spanish verb 'incumbir'[38] translates '[t]o incumb, to be pertinent, to be of concern'[39], '[t]o be incumbent upon'[40] and 'to be the duty of'.[41] These dictionary translations also

corporation, community, etc., of a legal (or esp.) commercial right, esp. to the exclusion or prejudice of the rights of others'.

34 *Outer Space Treaty* art II.

35 Aldo Armando Cocca, 'The Common Heritage of Mankind: Doctrine and Principle of Space Law an Overview' in *Proceedings of the 89th Colloquium on the Law of Outer Space* (AIAA, 1986) 17, 18.

36 Maiorsky, above n 7, 59; He continues in his examination of the Spanish translation to find '[t]he whole phrase in Spanish ("La exploración y utilización del espacio ultraterrestre … incumben a toda la humanidad"), translated literally, would mean "The exploration and use of outer space … lies within the responsibility of all mankind"'; See: Appendix 3.A.

37 Kopal, above n 6, 110.

38 Conjugated in the Spanish text of Article I as 'e incumben a toda la humanidad.'

39 Henry Saint Dahl, *Dahl's Law Dictionary: Spanish-English, English*-Spanish (William S Hein & Co, 6th ed, 2015) 272; Henry Saint Dahl, *McGraw-Hill Spanish and Legal Dictionary* (McGraw Hill, 2004) 149.

40 Beatriz Galimberti Jarman and Roy Russell (eds), *The Oxford Spanish Dictionary* (Oxford University Press, 2nd revised ed, 2001) 404; Colin Smith, *Collins Spanish-English English-Spanish Dictionary: Unabridged* (HarperCollins, 5th ed, 1997) 394.

41 *Harrop's Spanish and English Dictionary* (Chambers Harrop Publishers, revised ed, 2005) 290; Steve M Kaplan, *English/Spanish and Spanish/English Legal Dictionary* (Kluwer Law International, 2013) 966; Interestingly the Larousse Spanish dictionary also offers a specific legal translation for 'incumbir' of '[t]o be within the jurisdiction', this resonating with

correspond well to the IML's Spanish translation of the province provision as '[t]he exploration and use of outer space … are the concern of all human kind.'[42] While Cocca's claim that the Spanish provision is the most supportive of humanity's ownership of space does not quite ring true, given that it holds exploration and use are the duty of all humankind, with the attendant connection of both these activities to territorial appropriation,[43] there is certainly no incompatibility with the territorial conception.

D *Chinese Text*

The Chinese text of Article I is unique in that it has received no previous attention in English space law literature, with Maiorsky and Kopal excluding it from their respective examinations.[44] Accordingly, three Chinese translations from different translators were obtained from the IML. The province provision in its equally authoritative Chinese states '并应为全人类的开发范□ ',[45] with this being translated by the IML translators as, '[e]xploring and using outer space …'[46] – 1) 'should be the development range of the human race';[47] 2) 'should also be of the range of development of all human kind';[48] and 3) 'should be considered a matter belonging to all mankind'.[49] The 'development range', 'range of development' and 'matter belonging' to humankind referred to here is 开发 ('kāi fā'), which translates to 'develop'[50] or 'exploit'.[51] That this can have a connection with territory is clear from another dictionary translation, 'kāi fā v[erb] develop (land, resources, products, etc).'[52] This becomes further apparent

humankind's legal sovereignty under the territorial conception; See: Ramón García-Pelayo y Gross, *Larousse Diccionario Moderno Español-Inglés* (Ediciones Larousse, 1983) 230.

42 Appendix 3.1.

43 See: Part D of Chapter 2.

44 Ricky J Lee has though made a worthy contribution to international space law literature by examining the Chinese text of the OST in relation to Articles II, VI and VII as well as Article 11(3) of the *Moon Agreement*; Ricky J Lee, *Law and Regulation of Commercial Mining of Minerals in Outer Space* (Springer, 2012) 129, 167, 181.

45 Appendix 4.A.

46 Appendix 4.1; There was some divergence in the Chinese translation of these opening words of Article I, with Appendix 4.2 translating these as '[r]esearch and utilization of the outer space' and Appendix 4.3 translating them as '[e]xploring and using the outer space'.

47 Appendix 4.1.

48 Appendix 4.2.

49 Appendix 4.3.

50 Julie Kleeman and Harry Yu (eds) *The Oxford Chinese Dictionary* (Oxford University Press, 2010) 402; Oxford University Press, '*开发*' (2016) <http://www.oxforddictionaries.com/translate/chinese-english/%E5%BC%80%E5%8F%91>.

51 Marianne Dickson et al (eds), *Collins Chinese Dictionary* (HarperCollins, 3rd ed, 2011) 217.

52 Li Dong, *Tuttle Concise Chinese Dictionary* (Tuttle Publishing, 2nd revised ed, 2011) 694.

when looking at the Chinese translation for 'develop' in respect to kāi fā with this pertaining to '(convert, improve) 开发 (land, site)',[53] while the English 'development' also translates to '(creation, invention) 开发 kāi fā'.[54] It is apparent from these translations that this 'development range',[55] 'range of development'[56] and 'matter belonging'[57] could all be legitimately interpreted as involving developing outer space in a geographic sense, encompassing the creation of resource improvement and territorial enlargement for all humankind of its 'land' or province in outer space.

