A Foucauldian Genealogy of Private Property and Appropriation Rights in Celestial Bodies

by

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it a great privilege to find myself, sixty years later, following in his footsteps by completing *my* graduate thesis on our species future ventures into this final frontier he so loved.

Abstract

Humans have preoccupied themselves with thoughts of the celestial since time immemorial. Yet, it has only been over the past few decades that these thoughts have centered around the notion of privately owning or appropriating celestial bodies and their resources. This new fascination with celestial private property rights is often attributed to the scientific and technological developments that have transformed space travel from a dream to reality. This thesis attempts first, to problematize the preoccupation contemporary space law discourse has with exclusive rights in celestial bodies and second, to provide a more substantive explanation for its emergence.

To do so, this thesis utilises the theoretical toolbox of philosopher Michel Foucault, especially the genealogical method of discourse analysis. Through the use of genealogy, this thesis dismantles the narrative weaved around the celestial domain's uniqueness that at the present operates to expulse from the corpus of 'acceptable' space law research works that either draw a comparison between the proposed establishment of exclusive rights and terran property rights systems or address wider conceptions of power when discussing these rights. In doing so, it shows that despite being waged in a new domain, the contemporary discussion of these rights is but the latest manifestation of a much older discourse, that which concerns the relationship between private property, sovereignty and the commons. Genealogy goes on to expose the different conception of this relationship that each manifestation of this discourse presented as 'true', and show that each 'truth' was produced through the operation of a different modality of power.

The thesis concludes that the power that *demands* we speak of these rights now, millennia into our species conversation about the celestial domain, is a neoliberal governmentality that ought to be countered and resisted. The reason for this, it is argued, is the fact that this power that operates

through contemporary space law discourse, attempts to produce the global population as *homines oeconomici,* meaning beings whose every sphere of life is economised and are thus unable to fulfil the ultimate telos of international law; the betterment of mankind.

Résumé

Depuis des temps immémoriaux, les humains se préoccupent des espaces célestes. Mais, ce n'est que dans les dernières décennies que la problématique se tourne autour de la notion de la propriété individuelle ou de l'appropriation des corps célestes et de leurs ressources. Cette nouvelle fascination concernant les droits individuels exclusifs sur les corps célestes est souvent attribuée au progrès scientifique et technologique qui a transformé le rêve du voyage dans l'espace à une réalité. La thèse essaie de problématiser le discours contemporain du droit d'espace sur les droits exclusifs aux corps célestes, ainsi que d'offrir une interprétation approfondie des causes de l'apparition de ce discours.

Pour atteindre cet objectif, la thèse utilise les outils de la théorie philosophique de Michel Foucault et, en particulier, sa méthode généalogique de l'analyse du discours. En utilisant la généalogie/ cette approche, la thèse démonte le récit sur l'unicité du domaine spatial qui tend à exclure du corpus de la recherche « officielle » du droit d'espace tant les essais comparatifs entre l'établissement des droits exclusifs et le régime terrestre des droits à la propriété individuelle, que les essais traitant la notion du pouvoir concernant ces droits. De cette manière, ce travail montre que le débat contemporain sur les droits prédits, bien que mené dans un domaine nouveau, constitue l'apparition récente d'un discours ancien portant sur la relation entre la propriété individuelle, la souveraineté et res communis. La généalogie démontre comment la conception de cette relation est présentée comme « réelle » et expose que chaque dite « réalité » est produite à travers des modalités du pouvoir.

La thèse arrive à la conclusion que le pouvoir qu'impose actuellement le débat sur ces droits, après de milliers d'ans de réflexion sur le domaine spatial, constitue une gouvernementalité néolibérale

à laquelle il faut contredire et résister. La cause de cette contradiction se trouve dans le fait que ce pouvoir, qui fonctionne grâce au discours contemporain du droit d'espace, s'efforce de produire la population universelle comme *homines oeconomici*, n'ayant pas la capacité d'accomplir le telos primordial du droit international, c'est-à-dire la prospérité de l'humanité.

