Property Rights and Sovereignty Within the Framework of the Common Heritage of Mankind Principle

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Abstract

The conception of space exploration and use as the province of all mankind is a founding principle of space law, enshrined in the Outer Space Treaty (OST) to ensure peace in outer space. In the years since the OST was drafted, the principle has retained its relevance over the years and finds expression in the Principle of Non-Appropriation, which prevents states from appropriating any celestial body in part or as a whole through claims of sovereignty, occupation or any other means. As settlements on celestial bodies move closer to reality, space law must find a place for these settlements or risk obsolescence. This paper argues for a rethinking of property rights, and eventually of sovereignty itself, in relation to the Principle of Non-Appropriation. It will explore what shape, if any, private property could take in a system where states are prohibited from claiming territory. It recommends a fresh look at the term 'celestial body' to apply only to larger bodies like planets and moons while excluding smaller bodies like asteroids and comets. Settlements on the newly defined celestial bodies could be defined as space objects to allow the launching states to maintain control over them. No existing state shall exercise jurisdiction over the settlements; rather an international body could grant private rights over plots of celestial bodies stopping short of absolute ownership. The paper further argues that in such a situation, the possibility of larger settlements declaring independence would have to be considered a legal possibility.

1. Introduction

When space law first developed, states were the primary actors in outer space and questions of control and ownership were seen in terms of national sovereignty. Today, the increasing presence of private actors in space is giving

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rise to questions of ownership and control which are separate from national appropriation, yet intrinsically linked to it. This paper will attempt to explore the relationship between property rights and sovereignty to see if property rights can exist in space, where no state has sovereignty; if such property rights can indeed exist, at what point do they start looking like sovereignty in and by themselves.

Section 2 will briefly introduce the concepts of sovereignty, territoriality, and property. Sections 3 and 4 will explore the relation of property rights to sovereignty and propose how these rights may exist in outer space without violating the principle of non-appropriation enshrined in the Outer Space Treaty (OST).[1] Section 5 will explore whether settlements on celestial bodies can claim sovereignty over parts of these bodies as independent nations under international law.

2. Sovereignty, Territory and Property on Earth

2.1. Sovereignty

F.H. Hinsley proposes that sovereignty emerges as a means of moderating the relationship between the state and the community governed by the state. Here, sovereignty refers to the idea that "there is a final and absolute authority (the state) in the political community."[2] The Peace of Westphalia in 1648 recognised states as equal sovereigns in the domain of international law and placed importance on non-interference within a state's territory by other states as characteristic of its sovereignty.[3]

The arbitral tribunal in the Island of Palmas Case in 1928 recognised the concept of positive sovereignty, requiring the independent exercise of 'functions of a state' within a portion of the globe in addition to the negative requirement of excluding other states from such territory.[4]

2.2. Territory

The etymology of the English word territory itself is unclear (a fact that reflects a certain lack of understanding of the origins of the term). The two terms suggested by the Oxford English Dictionary as roots of the word are '*terra*' (land) and '*terrere*' (to frighten).[5] While the '*terra*' etymology would

1 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, entered into force Oct. 10, 1967, 18 U.S.T. 2410, 610 U.N.T.S. 205 [hereinafter 'Outer Space Treaty'].

2 F.H. Hinsley, Sovereignty, second ed., Cambridge University Press, Cambridge, 1986.

3 Derek Croxton, The Peace of Westphalia of 1648 and the Origins of Sovereignty, The Int'l History Rev. 21.3 (1999) 569.

4 Island of Palmas (USA v. Netherlands) 2 RIAA 829, 838 (Perm. Ct. Arb. 1928).

5 J.A. Simpson & E.S.C. Weiner, Oxford English Dictionary Vol. 18, second ed., 1989, p.819.

suggest that territory has an intrinsic connection to land, the '*terrere*' etymology would root the basis in excluding others from said territory.
Bardo Fasbender and Anne Peters point out that territory was not always intermeshed with sovereignty, which was related to control over persons and communities rather than land. However, the concepts of territory and sovereignty eventually came together in the concept of Westphalian sovereignty, which was based on non-interference within territorial borders as an essential aspect of a state's sovereignty.[6]
In the modern world, a state may still have some rights over territory it does not have sovereignty over. It is not uncommon for one state to have property rights over territory over which another state retains sovereignty over. In these situations, the former state acts less as a sovereign actor in this interaction and more as a legal person exercising property rights. The International Court of Justice (hereinafter 'ICJ') has adjudged that in such situations, the territory owning state does not automatically exercise sovereignty over the territory, but sovereignty rights may arise in its favour through the intention of both states demonstrated over a period of time.[7]