In all five languages, the province provision consistently relates to the combined entity of all humans known as humankind, mankind, the human race or humanity[58] which, as argued in Chapter 2, has emerging legal personality. It is also evident that all five official texts can be interpreted in a manner consistent with the territorial conception proposed, enabling the province provision to achieve '[t]he presumption of the unity of the treaty' which 'requires that a common meaning be found for all the language versions'.[59] Such unity certainly does not currently exist, given there is not yet a single accepted meaning of the province provision in English, let alone one shared with its four counterpart languages. However, as demonstrated by the analysis above, the 'meaning which best reconciles the texts' is in fact a territorial interpretation. As this enables the original Russian terminology of 'the property of all mankind'[60] to be fully reconciled with the primary territorial meaning of 'province' in English, as well as with the Spanish verb 'incumbir' if the traditional legal connection of exploration and use

53 Kleeman and Yu (eds) *The Oxford Chinese Dictionary*, above n 50, 198; Oxford University Press, *'Develop'* (2016) <http://www.oxforddictionaries.com/translate/english-chinese/develop>; See also: the translations for 'develop' in both - Dong, *Tuttle Concise Chinese Dictionary*, above n 52, 1469; Dickson et al (eds), *Collins Chinese Dictionary*, above n 51, 142.

54 Ibid, *The Oxford Chinese Dictionary*, 198; Oxford University Press, *'Development'* (2016) <http://www.oxforddictionaries.com/translate/english-chinese/development>; See also: the translations for 'development' in both - Dong, *Tuttle Concise Chinese* Dictionary, above n 52, 1469; Dickson et al (eds), *Collins Chinese Dictionary*, above n 51, 142.

55 Appendix 4.1.

56 Appendix 4.2.

57 Appendix 4.3.

58 Wheeler, Unbegaun and Falla (eds), *The Oxford Russian Dictionary*, above n 21, 566 'человечества … humanity, mankind'; Corréard and Grundy (eds), *The Oxford-Hachette French Dictionary: French-English, English-French*, above n 29, 430, 'humanité … humanity'; Jarman and Russell (eds), *The Oxford Spanish Dictionary*, above n 40, 392, 'humanidad … the human race, humanity, mankind'; Kleeman and Yu (eds) *The Oxford Chinese Dictionary*, above n 50, 612, '人类 … mankind'.

59 Tabory, above n 4, 195. This customary norm of treaty interpretation finds codification in Article 33(3) of the *Vienna Convention on the Law of Treaties* which states '[t]he terms of the treaty are presumed to have the same meaning in each authentic text.'

60 See: Appendices 1.1, 1.2 and 1.3.

(occupation) with territorial appropriation are accepted as relating to this duty.[61] Similarly, the territorial conception also wholly accommodates the Chinese text with the association of '开发 ['kāi fā']' with the development of land and resources, as well as the French 'apanage' which can be understood as referring to the special privilege or prerogative of territorial appropriation only available to humankind. The territorial conception of 'the province of all mankind' therefore offers an interpretation that not only conforms to all five equally authentic languages but, crucially, reconciles them. A strong basis for interpretative evolution towards the territorial conception therefore exists when considering all five equally authentic texts of the OST holistically together.

61 See: Part D of Chapter 2.

VI LOOKING UP

The proposed territorial conception of 'the province of all mankind' will be controversial. Some scholars may dismiss it outright as a violation of the non-appropriation principle under Article II of the *Outer Space Treaty* (OST). But this ignores that the treaty text clearly states only 'national appropriation', rather than appropriation *in toto*, is precluded. As Aldo Armando Cocca observes, 'if no national occupation on the part of States is possible, it is something common to all [h]umankind, considered as a whole.'[1] Others may criticise the territorial conception as a perversion of Cocca's work, given its divisibility of sovereignty enabling territorial administration. However, as articulated in Chapter 2, it instead develops further this recognition of humankind's legal personality and resultant ownership over outer space that Cocca and other scholars from his earlier generation contemplated, and it advocates *de lege ferenda* that this theoretical foundation be advanced in a different direction. As Chapter 5 demonstrates, there exists a strong basis for this evolutionary interpretation of 'the province of all mankind', not only from the ordinary meaning of these words in English but also from their counterparts in the other equally authentic languages of the OST. Chapter 4 also reveals support for the *res communis* nature of the outer space environment within the *travaux préparatoires* of this Treaty, which this evolutionary interpretation builds upon.

The possibility exists that there are people alive today, though it is far from assured, who may end their lives as residents of a community located somewhere beyond Earth. This prospect increases exponentially for subsequent generations of the human race. Indeed, the significance of humanity settling outer space cannot be underestimated.[2] In categorising the story of our universe, Big History identifies 'eight thresholds of increasing complexity' that constitute the greatest milestones in

1 Aldo Armando Cocca, 'The Advances of International Law Through The Law of Outer Space' (1981) 9 *Journal of Space Law* 13, 14.

2 As Elon Musk describes, 'the future of humanity will fundamentally bifurcate along the lines of either a single planet species or a multi-plant species'. Elon Musk (AeroAstro Centennial Symposium, Massachusetts Institute of Technology, 24 October 2014) <https://www.youtube.com/watch?v=7hjwBbTjbI4>; Stephen Hawking also states '[s]preading out into space will have an even greater effect. It will completely change the future of the human race and maybe determine whether we have any future at all.' Stephen Hawking and Lucy Hawking, 'Why We Should Go Into Space' (Speech delivered at NASA's 50th Anniversary Lecture Series, George Washington University, Washington DC, 21 April 2008) <http://www.nasa.gov/50th/NASA_lecture_series/hawking.html>.

the universe's 13.8 billion year history.[3] In predicting what may constitute our awaiting ninth threshold, David Christian suggests it potentially 'involves humans migrating to other planets and star systems'.[4] If this presents our possible next watershed moment for humanity, surely the complex international legal issues this will create are worthy of attention and new thinking ahead of its occurrence.

