



Lunar Law – Is it mere Colony Law with Cosmic Application?

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“Whoever gets there first will make the rules. That has been true of every civilization [...] who do you want calling the shots in space?”

Hidden Figures - 20th Century Fox, 2016.

1. Executive Summary

Humanity has toyed with the ideas of space flight and colonisation of new planets for decades. This is evident through the creation of entities whose primary goal is to make this possible (such as NASA, the ESA or JAXA), or throughout science fiction and pop culture.¹ All things begin with a single step and in this instance, figuratively, one small step for mankind.

This research paper seeks to determine what the most likely manifestation of a legal system would be in the event that Earth was able to colonise the Moon. The given scenario is barren in that no details have been provided as to which Earthly state or other entity accomplished this task, or whether valuable viable resources have been discovered on the Moon which have motivated the colonisation itself. Both of these aspects (the who and why) would be important considerations in determining what type of legal system would emerge.

Although colonisation itself is not new to the human race, this event is different as it represents an opportunity to create something new off-world, rather than off-continent. The new legal system should be flexible enough to accommodate unexpected circumstances, yet firm enough to retain and fulfill its purpose.

In order to determine the most likely outcome, I will evaluate the current system of laws which govern the Moon and claims of ownership or jurisdiction over it by the states of Earth. Then, I will formulate and suggest the basic format of a legal system, which, it is

¹ Earth has space agencies, including the National Aeronautics and Space Administration (USA), the European Space Agency (Europe) and the Japan Aerospace Exploration Agency (Japan).

submitted, would be most effective, when colonisation takes place. Much of the data used and submissions made herein are applicable to a colony being formed on Mars, as the concept is largely congruent.

Considering the complexities faced in creating a colony in a humanity-hostile environment a long distance from home, a simple and effective legal system should be the goal.²

2. The Questions Presented

This research scenario presents several questions, including:

1. Having regard to current legislation, can an Earth state colonise another celestial body, such as the Moon?
2. Should the colony be granted sovereign status?
3. What effect will the inhabitants of the colony from different legal systems have on the Moon's legal system?
4. What is the legal status of the colonists? Would they comply with the proposed system?
5. What type of legal system should manifest, be it civil, common, federal or otherwise?

3. Statement of the Facts

Perhaps from the time humanity became self-aware, our curious nature caused us to explore our surroundings. We have tested boundaries, sought sustenance and survived in a range of hostile circumstances from natural disasters to those of our own creation. Whether it

² Sharp, T. (2018). *How Far is the Moon?* Space.com. Available at: <https://www.space.com/18145-how-far-is-the-moon.html> [Accessed 17 Apr. 2018].

be due to our own poisoning of the world, overpopulation, war, science, the chasing of adventure or ambition, we now look to the stars for the potential future of our species. In reality, we have been looking to the stars for some time.

The Committee on the Peaceful Uses of Outer Space (“COPUOS”)

Humanity has legislated each others’ use of outer space for decades, despite the inability of many nations to actually get to space. In 1959, COPUOS was established by the United Nations (‘UN’) to govern the exploration and use of space for the benefit of humanity’s peace, security and development. The committee was tasked with *‘reviewing international co-operation in peaceful uses of outer space, studying space-related activities that could be undertaken by the UN, encouraging space research programmes, and studying legal problems arising from the exploration of outer space’*.³

COPUOS established a network, of five international treaties and five sets of principles, on space-related activities.⁴ Two treaties and one set of principles are discussed hereunder.

The Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space including the Moon and other Celestial Bodies⁵

Usually known as the ‘Outer Space Treaty’, the treaty was the foundational legislation on outer space and provides the basic legal framework of international space law. The most relevant article of the treaty states that *‘outer space, including the Moon and other celestial*

³ Unoosa.org. (2018). *COPUOS*. [online] Available at: <http://www.unoosa.org/oosa/en/ourwork/copuos/index.html> [Accessed 18 Apr. 2018].

⁴ Unoosa.org. (2018). *Space Law Treaties and Principles*. [online] Available at: <http://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties.html> [Accessed 18 Apr. 2018].