2.3. Private Property

Individual rights over territory come within the ambit of property. Property rights apply to private persons who (mostly) live under the protection of the sovereign, and even when governments hold territory they mostly do so as legal persons and not as sovereign authorities.
According to John Locke, the right to property is inherent in individuals and the state only protects private property in order to prevent individuals from using self-help to protect these rights themselves.[8]
In the 19th century, Hegel introduced the distinction between property and mere possession, associating the former with legal rights.[9] These legal rights exist not between an owner and their property but between the owner of land and other individuals. The focus of legal rights is not on enabling the enjoyment of property, but in excluding others from it.[10]
The modern conception of property thus begins to resemble the Westphalian concept of sovereignty defined in terms of non-interference. The focus of many laws on possession and control of property when determining legal

6 Bardo Fassbender and Anne Peters, Oxford Handbook of the History of International Law, Oxford University Press, Oxford, 2012, pp.229-240.
7 Sovereignty over Pedra Branca/Pulau Batu Puteh, Middle Rocks and South Ledge (Malaysia/Singapore), Judgment, 2008 I.C.J. 12 (May 23).
8 John Locke, Second Treatise of Government, Cambridge University Press, Cambridge, 1988, pp.204-236.
9 Sony Pellissery and Sattwick Dey Biswas, Emerging Property Regimes in India: What it Holds for The Future of Socio-Economic Rights, Institute of Rural Management Anand, Working Paper No. 234, 2012.
10 Morris R. Cohen, Property and Sovereignty, 13 Cornell L. Q. 13 (1927) 8.

ownership of property also mirrors the importance of positive exercise of power as discussed in the Island of Palmas Case. Moreover, in a regime where land is the principal source of livelihood and wealth, Morris Cohen argues that ownership of land grants power over other persons and community much like that which is exercised by sovereign states.[11]
While property rights as defined here apply to various things, this paper will consider property primarily in terms of rights over land and resources on and below the surface of celestial bodies.

3. Space as Common Heritage of Mankind

3.1. Space as the Province of all Mankind

One of the foundational principles of space law is that the exploration and use of outer space and the celestial bodies therein are the province of all mankind (hereinafter 'The Principle'). The Principle was espoused by the United Nations General Assembly (hereinafter 'UNGA') as early as 1963, in the Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space (hereinafter the '1963 Declaration').[12] The 1963 Declaration declares that exploration and use of outer space should be "for the benefit and in the interests of all mankind". It also lays out the principles of non-appropriation and the equality of states irrespective of their developmental status, which have become important aspects of The Principle in its current form.
The Principle was reaffirmed in the OST which expands on the 1963 Declaration's language designating the exploration and use of outer space as the province of all mankind.[13] The Moon Treaty reiterates The Principle and calls for both international and intertemporal justice in lunar exploration.[14] The Principle was reiterated as the basic principle for international cooperation in space exploration in the UNGA 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 (hereinafter the '1997 Declaration').[15]

11 *Id*.
12 G.A. Res. 18 (1962) Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space (Dec. 13, 1963) [hereinafter '1963 Declaration'].
13 Outer Space Treaty, *supra* note 1.
14 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, entered into force July 11, 1984, 18 U.S.T. 2410, 1363 U.N.T.S. 21 [hereinafter 'Moon Treaty'].
15 G.A. Res. 51/122, 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 (Feb. 4, 1997) [hereinafter '1997 Declaration'].

It must be noted that the term 'mankind' as used in The Principle represents a collective interest shared by humanity as a group. This makes it different from realms like human rights which create rights in individuals, and in doing so raises an important question– who, if anyone, can represent 'mankind' as a group? Unless 'mankind' becomes a new subject under international law (the possibility of which is remote) the focus shifts back to states, which are the primary actors on the international stage and are therefore the most likely representatives of mankind.