The proposed territorial interpretation of the province provision therefore seeks not only to accommodate the future intersection of international migration law and the law of outer space, specifically through an individual freedom of movement, but also to provide an overarching framework for the raft of legal issues that are likely to arise with human settlement of space. In addition to the full range of domestic governance issues that exist in any human community, it will be necessary to address a plethora of international legal dilemmas once large numbers of people inhabit space.[5] The territorial administration of space settlements enabled under the territorial conception, alongside the compulsory jurisdiction of humankind that this emerging legal entity should insist other subjects of international law consent to in outer space, will provide an effective overarching regime for both domestic and international space governance As detailed in Chapter 3, the recognition of humankind as a subject of international law and the evolutionary interpretation of the province provision introduced by this thesis, should result in three key legal consequences.

First, by constituting the province of all mankind, appropriated and jointly owned by all members of humanity, each member of our species will possess freedom of movement throughout outer space. This will result in the freedom of exploration, use and access conferred on States in Article I of the OST, becoming a freedom also personally held by all individuals and not solely exercisable through a State. Given

3 These are: 1) The Big Bang, 2) The Formation of Stars and Galaxies, 3) Heavier Chemical Elements and the Life Cycle of Stars, 4) The Formation of Our Solar System and Earth, 5) The Evolution of Life on Earth, 6) The Rise of Homo Sapiens, 7) The Agrarian Revolution and 8) Modernity and Industrialisation; See: Richard B Simon, 'What Is Big History?' in Richard B Simon, Mojgan Behmand and Burke (eds), *Teaching Big History* (University of California Press, 2014) 11, 16-17; David Christian, Cynthia Stokes Brown and Craig Benjamin, *Big History: Between Nothing and Everything* (McGraw-Hill Education, 2014) 6-7.

4 *The Future* (Presented by David Christian, The Big History Project, 2015) <https://www.bighistoryproject.com/chapters/5#the-future>; David Christian, *Maps of Time: An Introduction to Big History* (University of California Press, 2nd ed, 2011) 483-5.

5 As Andrew Haley notes, diverse international legal issues will eventually confront humanity in space. From 'nationality, domicile, statelessness, internment, asylum, sequestration, blockade, hovering, extraterritoriality, embargo, reprisal, boycotts, expropriation, piracy, contraband, customs, prize proceedings, emigration, immigration, mandates, colonies, tortious violations, civil claim, venue jurisdiction, and so on.' Andrew Haley, *Space Law and Government* (Appleton, 1963) 133.

that our ability to travel and migrate on Earth is largely determined by nationality, such a unique universal human right may become one of the most valued and tangible benefits arising from international space law and constitute a tremendous legal achievement for the equality of all human beings.

Second, the most profound consequence of the territorial conception arises from the nature of sovereignty itself. As articulated by numerous legal scholars[6] and detailed in Chapter 3, there exist two meanings or levels of sovereignty in international law. This means that in those areas of outer space where humanity undertakes exploration and use, residual sovereignty and title over this territory can be vested in humankind as a legal entity. Furthermore, as has consistently occurred on Earth since Westphalian sovereignty first emerged, sovereignty in outer space can also be bifurcated. With ownership and legal sovereignty invested in humankind, administrative jurisdiction and control over space territory is exercisable by other subjects of international law. This enables legal entities that have a proven historical ability to effectively administer territory to do so again in space. These existing actors in the international system can provide the necessary governance and domestic legal jurisdiction for future space communities, including the allocation of mining, resource and other private property rights in administered territory. Such territorial jurisdiction and control however would always be divorced from holding ultimate title and residual sovereignty over any area governed.

Third, as title and legal sovereignty resides in humankind, it will be for it to determine through its 'institutional expression'[7] what specific conditions other subjects of international law are required to accept, should they wish to exercise jurisdiction and control over territory in outer space. Although a deliberate policy choice to be imposed upon its province,[8] humankind should insist that all entities administering

6 Elihu Lauterpacht, 'The Contemporary Practice of the United Kingdom in the Field of International Law – Survey and Comment' (1956) 5(4) *International and Comparative Law Quarterly* 405, 410; Ralph Wilde, *International Territorial Administration: How Trusteeship and the Civilizing Mission Never Went Away* (Oxford University Press, 2008) 100; Sir Gerald Fitzmaurice, 'The General Principles of International Law Considered From The Standpoint of the Rule of Law' (1957) 92 *Collected Courses of the Hague Academy of International Law* 1, 130-1; Sir Robert Jennings and Sir Arthur Watts (eds) *Oppenheim's International Law: Volume 1 – Peace* (Longman, 9th ed, 1992) 565-72: James Crawford, *Brownlie's Principles of Public International Law* (Oxford University Press, 8th ed, 2012) 206-10; Alina Kaczorowska-Ireland, *Public International Law* (Routledge, 5th ed, 2015) 249.

7 Barry Buzan, *People, States and Fear: An Agenda for International Security Studies in the Post-Cold War Era* (ECPR Press, 2nd ed, 2009) 70-1.

8 With humankind of course free to decide it does not require another subject of international law to accept its compulsory jurisdiction, in specific or indeed all cases. However this would be

territory[9] are required to consent to humankind's compulsory jurisdiction over international legal disputes. This represents perhaps the single most important action humanity can take to ensure its peaceful future in outer space. The development of an authoritative international dispute settlement mechanism will ensure that international disputes inevitably arising alongside migration, settlement and resource utilisation in outer space will be resolved under the rule of law.