⁵ Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, UN, 1967.

bodies, is not subject to national appropriation by a claim of sovereignty, by means of use or occupation, or by any other means' (emphasis added).⁶

A colony is generally defined as a country or area under the full or partial control of another country, and occupied by settlers from that (controlling) country.⁷ The definition implies a claim of sovereignty over a geographical area. It also refers to control, and in 'standard' colonising activities, the controlling country imposes their legal system upon the geographical jurisdiction of the newly established colony. Furthermore, the new colony is invariably reliant on its controlling country for resources – at least to some degree – whilst you may colonise an area specifically to gain its resources, you would need to take many baseline resources with you initially.

Given that the treaty is UN legislation, the question is whether colonising the Moon by any state would even be considered legal given the definition of a colony above, unless sanctioned by the UN or as a direct result of UN-mandated efforts (given that there are currently 107 party states to the treaty).

The Agreement Governing the Activities of States on the Moon and Other Celestial Bodies⁸

Better known as the 'Moon Treaty', this agreement seeks to turn the jurisdiction of celestial bodies over to the international community and tries to ensure that all space activities conform to international law, including the United Nations Charter.⁹

The treaty states that the Moon is not subject to national appropriation or claims of sovereignty, prohibiting any land on the Moon from being owned by a state, despite the placement of facilities, personnel or equipment there.¹⁰

⁶ Article II, Outer Space Treaty, UN, 1967.

⁷ Oxford Dictionaries | English. (2018). *Definition of 'colony' in English by Oxford Dictionaries*. [online] Available at: <https://en.oxforddictionaries.com/definition/colony> [Accessed 18 Apr. 2018].

⁸ Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, UN, 1984.

⁹ Article 2, Moon Treaty, UN, 1984.

The Moon Treaty is considered failed legislation, given that in the 30+ years from its inception, it has only attracted 18 party states.

It is worth noting here that a basic principle of international law is a state's consent to be bound to any provision, and, whilst the 18 parties would be bound to the provisions of the Moon Treaty, none of the 18 are considered major space-faring nations. It is, however, debated whether the Moon Treaty could be considered customary law due to the lack of denunciations of it by space-faring states.¹¹

The Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space¹²

Adopted as a resolution of the UN's General Assembly in 1962, this declaration also contains principles prohibiting 'outer space and celestial bodies' from being subject to national appropriation (or other claims of sovereignty), and which principles provide that all outer space activities shall be carried out in accordance with international law.¹³

The further principles of this resolution almost mirror those of the Outer Space Treaty and may have served as a precursor for its drafting.

The origin of legal systems in colonies

When a colony is created, two forms of legal influx can take place: transplantation (if no legal system exists in the geographical area of the new colony), or imposition (if the colonising country forces the abandonment of an existing legal system to force the use of its

¹⁰ Articles 11.2, 11.3, Moon Treaty, UN, 1984.

¹¹ Listner, M. (2011). *The Moon Treaty: failed international law or waiting in the shadows?* [online] Thespaceview.com. Available at: <http://www.thespaceview.com/article/1954/1> [Accessed 1 May 2018].

¹² Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space, UN, 1962.

¹³ Principles 3 and 4, Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space, UN, 1962.

own). When imposition takes place, the level of compliance with the 'new' legal system by those whose legal system has been replaced, can be questionable. The new system may be complied with out of fear, or compliance may be feigned, or the colonised population may reject the new system in its entirety. For example, with the introduction of legislation in South Africa to administer African indigenous law, compliance was often feigned in order to avoid sanctions by the government, but on a personal level the legislation was often completely ignored as it did not serve the interests of the community, given that it was impractical to use or it represented significant changes to indigenous law, while purporting to be a mere written version of it.¹⁴

Colonial inhabitants

At some point the inhabitants of the Moon colony will come from different Earth states, even if not initially. It is inevitable that individuals from multiple geographical and legal jurisdictions on Earth will be present in the colony and interacting with each other. The colony would require a legal system, which is both prescriptive (to set a level of conduct required of inhabitants) and adequately equipped to address disputes from persons of different legal backgrounds. We must consider that the first generation of colonists will face a set of laws which is not necessarily similar to those of their home nation and an important aspect of creating the colony will be imposing the new legal system on the inhabitants from other jurisdictions.