This in turn raises the question of which states can be said to represent 'mankind', creating a conflict of interest between different groups of states. The nations who have existing capabilities to exploit the resources would like to be rid of the concept or in the alternative to water it down, while nations which cannot currently exploit these resources prefer a stricter interpretation to protect their interests till they are able to develop the capability to exploit the resources themselves. This concern is central to the 1997 Declaration, which calls for space exploration to be carried out "for the benefit and in the interest of all States, irrespective of their degree of economic, social or scientific and technological development".[16]

It is clear that the principle is becoming more and more entrenched in international law, evidenced by it being part of the OST as well as two unanimously passed resolutions of the United Nations General Assembly. If we follow Bin Cheng's understanding of 'instant custom', it can be said that the very passage of these UNGA resolutions unanimously is evidence of customary international law designating space exploration and use as the province of all mankind.[17]

3.2. The Non-Appropriation Principle

The Principle as reflected in Article I of the OST and the UNGA Declarations is normative in nature. Article II of the OST operationalises The Principles by providing that outer space, including all celestial bodies, is not subject to appropriation by claims of sovereignty, occupation or any other means. This is the Principle of Non-Appropriation.

The Principle of Non-Appropriation does not imply that the no form of sovereignty exists in outer space. Article VIII of the OST provides that States shall retain jurisdiction and control over objects appearing on their space registers and the personnel thereon, irrespective of their presence in outer space or on any celestial body or return of the object to Earth.

16 1997 Declaration, *supra* note 15, at clause 1.

17 Bin Cheng, Studies in International Space Law, Clarendon Press, Oxford, 1997, p.139.

4. Private Property in Outer Space

4.1. Property Rights under Space Law

This brings us to the complex question of whether, conceptually, property rights can in fact exist in absence of state sovereignty over the area in question.

Scholars like Bin Cheng have argued that the Non-Appropriation Principle as embodied in Art. 2 of the OST applies not only to appropriation by states but extends to the realm of private law and disallows the creation of any property rights in outer space.[18] However, we have seen that historically and conceptually the idea of private property was not always dependent on state sovereignty and in some conceptions even predates the very concept of a sovereign state. It has been argued that while states are bound by Art. II of the OST and cannot claim sovereignty in outer space, private individuals are not precluded under space law from establishing property rights, so long as these rights are not created by the states and do not constitute appropriation under Art. II.[19]

Although individuals may not be direct subjects of international law, Article VI of the OST makes states internationally responsible for the 'national activities' carried out by "governmental agencies or by non-governmental entities", meaning that far from recognising property claims by their nationals, states are obligated to ensure that their nationals do not make such claims.[20]

We see that although personal property could exist without state sovereignty in outer space, the problem lies with the owners of such properties being subject to jurisdictions who are bound by international law to prevent their subjects from acquiring property in outer space.

This seems to leave us in a position where we are either forced to accept the position that the Non-Appropriation Principle has no legal force and states and individuals are free to territory in outer space, or to disallow such claims to property till permanent settlements in outer space become inevitable. Any solution to this dilemma needs to balance the equity of the Non-Appropriation Principle with a system that incentivises resource extraction and use in order to encourage private enterprise in outer space.

4.2. A New Regime

It is essential to keep in mind that property is not merely to be seen as absolute control over a piece of land but must instead be conceived as a set of

18 Bin Cheng, The 1967 Space Treaty, J Droit Intl. 95 (1968) 538.

19 Gbenga Oduntan, Sovereignty and Jurisdiction in the Airspace and Outer Space, Routledge, New York, 2012, p.201.

20 Thomas Gangale and Marilyn Dudley-Rowley, To Build Bifrost: Developing Space Property Rights and Infrastructure, Space 2005 (2005) 6762.

rights. A regime consistent with the core tenets of space law will have to limit some of these rights while granting others.