The institutional expression that humankind as an emerging subject of international law should ultimately develop for exercising its residual sovereignty in outer space is a question for further scholarship. As discussed in Chapter 2, for the moment at least it is through the United Nations and, specifically, its only fully representative organ, the General Assembly, that humankind can currently exercise its emerging legal personality in outer space affairs. However, numerous options exist as to how humankind can institutionalise its authority in outer space in the future. Regardless of whichever model is pursued, an authorising mandate from the General Assembly or a specially convened summit of all States would likely be required to demonstrate the approval of humanity through their representative national governments. Such options could for example involve the investment of humankind's residual sovereignty in the Committee on the Peaceful Uses of Outer Space (COPUOS), the establishment of a specialised body for outer space similar to the International Seabed Authority[10] or, at least in the case of the initial human settlements to be established, the convening of dedicated international conferences. Separately, should humankind assert its compulsory jurisdiction in outer space (or indeed its international legal jurisdiction in space in any form) the creation of a dispute settlement body will be necessary.

Finally, there are far more questions that the territorial conception of 'the province of all mankind' generates than can be answered in this thesis. In addition to

a significant missed opportunity to ensure all international disputes in outer space are settled peacefully under the rule of law. This would be a major contribution to ensuring future peace throughout all of outer space (including void space), particularly in light of Art IV of the OST only mandating '[t]he moon and other celestial bodies shall be used by all States Parties to the Treaty exclusively for peaceful purposes.'

9 Including entities administering solely for resource utilisation (with limited or no accompanying human settlement).

10 *United Nations Convention on the Law of the Sea*, opened for signature 10 December 1982, 1833 UNTS 3 (entered into force 16 November 1994) ('*UNCLOS*') art 156-185; Any similar institution for outer space would not however be implementing a common heritage regime as the International Seabed Authority undertakes for the law of the sea, but rather a distinctly different 'province of all mankind' regime. See: Part B of Chapter 2 for an overview of the separate nature of 'the province of all mankind' to 'the common heritage of mankind'.

humankind's future institutional expression, there is, for example, the issue of subsequent practice in interpreting the province provision[11] and the role under the territorial conception of Article V of the OST in declaring astronauts to be 'envoys of mankind in outer space'.[12] Dedicated treatments of the territorial conception's conformity with the prohibition against national appropriation under Article II, and also how it can be accommodated with Article VIII's conferral of jurisdiction and control on States over objects they launch into space 'and over any personnel thereof',[13] each present worthy subsequent scholarly endeavours. How humankind should determine the geographic boundaries of areas it allows other legal entities to administer, and whether a uniform set of principles placing constraints on such territorial administration should be developed,[14] will likewise require scholarly attention if the territorial conception gains traction. These are only the beginning of

11 Subsequent practice being another specified means of treaty interpretation under the *Vienna Convention on the Law of Treaties*, with it providing at Article 31(3)(b) that 'any subsequent practice in the application of the treaty which establishes the agreement of parties regarding its interpretation' shall be taken into account when interpreting a treaty. *Vienna Convention on the Law of Treaties*, opened for signature 23 May 1969, 1155 UNTS 331 (entered into force 27 January 1980); In relation to subsequent practice there is the ill-fated *Moon Agreement's* own province provision at its Article 4(1), separate to its latter reference to 'the common heritage of mankind' at its Article 11(1). *Agreement Governing the Activities of States on the Moon and Other Celestial Bodies*, opened for signature 5 December 1979, 1363 UNTS 3 (entered into force 11 July 1984) ('*Moon Agreement*'); As Andrew Young notes, the appearance of both provisions in the same treaty 'suggest[s] a totally different concept.' Andrew J Young, *Law and Policy in the Space Stations' Era* (Martinus Nijhoff, 1989) 195; A study of this 1979 treaty's own *travaux préparatoires* presents a worthwhile endeavour in interpreting the province province's significance and differentiating these distinct concepts. There is also the subsequent practice of the Apollo astronauts in exploring the Moon and the legal response of the US and the international community regarding their lunar endeavours in 'the province of all mankind'; More recently reference to 'the province of all mankind' in the General Assembly's 1996 *Declaration on International Cooperation in the Exploration and Use of Outer Space* also warrants academic attention. *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 GAOR, 51st sess, 83rd plen mtg, UN Doc A/RES/51/122 (13 December 1966) Preamble para 9, annex para 1.

12 A similar focused analysis of the *travaux préparatoires* of the 'envoys of mankind' provision at Article V of the OST and its meaning in this treaty's other equally authentic languages is also called for; As the term 'envoys of mankind' actually first originated in para 9 of the 1963 *Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space*, its preparatory works should also be examined in any such study alongside those of the OST. *Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space*, GA Res 1962 (XV111), UN GAOR, 18th sess, 1280th plen mtg, UN Doc A/RES/18/1962 (13 December 1963).

13 For example principles may be developed similar to the jurisdiction of coastal States over foreign vessels in internal waters under the customary law of the sea, where the normal jurisdiction and control of the flag state is limited when in these internal waters and during port visits, yet matters involving solely the internal discipline of the ship still remain under the flag state's control. Such practice could potentially be adopted when spacecraft and their personnel visit settlements in outer space under the territorial administration of another subject of international law. See: Yoshifumi Tanaka, *The International Law of the Sea* (Cambridge University Press, 2012) 78-9.

14 Beyond the individual freedom of movement in outer space and requirement that humankind's compulsory jurisdiction over international disputes be accepted, as both discussed in Chapter 3.

the new legal avenues the territorial conception of the province provision as 'a seed of a transformational idea'[15] could open for international space law scholarship.