¹⁴ See Himonga, C. (2014). *African customary law in South Africa*. Cape Town, South Africa: Oxford University Press Southern Africa.

4. The Argument

The argument portion of this research paper will address the questions presented in Section 2, using facts discussed in Section 3 above.

Having regard to current legislation, can an Earth state colonise another celestial body, such as the Moon?

The clear message from the available legislation and principles discussed above is that, at present, no country may lawfully lay claim to the Moon in terms of international law. This would include the establishment of a colony there. Factually speaking, however, before the hypothetical situation which gives rise to this research paper, the colonisation of the Moon was not even a possibility. No country could protect any claim it did make in respect of the Moon. This position would be different once a country is able to get its people and its resources to the Moon.

Legally speaking, at present, no country may claim ownership the Moon (or their colony on it). However, if a country is able to place its people and resources to sustain them indefinitely on the Moon, it suggests that the relevant law ought to be revised. In order for any law to stay relevant, whether it is domestic or international, it must be revised and updated to work for the community it serves and their abilities. A claim to a colony on the Moon is, in this situation, therefore an issue of outdated legislation rather than one of technical possibility.

Should the colony be granted sovereign status?

It is unlikely that any one country would have the ability and resources to create and claim the Moon's colony as its own. In many of man's space exploration efforts, a

culmination of international effort has been present – the International Space Station, for example, operates under the co-operative governance, administration and maintenance of a number of countries.¹⁵ It is only fair that if the Moon colony is the product of a number of countries working together, that the countries must control it together, which could lead to many disputes and unnecessary bureaucratic process required to resolve minor issues. The alternative is for the colony to be granted sovereign status and to control itself from within.

With exception to the idea that a colony relies on its controlling country for resources, as the Moon colony may rely on Earth, the Moon colony could satisfy the current legal requirements to be declared a sovereign state.¹⁶

The initial requirements, of a permanent population and a defined territory, are satisfied simply by the colony's existence. The requirement of government (and its structure, at least initially), would depend on who the controlling country / countries are and their respective structural preferences. The final requirement is more complicated; the capacity required to enter into legal relations with other states – given that the Montevideo Convention provides that statehood (and a concomitant legal capacity) is independent of recognition by other states.¹⁷ In practice, however, statehood manifests upon the recognition of the new state by existing states.¹⁸ There are multiple examples of countries that fit the first three requirements, but not the fourth.¹⁹ States who are not fully recognised are therefore,

¹⁵ The station is governed together by 10 European countries, the USA, Russia, Canada and Japan. See European Space Agency. (2013). *International Space Station legal framework*. [online] Available at: https://www.esa.int/Our_Activities/Human_Spaceflight/International_Space_Station/International_Space_Station_legal_framework [Accessed 22 Apr. 2018].

¹⁶ In order to be recognized as a state, a person of international law should possess the following qualifications: (a) a permanent population; (b) a defined territory; (c) government; and (d) capacity to enter into relations with the other states – article 1, Montevideo Convention on the Rights and Duties of States, UN, 1934.

¹⁷ This is known as the declaratory method of state recognition – see Dugard, J *et al.* (2016). *International law*. 4th ed. Cape Town: Juta, pp.89-92 and Article 3, Montevideo Convention, UN, 1934.

¹⁸ The constitutive method of recognition, *ibid.*

¹⁹ Mulcey, M. (2015). *A World Tour of the States not recognized by the UN*. [online] Le Journal International - Archives. Available at: https://www.lejournalinternational.fr/A-World-Tour-of-the-States-not-recognized-by-the-UN_a2998.html [Accessed 19 Apr. 2018].

technically, both states and non-states, depending on whether legislation or practice is referred to in argument.