Wayne N. White suggests a regime of "functional property rights" which would flow from a state's quasi-sovereign rights over space objects under Article VIII of the OST. He argues that these rights would look almost identical to 'real' property rights on Earth in most ways, except they would be limited in place and time to the space object for the duration of use.[21]

Such a regime would allow states to exert control and maintain order in celestial settlements while also allowing private individuals or entities to participate in the exploration of celestial bodies. However, to ensure that states who do not possess space objects are not put at a disadvantage, owners of the settlements should only be allowed to extract resources in order to meet their needs but not for commercial purposes.

For commercial exploitation of resources in outer space, we would require an international organisation such as the International Telecommunication Union (hereinafter 'ITU'), which already regulates the use of the Radio Spectrum. Authors such as Scott J. Shackelford and Rosanna Sattler point to the ITU as a positive model for an organisation to oversee resource distribution in outer space.[22] The ITU allows every state a single vote on the basis of equality, and allows private entities to participate in debates, framing of guidelines, etc without granting them a vote.[23]

Such a system would keep states in an important position in the regime while avoiding direct control by them over property or resources. The regime would allow resource exploitation in space, provide benefits of the home countries of private entities that participate in such extraction, and at the same time allow for some level of equitable benefit sharing based on the principle of one nation one vote.[24]

This new 'Space Property Organisation' set up along the lines of the ITU will regulate different bodies differently– an approach that works for orbits cannot work on planets, and one that works for planets may not be appropriate for smaller bodies like asteroids or much larger objects like stars. For instance, asteroids and comets would be seen as chattel in this regime as has also been suggested by Leslie Tennen and Andrew Tingkang,[25] allowing

21 Wayne N. White, Real Property Rights in Outer Space, 40th Colloquium on the Law of Outer Space, 1998, p.370.

22 Scott J. Shackelford, The Tragedy of the Common Heritage of Mankind, Stan. Envtl. L. J. 28 (2009) 109, 164; *and* Rosanna Sattler, Transporting a Legal System for Property Rights: From the Earth to the Stars, Chi. J. Int'l L. 6 (2005) 23, 41- 44.

23 Rosanna Sattler, *id.*

24 *Id.*

25 Leslie I. Tennen, Towards a New Regime for Exploitation of Outer Space Mineral Resources, Neb. L. Rev. 88 (2010) 794, 830-831; Andrew Tingkang, These Aren't the Asteroids You Are Looking For: Classifying Asteroids in Space as Chattels, Not Land, Seattle U.L. Rev. 35 (2011) 559, 579-581.

the Space Property Organisation to assign greater property rights extended up to ownership rights over smaller asteroids and comets.
The Space Property Organisation will assign rights on celestial bodies which will be less than complete ownership but will allow for pre-decided rights allowing resource exploitation for commercial purposes. The terms of the allocation would require the assignee to follow certain norms which ensure the sustainable use of resources and protection of the celestial body's environment.
Settlements on Celestial bodies would be allowed; they would be controlled and regulated by terrestrial states under Articles VIII of the OST but would require the permission of the Space Property Organisation for commercial exploitation of resources around them. This system would work well for a temporary settlement which is set up for a particular purpose, but permanent settlements would present a different set of challenges, which are addressed in Section 5.

5. Sovereign Nations in Outer Space

The previous section discussed private property assigned under the existing international regime. However, since the regimes are only proposals at this point, it is important to address possibilities of individuals claiming private property without any regime in place. As pointed out earlier, this would be more likely if the claimant of the property is able to permanently exit the jurisdiction of the launching state.
How then should we see the proposals to 'colonise' Mars or the Moon?[26] As discussed earlier, Article VIII of the OST may allow states to assign limited property rights in such settlements based on its quasi-sovereignty over the space objects they are built on, making them similar to a colony controlled by the State. Historically, however, colonies have had a rocky relationship with the colonising nations, and the UN has historically pursued a policy of decolonisation and self-determination.[27] It hardly seems likely that a system that has been demolished on Earth would be successful to govern people who settle on another celestial body, which would be much farther from the parent state than any terrestrial colony on Earth.
Even if a colony was set up with the intention of the parent state to retain control, the colony would most likely begin to resemble a nation over time. If

26 Sarah Fecht, Colonizing the Moon May be 90 Percent Cheaper than we Thought, 20 July, 2015, https://www.popsci.com/colonizing-moon-may-be-90-percent-cheaper-we-thought (accessed 01.10.2020). *See also*, Amber Jorgenson, Scientists draw up plan to colonize Mars, September 12, 2018 http://www.astronomy.com/news/2018/09/scientists-draw-up-plan-to-colonize-mars (accessed 01.10.2020).