Introduction

Humans have always preoccupied themselves with thoughts of the celestial. If the popular linguistic 'myth' regarding the ancient Greek word for human, 'ἄνθρωπος' (ánthrōpos), is to be believed, this fascination is the defining feature of our species. This myth posits that 'ἄνθρωπος' derives from the words ἄνω (ánō) and θρώσκω (thrōskō) and denotes a being that looks upwards. According to this etymology, the human species is distinguished from all other creatures of this earth on the basis of its ability to gaze up, towards the heavens. Though this alleged etymology has been debunked and its importance overshadowed by the many modern scientific ways of differentiating our species from others, the simple gesture of looking upwards and the millennia of pondering it has led to have played an enormous part in the shaping of our cultures, sciences, consciousness and goals.[1]

Our species' thoughts on the celestial domain were never confined to ones of helpless wonder. Despite the primitive state of their technology, humans from all over the world, guided by the primordial need to explore, spun tales of space travel as early as the fourth century BCE.[2] Long before history made a legend out of Neil Armstrong, poets and writers made legends out of characters like King Kakudmi, Lucian of Samosata and Duracotus.[3] And long before Apollo 11

[1] See Beekes, Robert, *Etymological dictionary of Greek* (Leiden: Brill, 2010), at 107 for the dispelling of this popular myth.

[2] One of the first recorded tales such as this, is that of King Kakudmi in the *Mahabharata* which is dated around 400 BCE.

[3] Lucian of Samosata was the protagonist and writer of *A True Story.* In this 2nd century CE novel which is considered to be one of the first works of science fiction despite it being a parody, Lucian and others travel to the Moon after being caught in a whirlwind; Duracotus, a character in Johannes Kepler's 1608 novel *Somnium*, travels to the Moon with the help of a daemon.

completed its infamous voyage, peoples' imaginations travelled to the stars on flying palaces, ebony horses and through the propulsion of giant guns.[4] Yet, despite all the stories of celestial adventures and the eons over which they fed and perpetuated humankind's desire to know and reach the moon and beyond, it has only been in the past few decades that people have spoken, be it favorably or not, of owning and appropriating celestial bodies.[5]

In fact, though the discussion around the legality of celestial private property and appropriation rights began in earnest in the 1960s as the **Outer Space Treaty** ("OST") was being negotiated, it is only in recent years that the arguments in favor of the establishment of these rights have seem to gain traction.[6] This can largely be attributed to the fact that the long-held belief that there can be no private appropriation and property rights in celestial bodies under international space law has only been contradicted in this past decade by the actions of certain States. By utilising the fact that the language of the OST is at best vague, State Parties to the Treaty and private entities alike have began to doubt any postulation that private appropriation and property rights in celestial bodies are prohibited. Most notable amongst these states are the United States and Luxembourg who have introduced and passed domestic legislation that allows private entities and natural persons within their jurisdiction to appropriate the resources of celestial bodies by arguing that

[4] Vimanas were the mythological flying palaces depicted in many Hindu and Sanskrit stories, one of the abilities of which was to fly to the stars. The are featured in both the *Mahabharata* and the *Ramayana* (400 BCE); In the *Arabian Nights,* the earliest version of which appears in 700 CE , one of the tales told speaks of a mechanical ebony horse which can fly its rider to outer space; Julius Vern in *From the Earth to the Moon* (1865) has three of his characters launched to the moon with a gigantic columbiad gun.

[5] The story that has come closest to approximating the conversations we have today about celestial bodies is Lucian of Samosata' s *True Story* in which Lucian, the protagonist, gets caught up in a war between the inhabitants of the sun and the moon, over who has the right to colonise the Morning Star (Venus).

[6] Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, 27 January 1967, 610 UNTS 205 (entered into force 10 October 1967)

only exclusionary rights in relation to celestial bodies *themselves*, not their resources, are prohibited by the OST.

The US legislation **Spurring Private Aerospace Competitiveness and Entrepreneurship Act of 2015** ("SPACE Act") has the explicit goal of promoting the "commercial space resource exploration and utilization industry".[7] This act, according to **§ 51303**, endows any US citizen with the right to possess, own, use and sell any asteroid or other space resource they have obtained through commercial space activities that comply with US and international law. The Luxembourg **Loi du 20 juillet 2017 sur l'exploration et l'utilisation des ressources de l'espace** follows a similar path since, as the country's Deputy Prime Minister pointed out, the Law is meant to reinforce Luxembourg's "position as a European hub for the exploration and use of space resources".[8] The brief legislation is most notable for its first Article which simply states that "space resources are capable of being appropriated".

Unfortunately, all too often, this newfound fascination with celestial private ownership is given no more than a cursory glance, dismissed as simply the result of the recent technological advancements that have made this type of ownership a possibility and thus, turned it into a legal debate. However, the inadequacy of our technologies has never truly limited our species' imagination before so, the question still remains; 'why do we speak of owning the Moon and other celestial bodies *now*, millennia after our species began the conversation about outer space?'. Contemporary literature on space law, though greatly concerned with the legality of private

[7] United States House of Representatives, "Space Resource Exploration and Utilization Act of 2015: Report 114-153" *114th Congress 1st Session*, at 1.