This means that the main hurdle in granting the Moon colony sovereign status could be convincing enough Earth states to recognise it as a separate state. However, could a state be recognised as such when it is completely dependent on another state / states for resources? Taking the Vatican City State or the Principality of Monaco as examples, the Moon colony would be no different, merely further away.

In being declared a sovereign state, however, the Moon colony would technically be decolonised. In effect, the Moon would then be both colonised and decolonised in the same swift action, though this is an argument in semantics.

While the remainder of this research paper is written on the premise that the Moon is declared a sovereign state, I will continue to refer to it as the ‘Moon colony’ for consistency.

What effect will the inhabitants of the colony from different legal systems have on the Moon’s legal system?

It is unreasonable to expect that all individuals living in the colony would originate from one country and one legal system on Earth. If these individuals are not conforming to one set legal system (such as that which operates under the umbrella of a state), it is likely that tribal law, and clashes between ‘tribes’, will emerge in any disputes between them.²⁰ In this situation, it would be impractical to have multiple legal systems overlapping in one jurisdiction. Additionally, an unwritten common law system would be equally impractical, presenting difficulties in proving intricacies of law during disputes, where there is quite literally no letter of law to which one may refer in order to prove or defend a matter.

²⁰ Tribal law here meaning that the persons will act in accordance with, and expect justice in terms of, the laws of their home state or ‘tribe’.

A civil, written system of law would be essential, where clarity lies in a hierarchal system – that is, a base system of predetermined supreme (perhaps constitutional) law, agreed as being in the best interests of the inhabitants and to which all other laws must be subservient, should they clash.

What is the legal status of the colonists? Would they comply with the proposed system?

On Earth, and with the exception of ambassadors, diplomats or any other permutation of the diplomatically immune, when individuals enter a foreign country, they are subject to that country's laws, regardless of those which apply in their home country. The lunar legal system should be no different, especially once established as a sovereign state.

If the Moon colony were recognised as a state, the inhabitants would be seen as its citizens. Two options exist in the recognition of the individual's citizenship:

1. A mandatory abandonment of an individual's claim to citizenship of any Earth state / states upon leaving Earth, to become a citizen of the Moon colony and to permanently, unequivocally and irrevocably accept its laws as their own. The Moon colony could then establish embassies in the countries on Earth and function on an international plane as any other state; or
2. A holding of dual citizenship between the Earth state(s) and Moon state by the inhabitants. If the Moon's citizens travel back and forth to Earth, the Earth state citizenship could be in use and *vice versa*. This option does away with the need for embassies of the Moon colony on Earth.

The second option creates a problem, however, when having regard to the second generation of Moon colonists, those who are born in the colony. These individuals would be granted Moon citizenship by right of birth, but would have no Earth citizenship on which to rely if they travelled to Earth. It is submitted that a new form of citizenship should be created

for these individuals, while on Earth, perhaps under the protection of the United Nations as their Earth 'state'.

Regardless of the type of legal system created for the colony, a criminal sub-system would be required to regulate conduct of citizens and prescribe appropriate sanctions for disobedience. Further discussions on the criminal law aspect of the colony fall beyond the scope of this research.

What type of legal system should manifest, be it civil, common, federal or otherwise?

If the Moon colony is the result of a co-operative effort between different states, surely this should be seen in the resultant legal system even if the colony is declared a state and would not be subject to the control of Earth. The founding states (rather than 'controlling states', as we are now discussing an entity which would not be controlled by the states after establishment), should have an opportunity to contribute to the legal system created for the colony. But, do modern examples of country-hybridised legal systems exist? If so, are they effective?