As Carl Sagan foresaw:

> Once the first children are born off Earth, once we have bases and homesteads on asteroids, comets, moons and planet; once we're living off the land and bringing up new generations on other worlds, something will have changed forever in human history. But inhabiting other worlds does not imply abandoning this one … [as f]or a very long time only a fraction of us will be out there … [yet p]eopling other worlds unifies nations and ethnic groups, binds the generations and requires us to be both smart and wise. It liberates our nature and, in part, returns us to our beginnings. Even now, this new *telos* is within our grasp.[16]

It is therefore time for international space law to start the process of evolving to this coming future. Because as the macro perspective of Big History reveals, the human species' two hundred millennia long migratory expansion has almost certainly not ceased. Indeed the very beginnings of our migration beyond Earth are already with us, given humanity's 25 year habitation of low earth orbit. New legal ideas and paradigms will be needed to spur and facilitate this human settlement of outer space, with the territorial conception of 'the province of all mankind' proffered as an opening contribution.

15 Joanne Gabrynowicz, 'The Province and Heritage of Mankind Reconsidered' (Paper presented at Second Conference on Lunar Bases and Space Activities of the 21st Century, Houston, 5-7 April 1988) 692 <http://ntrs.nasa.gov/search.jsp?R=19930004830>.

16 Carl Sagan, *Pale Blue Dot: A Vision of the Human Future in Space* (Random House, 1994) 403-4.

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APPENDIX A –

TRANSLATIONS OF ARTICLE I OF THE *OUTER SPACE TREATY* IN ITS EQUALLY AUTHENTIC LANGUAGES

Article I[1]

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.

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 there shall be free access to all areas of celestial bodies.

There shall be freedom of scientific investigation in outer space, including the Moon and other celestial bodies, and States shall facilitate and encourage international cooperation in such investigation.

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1 *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies* – Article I in United Nations Office of Outer Space Affairs, pp 3-4 <http://www.unoosa.org/pdf/publications/st_space_61E.pdf>.

APPENDIX 1.A

ARTICLE I OF THE *OUTER SPACE TREATY* IN ITS EQUALLY AUTHENTIC RUSSIAN TEXT[1]

Статья I

Исследование и использование космического пространства, включая Луну и другие небесные тела, осуществляются на благо и в интересах всех стран, независимо от степени их экономического или научного развития, и являются достоянием всего человечества.

Космическое пространство, включая Луну и другие небесные тела, открыто для исследования и использования всеми государствами без какой бы то ни было дискриминации на основе равенства и в соответствии с международным правом, при свободном доступе во все районы небесных тел.

Космическое пространство, включая Луну и другие небесные тела, свободно для научных исследований, и государства содействуют и поощряют международное сотрудничество в таких исследованиях.

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[1] Договор о принципах деятельности государств по исследованию и использованию космического пространства, включая Луну и другие небесные тела – Статья I [*Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies* – Article I] in Договоры и принципы Организации Объединенных Наций, касающиеся космического пространства [United Nations Treaties and Principles On Outer Space], United Nations Office of Outer Space Affairs, 3-4 <http://www.unoosa.org/pdf/publications/st_space_61R.pdf>.

APPENDIX 1.1

Translated from Russian by IML Translator – Date: March 2016

(Translator's Individual NAATI № 56196)

Article I

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 are the property of all mankind.

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

Outer space, including the Moon and other celestial bodies, shall be free for research, and countries shall facilitate and encourage international cooperation in such research.

APPENDIX 1.2

Translated from Russian by IML Translator – Date: March 2016

(Translator's Individual NAATI № 23945)

Article 1

The investigation[1] and utilisation of outer space[2], including the Moon and other celestial bodies, are carried out for the benefit and in the interests of all countries regardless of the degree of their economic and scientific development and are the property[3] of all humanity.

Outer space, including the Moon and other celestial bodies, is open for investigation and utilisation by all States without any discrimination whatsoever on the basis of equality and in accordance with international law with free access in all areas of celestial bodies.

Outer space, including the Moon and other celestial bodies, is freely available for scientific investigation and States should[4] facilitate and encourage international collaboration in such investigations.

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1 This word can be translated as investigation, research or exploration. It is unclear which is the most apt in this context. I have chosen investigation as it includes both research and exploration. The term used in the source is also generic in meaning.

2 Cosmos and cosmic space are also equally valid translations although the definitions of these concepts are not absolutely identical. In the Russian language, only one term "cosmic space" exists for all of these terms. From the context, outer space is probably more apt, as the moon is definitely included, whilst "cosmos" is less clear about this.

3 **Достояние: (definition)** According to the Russian Legal Dictionary, достояние means property or belongings. When pertaining to national or public property, it is an interdisciplinary legal category indicating the general social significance of objects (be they tangible or intangible), regardless of anyone holding a right of ownership to them. The recognition of some property, e.g. land, mineral assets or cultural values, etc., by society (either national or international), which gives rise to certain legal consequences, primarily allowing a certain group of individuals the right to make use of its privileges without limitations in a predetermined legal way. Additionally, if there is an owner, it recognises the owner's obligation to safeguard the property for future generations. The primary translation would be property or belonging, but heritage is possible – depends on context and the nature of the object in question. See: A Y Sukharev, V E Krutskikh and A Y Sukhareva, *The Great Legal Dictionary* (Infra-M, 2003) [Большой юридический словарь] <http://dic.academic.ru/dic.nsf/lower/14622>.

4 Should is a link word that isn't required in Russian, but something of the sort is needed in English.

APPENDIX 1.3

Translated from Russian by IML Translator – Date: March 2016

(Translator's Individual NAATI № 6920)

Article 1

Research and use of space, including the Moon and other heavenly bodies, shall be carried out for the good and in the interests of all countries, irrespective of the level of their economic or scientific development, and are the property of all mankind.

Space, including the Moon and other heavenly bodies, is open for research and use by all states without any discrimination whatsoever, on the basis of equality and in accordance with international law, with free access to all areas of heavenly bodies.