27 G.A. Res. 1514 (XV), Declaration on the Granting of Independence to Colonial Countries and Peoples (14 December 1960).

for instance an individual or a corporate entity was granted the rights to a particular settlement, they would be able to exert an element of control over other residents they take to these settlements; more so due to the inhospitable nature of the environments outside the settlements. Even when the rights in these settlements are distributed more evenly among the residents, the sheer distance from Earth would make it likely that they would set up some structures and institutions to maintain social order.[28]

The question then is whether these settlements would be able to claim statehood under international law once they have achieved a degree of independence.

5.1. Requirements for Statehood

The Montevideo Convention on the Rights and Duties of States establishes four requirements for statehood: 1) a permanent population, 2) a defined territory, 3) government, and 4) the capacity to enter into relations with other states.[29] All four terms are context heavy and extend beyond their simple meaning.

The requirement for permanent population is the fundamental requirement for a state. It connotes a stable community that exists within the territory which is mentioned in the next requirement.[30]

Territory is an important requirement for our purposes, and we should look back to its history in order to look forward to its future which is life in outer space. We have already seen that sovereignty of states was not always intertwined with the idea of territory. Jurisdiction over people living in a broadly defined area was the more important aspect of sovereignty.[31] Over time, land territory became an important aspect of state. This territory needs to be bounded by borders; these need not be fully defined or uncontested but must simply be clear enough to establish a stable political community.[32] There is also no lower or upper limit to the territory an entity must possess in order to qualify as a state.[33]

The next requirement is that of effective government. Conceptually, this requirement for an effective government flows from and is related to the requirement for a stable political community, since such an effective and

28 Dr. Ernst Fasan, Human Settlements on Planets; New Stations or New Nations, Journal of Space Law, 22 (1994) 47.

29 Montevideo Convention on the Rights and Duties of States, entered into force December 26, 1933, 3802 U.N.T.S. 165. [hereinafter 'Montevideo Convention'].

30 James Crawford, Brownlie's Principles of International Law, Oxford University Press, Oxford, eighth ed. 2012, p. 128.

31 F. H. Hinsley, *supra* note 2.

32 North Seas Continental Shelf (Federal Republic of Germany v Denmark); (Federal Republic of Germany v Netherlands) Judgment, 1969 I.C.J. 3, 32 (Feb 20).

33 James Crawford, *supra* note 30.

centralised government is the best evidence for the existence of such a community.[34]

However, a population of people that constitutes a stable political community bounded by defined borders and governed by a stable, centralised government is not necessarily a nation state. Rousseau considered independence to be the decisive criteria of statehood, and this independence is manifested in the Montevideo Convention as the capacity to enter into relations with other states.[35] This is related to what is arguably the most theoretically complex and politically charged issue involved in the birth of a state– recognition by other states. There are two theoretical frameworks to reconcile the political decision of states to recognise an emerging entity as a state with the legal effect of this action on the nature of the entity.

The first is the constitutive theory, according to which an entity or community has no rights or obligations prior to the political act of recognition by other states.[36] This theory would imply that there is some lag before an entity comes into existence *de facto* and when it is *de jure* accepted on the international stage, and this was historically seen in the case of Israel, where recognition was granted as a state that existed in fact.[37] Lauterpacht argues that international personality cannot accrue automatically on proposed states, and that since there are legal criteria for statehood, such determination must be made by some entity.[38] Such entities, he says, are states, who act as gatekeepers to the international realm. Ideally, the act of recognition should be a legal act, based on the fulfilment of legal criteria. However, recognition in the real world is a matter of policy and would thus result in the legal existence of new states becoming subject to whims and interests of existing states