In South Africa, the current legal system is the result of a combination of others – it finds heritage in the English, Roman-Dutch and African indigenous systems. In the United States, much of its original codified legal system was born from English law, though today, many further innovations of American civil law have taken place. In line with the submissions above regarding a legal hierarchy, both of these countries rely on a constitutional document as their supreme law, and both constitutions contain a bill of rights to protect their citizens. While there is merit in the idea of a supreme law which holds the rights of citizens

above all else, whether these laws are implemented as originally intended is open for debate.²¹

We could also consider the Intergovernmental Agreements, which govern the Columbus Space Station Project or International Space Station, as they represent examples of legal systems which had direct creative influence from their founding countries, given that they were drafted as agreements rather than statute. In the latter instance, the signatory parties further agreed to develop a code of conduct for space station crews, which included the power to punish crimes, safety, repatriation of nationals and the extradition of criminal offenders to Earth.²² These agreements, along with the general principles of law recognised by Earth's legal systems (as an adaption to a recognised source of international law), should be the starting points for drafting the hybridised, constitutional legislation in the Moon state.²³

If multiple colonies are formed on the Moon, by different Earth states (either by earlier agreement or later factional splits), a federal system of administration could be considered, however, it is submitted that if each colony has its own set of laws (like the states of America), all colony laws should continue to be subservient to the established constitutional law of the Moon as a whole. A federal system, in this instance, would allow the controlling states to retain some degree of legal jurisdiction over their individuals on the Moon (as opposed to relinquishing full control post-establishment of the colony), and the individuals could continue to live under a set of laws to which they are largely familiar. This means sub-colonies could be created, controlled by the states of Earth, although these states and the laws

²¹ See Liebenberg, S. (2017). *South Africa has a model Bill of Rights. But it doesn't feel that way*. [online] The Conversation. Available at: <https://theconversation.com/south-africa-has-a-model-bill-of-rights-but-it-doesnt-feel-that-way-74457> [Accessed 24 Apr. 2018] or McMaken, R. (2016). *Why the Bill of Rights Is Failing?* [online] Mises Institute. Available at: <https://mises.org/wire/why-bill-rights-failing> [Accessed 24 Apr. 2018].

²² Oduntan, G. (2017). *Why NASA Needs To Establish Martian Law*. [online] Smithsonian. Available at: <https://www.smithsonianmag.com/science-nature/why-nasa-needs-to-establish-martian-law-180965259/> [Accessed 22 Apr. 2018].

²³ Article 38(1)(c), Statute of the International Court of Justice, United Nations.

which they administer within the sub-colonies, must comply with the lunar constitutional law.

5. Conclusion

If the technology allows, then technically, yes, the Moon could be colonised. This action would, however, require revision of the current legislation which regulates humanity's claims of ownership or control over the Moon (and any other celestial body, for that matter), in order to be considered legal under international law.

It is submitted that declaring the Moon a sovereign state and providing it with a civil, written legal system, which answers to a supreme constitutional document, would be the most efficient and effective means to creating and enforcing a set of laws within the colony. The constitutional document should contain a bill of rights, setting out the rights of the inhabitants and to what extent they are protected, especially those rights considered non-derogable, such as the rights to life, protection from torture or unnecessary detainment, the rights to integrity, dignity and a protected right of access to basic resources.

As above, if more than one colony is established on the Moon, a federal system may be effective as it allows a certain amount of flexibility from the controlling states in the administration of the colony.

The inhabitants of the colony should be declared citizens of the new state and as a result, be subject to its laws. These citizens should either abandon their original citizenship and / or irrevocably agree to abide by the laws of the colony, while they are present within. Citizens of the colony born within its boundaries would be raised under the manifesting legal system, as within any other Earth state.

As Earth will be the Moon's main resource provider, at least initially, the legislative documents drafted must include dispute resolution procedures to ensure that the Moon is not summarily cut-off from its resources while a dispute is mediated.

In colonising the Moon and declaring it a sovereign state, humanity has an unprecedented opportunity to reboot the concepts of law and governance, though much uncertainty will exist in the early years from establishment. While a constitutional system of law is recommended to ensure certain rights and liberties are protected *ab initio*, we do not have enough data at present to know what life on the Moon would actually be like. To accommodate for this, if the colony is declared a state, the government would have the inherent ability develop or adapt the legal system to the circumstances present within the colony or the hostile environment in which it is based. This flexibility will give the lunar legal system the opportunity to protect, provide and grow to be useful for its citizens.