Space, including the Moon and other heavenly bodies, is free for scientific research, and states shall promote and encourage international cooperation in such research.

APPENDIX 1.4

Translated from Russian by IML Translator – Date: March 2016

(Translator's Individual NAATI № 44263)

Article 1

Exploration and exploitation of cosmic space, including the Moon and other celestial bodies, are carried out for the benefit and in the interests of all countries, irrespective of the degree of their economic or scientific development, and are the heritage of all humankind.

Cosmic space, including the Moon and other celestial bodies, is open for exploration and exploitation by all states without any kind of discrimination, on the basis of equality and in accordance with international law, with free access to all the regions of celestial bodies.

Cosmic space, including the Moon and other celestial bodies, is freely available for scientific research, and the states promote and stimulate international cooperation in such activities.

APPENDIX 2.A

ARTICLE I OF THE *OUTER SPACE TREATY* IN ITS EQUALLY AUTHENTIC FRENCH TEXT[1]

Article premier

L'exploration et l'utilisation de l'espace extra-atmosphérique, y compris la Lune et les autres corps célestes, doivent se faire pour le bien et dans l'intérêt de tous les pays, quel que soit le stade de leur développement économique ou scientifique; elles sont l'apanage de l'humanité tout entière.

L'espace extra-atmosphérique, y compris la Lune et les autres corps célestes, peut être exploré et utilisé librement par tous les États sans aucune discrimination, dans des conditions d'égalité et conformément au droit international, toutes les régions des corps célestes devant être librement accessibles.

Les recherches scientifiques sont libres dans l'espace extra-atmosphérique, y compris la Lune et les autres corps célestes, et les États doivent faciliter et encourager la coopération internationale dans ces recherches.

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1 Traité sur les principes régissant les activités des États en matière d'exploration et d'utilisation de l'espace extra-atmosphérique, y compris la Lune et les autres corps célestes – Article premier [*Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies* – Article I] in Traités et principes des Nations Unies relatifs à l'espace extra-atmosphérique [United Nations Treaties and Principles On Outer Space], United Nations Office of Outer Space Affairs, 3-4 <http://www.unoosa.org/pdf/publications/st_space_61F.pdf>.

APPENDIX 2.1

Translated from French by IML Translator – Date: March 2016

(Translator's Individual NAATI № 42988)

Article 1

The exploration and use of outer space, including the moon and the other celestial bodies, must be done for the good and in the interest of all countries, regardless of the stage of their economic or scientific development; they[1] are the prerogative of humanity as a whole.

Outer space, including the moon and the other celestial bodies, may be explored and used freely by all States without any discrimination, under conditions of equality and in accordance with international law, all regions of the celestial bodies having to be freely accessible.

Scientific research is free in outer space, including the moon and the other celestial bodies, and States must facilitate and encourage international cooperation in this research.

[1] Translator's note: "Elles", the feminine form of "they", refers back to the two feminine nouns at the start of the sentence: "exploration" and "utilisation", not to the later nouns in the sentence, which are masculine.

APPENDIX 3.A

ARTICLE I OF THE *OUTER SPACE TREATY* IN ITS EQUALLY AUTHENTIC SPANISH TEXT[1]

Artículo I

La exploración y utilización del espacio ultraterrestre, incluso la Luna y otros cuerpos celestes, deberán hacerse en provecho y en interés de todos los países, sea cual fuere su grado de desarrollo económico y científico, e incumben a toda la humanidad.

El espacio ultraterrestre, incluso la Luna y otros cuerpos celestes, estará abierto para su exploración y utilización a todos los Estados sin discriminación alguna en condiciones de igualdad y en conformidad con el derecho internacional, y habrá libertad de acceso a todas las regiones de los cuerpos celestes.

El espacio ultraterrestre, incluso la Luna y otros cuerpos celestes, estarán abiertos a la investigación científica, y los Estados facilitarán y fomentarán la cooperación internacional en dichas investigaciones.

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1 Tratado sobre los principios que deben regir las actividades de los Estados en la exploración y utilización del espacio ultraterrestre, incluso la Luna y otros cuerpos celestes – Artículo I [*Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies* – Article I] in Tratados y principios de las Naciones Unidas sobre el espacio ultraterrestre [United Nations Treaties and Principles On Outer Space], United Nations Office of Outer Space Affairs, 4 <http://www.unoosa.org/pdf/publications/st_space_61S.pdf>.

APPENDIX 3.1

Translated from Spanish by IML Translator – Date: March 2016

(Translator's Individual NAATI № 62165)

Article 1

Exploration and use of outer space, including the Moon and other celestial bodies, shall be conducted in the benefit and interest of all countries, regardless of their degree of economic and scientific development, and are the concern of all human kind.

Outer space, including the Moon and other celestial bodies, shall be available for exploration and use by all States, without any discrimination whatsoever, on the basis of equality and pursuant to international law, with freedom to access any region of celestial bodies.

Outer space, including the Moon and other celestial bodies, shall be available for scientific research, and States shall facilitate and foster international cooperation in any such research.

APPENDIX 4.A

ARTICLE I OF THE *OUTER SPACE TREATY* IN ITS EQUALLY AUTHENTIC CHINESE TEXT[1]

第一条

探索和利用外层空间（包括月球和其他天体），应为所有国家谋福利和利 **益，而不**论其经济或科学发展程度如何，并应为全人类的开发范围。

所有国家可在平等、不受任何歧视的基础上，根据国际法自由探索和利用 **外**层空间（包括月球和其他天体），自由进入天体的一切区域。

所有国家可在平等、不受任何歧视的基础上，根据国际法自由探索和利用 **外**层空间（包括月球和其他天体），自由进入天体的一切区域。

1 **关于各国探索和利用包括月球和其他天体在内 外**层空间活动的原则条约 –**第一条** [*Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies* – Article I] in 联合国关于外层空间的 **条**约和原则[United Nations Treaties and Principles On Outer Space], United Nations Office of Outer Space Affairs, 3 <http://www.unoosa.org/pdf/publications/st_space_61C.pdf>.