The second theory is the declaratory theory, under which states come into existence based on the other legal criteria for statehood, and recognition is merely a declaration of an existing state of law and fact. This solves the problems caused by the politicisation of recognition, since recognition has no legal effect beyond declaring a particular state's acceptance of an existing legal fact.[39] This theory is borne out by the Montevideo convention itself.[40]

34 *Id*, at 129.
35 *Id*.
36 Hersch Lauterpacht, Recognition in International Law, Cambridge University Press, Cambridge, 1947, pp.1-2.
37 Philip Baum, Full Recognition of Israel: An Analysis of United States Diplomatic Practice in Granting De Jure Recognition to Newly-Established Governments, L. Guild Rev. 8 (1948) 441, 441.
38 Hersch Lauterpacht, *supra* note 36, at 55.
39 James Crawford, *supra* note 30, at 145.
40 Montevideo Convention, *supra* note 29, at 3, 6.

The declarative theory is also the theory which would animate states to bring legal claims against a state which they have not recognised.[41]

5.2. Possibilities of states in outer space

Based on section 5.1, it is conceivable that a nation founded on another celestial body with a stable, mostly permanent population would indeed meet the requirements of sovereign statehood. Should the Principle of Non-Appropriation in outer space then prove to be the stumbling block in the establishment of these new space nations?

The reasons for the Principle of Non-Appropriation are rooted in the Cold War era fears of an inter-national conflict in outer space due to a competition for control over access to outer space and resources therein. Almost all statements of The Principle are accompanied by calls for peaceful uses of outer space and the equitable distribution of the benefits of space exploration.[42] These purposes are meant to prevent existing nation states on Earth appropriating territory in outer space, but an independent nation founded in outer space does not lead to a competition for resources, and is thus not antithetical to the reasons for the broader ideals of The Principle. If states are mere representatives of mankind as a beneficiary of the common heritage that is outer space, it stands to reason that independent states in outer space would not be against the spirit of The Principle but rather represent the next stage in the evolution of this decades-old principle.

6. Conclusion

The space treaties developed very early in the history of space exploration; the OST having been signed even before Apollo 11 landed on the Moon. At the height of the Cold War, the fears of conflict between nations extending to outer space led to the reservation of space only for peaceful purposes. Further, access to outer space was limited to selected nations and was a technological feat which was not easy to develop, leading to fears of space increasing the existing wealth disparities between the developed and the developing nations. The principle of space exploration and use as province of all mankind embodies these concerns and is perhaps the single most important principle in the law of outer space.

Under the existing legal regime based on The Principle, sovereignty in outer space is limited to the quasi-sovereignty retained by launching states over their space objects. It is clear that no existing nation can claim sovereignty over any part of outer space, but this understanding is becoming increasingly strained as we move closer to feasible plans for exploiting space resources and establishing colonies on the Moon and Mars. However, despite valid

41 James Crawford, *supra* note 30, at 145.

42 Outer Space Treaty *supra* note 1, preamble; *See also*, 1997 Declaration *supra* note 15.

criticisms of The Principle in its present form it is not reasonable to discard the principle in favour of a *laissez faire* system. A more reasonable approach is to make The Principle less rigid while still respecting its spirit.

The first stage in this approach would be to create a functional international body to regulate the granting of licenses to exploit resources in outer space (the Space Property Organisation) along the lines of the ITU, with states voting as equals and private individuals participating in the proceedings but not allowed a vote. One important factor that would have to be instilled in the founding principles of the Authority would be a special regard for the environment of outer space in resource extraction.

Greater rights could be assigned by the Space Property Organisation over asteroids and comets up to and including full ownership. The question of planets and Moons would be more complicated. Here the Space Property Organisation may assign rights limited in time and space with riders regarding protection of the environment of the celestial body in particular and the outer space environment in general.

Settlements in outer space would represent the next step in the development of this regime, as well as the development of mankind as a species. It would be best to allow these settlements autonomy to develop their own political institutions consistent with international law. This would mean that we allow new states to arise and protect the interests of mankind in keeping with The Principle.

As such developments occur, the continual affirmation of the peaceful uses of outer space will become ever more important, once again reaffirming the need for space law as a dynamic system.