APPENDIX 4.1

Translated from Chinese by IML Translator – Date: April 2016

(Translator's Individual NAATI № 70809)

Article 1

Exploring and using outer space (including moon and other celestial bodies), should be for the welfare and interests of all countries, regardless of their economy or science development levels, and should be the development range of the human race.

All countries may, on the basis of equality and no discrimination, explore and use outer space (including moon and other celestial bodies) in accordance with international laws, freely enter all areas of celestial bodies.

Should have the freedom to conduct scientific research on outer space (including moon and other celestial bodies); each country should promote and encourage international cooperation in this kind of research.

APPENDIX 4.2

Translated from Chinese by IML Translator – Date: April 2016

(Translator's Individual NAATI № 24340)

Article One

Research and the utilization of the outer space (including the moon and other heavenly bodies), should be for the welfare and benefit of all countries, disregarding their levels of economic and scientific development and they should also be of the range of development of all human kind.

All the countries can freely research and utilize the outer space on the basis of equality and free from any discrimination, according to international laws, and free entrance into any areas of heavenly bodies.

There should be freedom to do scientific exploration to the outer space (including the moon and heavenly bodies); countries should promote such explorations and encourage international cooperation in such explorations.

APPENDIX 4.3

Translated from Chinese by IML Translator – Date: March 2016

(Translator's Individual NAATI № 17105)

Article 1

Exploring and using the outer space, including the moon and other celestial bodies, should be carried out in the welfare and interest of all countries, regardless of their levels of economic or scientific development, and should be considered a matter belonging to all mankind.

The outer space, including the moor and other celestial bodies, should be explored and used by all countries on the basis of equality and in accordance with the international law, without any kind of discrimination. Free access into any area of the space should be permitted.

The outer space, including the moor and other celestial bodies, should be open to free scientific investigation. All countries should facilitate and encourage the international cooperation of such investigation.

APPENDIX B –

THE OUTER SPACE TREATY

Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies

opened for signature 27 January 1967
610 UNTS 205
(entered into force 10 October 1967)

A. Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies[1]

The States Parties to this Treaty,

Inspired by the great prospects opening up before mankind as a result of man's entry into outer space,

Recognizing the common interest of all mankind in the progress of the exploration and use of outer space for peaceful purposes,

Believing that the exploration and use of outer space should be carried on for the benefit of all peoples irrespective of the degree of their economic or scientific development,

Desiring to contribute to broad international cooperation in the scientific as well as the legal aspects of the exploration and use of outer space for peaceful purposes,

Believing that such cooperation will contribute to the development of mutual understanding and to the strengthening of friendly relations between States and peoples,

Recalling resolution 1962 (XVIII), entitled "Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space", which was adopted unanimously by the United Nations General Assembly on 13 December 1963,

Recalling resolution 1884 (XVIII), calling upon States to refrain from placing in orbit around the Earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction or from installing such weapons on celestial bodies, which was adopted unanimously by the United Nations General Assembly on 17 October 1963,

Taking account of United Nations General Assembly resolution 110 (II) of 3 November 1947, which condemned propaganda designed or likely to provoke or encourage any threat to the peace, breach of the peace or act of aggression, and considering that the aforementioned resolution is applicable to outer space,

Convinced that a Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, will further the purposes and principles of the Charter of the United Nations,

Have agreed on the following:

Article I

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.

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[1] Adopted by the General Assembly in its resolution 2222 (XXI) of 19 December 1966.

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 there shall be free access to all areas of celestial bodies.

There shall be freedom of scientific investigation in outer space, including the Moon and other celestial bodies, and States shall facilitate and encourage international cooperation in such investigation.

Article II

Outer space, including the Moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means.

Article III

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.

Article IV

States Parties to the Treaty undertake not to place in orbit around the Earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction, install such weapons on celestial bodies, or station such weapons in outer space in any other manner.

The Moon and other celestial bodies shall be used by all States Parties to the Treaty exclusively for peaceful purposes. The establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military manoeuvres on celestial bodies shall be forbidden. The use of military personnel for scientific research or for any other peaceful purposes shall not be prohibited. The use of any equipment or facility necessary for peaceful exploration of the Moon and other celestial bodies shall also not be prohibited.

Article V

States Parties to the Treaty shall regard astronauts as envoys of mankind in outer space and shall render to them all possible assistance in the event of accident, distress, or emergency landing on the territory of another State Party or on the high seas. When astronauts make such a landing, they shall be safely and promptly returned to the State of registry of their space vehicle.

In carrying on activities in outer space and on celestial bodies, the astronauts of one State Party shall render all possible assistance to the astronauts of other States Parties.

States Parties to the Treaty shall immediately inform the other States Parties to the Treaty or the Secretary-General of the United Nations of any phenomena they discover in outer space, including the Moon and other celestial bodies, which could constitute a danger to the life or health of astronauts.

Article VI

States Parties to the Treaty shall bear international responsibility for national activities in outer space, including the Moon and other celestial bodies, whether such activities are carried on by governmental agencies or by non-governmental entities, and for assuring that national activities are carried out in conformity with the provisions set forth in the present Treaty. The activities of non-governmental entities in outer space, including the Moon and other celestial bodies, shall require authorization and continuing supervision by the appropriate State Party to the Treaty. When activities are carried on in outer space, including the Moon and other celestial bodies, by an international organization, responsibility for compliance with this Treaty shall be borne both by the international organization and by the States Parties to the Treaty participating in such organization.

Article VII

Each State Party to the Treaty that launches or procures the launching of an object into outer space, including the Moon and other celestial bodies, and each State Party from whose territory or facility an object is launched, is internationally liable for damage to another State Party to the Treaty or to its natural or juridical persons by such object or its component parts on the Earth, in air space or in outer space, including the Moon and other celestial bodies.

Article VIII

A State Party to the Treaty on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such object, and over any personnel thereof, while in outer space or on a celestial body. 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. Such objects or component parts found beyond the limits of the State Party to the Treaty on whose registry they are carried shall be returned to that State Party, which shall, upon request, furnish identifying data prior to their return.

Article IX

In the exploration and use of outer space, including the Moon and other celestial bodies, States Parties to the Treaty shall be guided by the principle of cooperation and mutual assistance and shall conduct all their activities in outer space, including the Moon and other celestial bodies, with due regard to the corresponding interests of all other States Parties to the Treaty. States Parties to the Treaty shall pursue studies of outer space, including the Moon and other celestial bodies, and conduct exploration of them so as to avoid their harmful contamination and also adverse changes in the environment of the Earth resulting from the introduction of extraterrestrial matter and, where necessary, shall adopt appropriate measures for this purpose. If a State Party to the Treaty has reason to believe that an activity or experiment planned by it or its nationals in outer space, including the Moon and other celestial bodies, would cause potentially harmful interference with activities of other States Parties in the peaceful exploration and use of outer space, including the Moon and other celestial bodies, it shall undertake appropriate international consultations before proceeding with any such activity or experiment.

A State Party to the Treaty which has reason to believe that an activity or experiment planned by another State Party in outer space, including the Moon and other celestial bodies, would cause potentially harmful interference with activities in the peaceful exploration and use of outer space, including the Moon and other celestial bodies, may request consultation concerning the activity or experiment.

Article X

In order to promote international cooperation in the exploration and use of outer space, including the Moon and other celestial bodies, in conformity with the purposes of this Treaty, the States Parties to the Treaty shall consider on a basis of equality any requests by other States Parties to the Treaty to be afforded an opportunity to observe the flight of space objects launched by those States.

The nature of such an opportunity for observation and the conditions under which it could be afforded shall be determined by agreement between the States concerned.

Article XI

In order to promote international cooperation in the peaceful exploration and use of outer space, States Parties to the Treaty conducting activities in outer space, including the Moon and other celestial bodies, agree to inform the Secretary-General of the United Nations as well as the public and the international scientific community, to the greatest extent feasible and practicable, of the nature, conduct, locations and results of such activities. On receiving the said information, the Secretary-General of the United Nations should be prepared to disseminate it immediately and effectively.

Article XII

All stations, installations, equipment and space vehicles on the Moon and other celestial bodies shall be open to representatives of other States Parties to the Treaty on a basis of reciprocity. Such representatives shall give reasonable advance notice of a projected visit, in order that appropriate consultations may be held and that maximum precautions may be taken to assure safety and to avoid interference with normal operations in the facility to be visited.

Article XIII

The provisions of this Treaty shall apply to the activities of States Parties to the Treaty in the exploration and use of outer space, including the Moon and other celestial bodies, whether such activities are carried on by a single State Party to the Treaty or jointly with other States, including cases where they are carried on within the framework of international intergovernmental organizations.

Any practical questions arising in connection with activities carried on by international intergovernmental organizations in the exploration and use of outer space, including the Moon and other celestial bodies, shall be resolved by the States Parties to the Treaty either with the appropriate international organization or with one or more States members of that international organization, which are Parties to this Treaty.

Article XIV

1. This Treaty shall be open to all States for signature. Any State which does not sign this Treaty before its entry into force in accordance with paragraph 3 of this article may accede to it at any time.

2. This Treaty shall be subject to ratification by signatory States. Instruments of ratification and instruments of accession shall be deposited with the Governments of the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland and the United States of America, which are hereby designated the Depositary Governments.

3. This Treaty shall enter into force upon the deposit of instruments of ratification by five Governments including the Governments designated as Depositary Governments under this Treaty.

4. For States whose instruments of ratification or accession are deposited subsequent to the entry into force of this Treaty, it shall enter into force on the date of the deposit of their instruments of ratification or accession.

5. The Depositary Governments shall promptly inform all signatory and acceding States of the date of each signature, the date of deposit of each instrument of ratification of and accession to this Treaty, the date of its entry into force and other notices.

6. This Treaty shall be registered by the Depositary Governments pursuant to Article 102 of the Charter of the United Nations.

Article XV

Any State Party to the Treaty may propose amendments to this Treaty. Amendments shall enter into force for each State Party to the Treaty accepting the amendments upon their acceptance by a majority of the States Parties to the Treaty and thereafter for each remaining State Party to the Treaty on the date of acceptance by it.

Article XVI

Any State Party to the Treaty may give notice of its withdrawal from the Treaty one year after its entry into force by written notification to the Depositary Governments. Such withdrawal shall take effect one year from the date of receipt of this notification.

Article XVII

This Treaty, of which the Chinese, English, French, Russian and Spanish texts are equally authentic, shall be deposited in the archives of the Depositary Governments. Duly certified copies of this Treaty shall be transmitted by the Depositary Governments to the Governments of the signatory and acceding States.

IN WITNESS WHEREOF the undersigned, duly authorized, have signed this Treaty.

DONE in triplicate, at the cities of London, Moscow and Washington, D.C., the twenty-seventh day of January, one thousand nine hundred and sixty-seven.