[8] Loi du 20 juillet 2017 sur l'exploration et l'utilisation des ressources de l'espace, *Journal Officiel du Grand-Duche de Luxembourg*, No. 674 du 28 Juillet 2017; Foust, Jeff, "Luxembourg adopts space resources law", *Space News* (17 July 2017) at http://spacenews.com/luxembourg-adopts-space-resources-law/ [accessed 06/05/2018]

ownership *in* and appropriation *of* celestial bodies and their resources, is devoid of any works that attempt to answer this question or that even acknowledge its need to be asked. And yet, this is a question that ought to be answered, even if to simply satisfy the spirit of curiosity that has always permeated our celestial ventures.

The first chapter of this thesis will tackle the task of problematizing the absence of works dealing with this question. It will do this by exposing the lacuna created by the general lack of critical works on celestial private property rights which, though at first glance unremarkable, is, in fact, a testament to the curious nature of contemporary space law literature. Partly, this curious nature derives from the fact that in a short period, between the late 1960s, when the OST was negotiated and adopted, and the late 1970s, some of the core principles of international space law went from almost universally accepted to widely contested.[9] Of particular note is the fact that the most contested amongst these principles is the one most pertinent in answering the question ignored by the literature and at the heart of this thesis; the principle enshrined in **Article II** of the OST, which prohibits States from appropriating celestial bodies and their resources by *any* means, and was initially taken to mean that private appropriation was also prohibited.

Another proverbial red flag is raised by the stark contrast found between contemporary and early works in this field. Unlike now, when doctrinal research dominates the field, in its early years – the 1950s and 1960s – space law literature engaged heavily in critical discussions that delved not

[9] Goedhuis, writing in 1981, was one of the first to note this shift in the way people regarded some the core principles of space law. Discussing the principles of freedom of exploration and use of outer space and celestial bodies, common interest and of celestial non-appropriation, he posited that though at first, in the 1960s and early 1970s, the principles had received a warm welcome by states and space officials, at some point during the turn of the decade, the notion that the principles were not in any way binding began to be popularised. See Goedhuis, Daniel, "Some Recent Trends in the Interpretation and the Implementation of the Rules of International Space Law" (1981) 19 Columbia Journal of Transnational Law 213

only into the practicalities of legal instruments but into intricate questions of legal theory. In other words, between the 1960s and now, interdisciplinary works which engage heavily with philosophy and critical theory have been slowly expelled from the realm of 'acceptable' space law scholarship. Space law scholars dismiss this type of research as no more than "amateurish dabbling" with irrelevant and easily misinterpreted theories and methods as Vick puts it, while philosophers and humanities scholars scoff at the idea of analysing matters relating to space, viewing such endeavors as being concerned with the absurd and abstract, in a way that is beneficial to no one.[10] As a result, certain insights on private property that are common in scholarship on terran property, particularly those that embrace a wider conception of power (i.e. power that is not conceived only in terms of resources, influence or institutional authority), are almost completely absent from the body of academic works on space law. Unlike its terran counterpart, space law scholarship's discussion of property rights fails to acknowledge that property in land - no matter where that land is - is not a concept confined to legal doctrine. Property, instead, relates to how we constitute ourselves, to our social relations and interactions with others and to multiple axes of social differentiation, such as race and gender.[11] These relations are what make property, in essence, a power relation, and require that anyone who concerns themselves with questions relating to property to acknowledge that it is a quintessential factor "in the actual distribution of forms of personal, political, economic, social or legal power".[12]

[10] Vick, Douglas, "Interdisciplinarity and the Discipline of Law" (2004) 31:2 Journal of Law and Society 163, at 164; MacDonald, Fraser, "Anti-Astropolitik: outer space and the orbit of geography" (2007) 31:5 Progress in Human Geography 592, at 610

[11] See Davies, Margaret *Property: Meanings, Histories, Theories* (New York: Routledge-Cavendish, 2007)

[12] *Ibid,* at 52

Space law discourse dismisses the problem that is this lacuna by promulgating the "fact" that outer space is "a unique medium with attributes unlike any physical area on Earth [that] requires an approach that is also unique, *one that is not burdened with the historical shackles of terran-based legal regimes*".[13] This thesis by no means opposes the view that there are unique attributes to the celestial domain that require the taking of novel approaches, including when it comes to property. What it *does* oppose however, is the notion that space is a tabula rasa, a domain in which humanity's past actions in the legal, political and social sphere have no relevance. This thesis posits, instead, that the widely held belief about the uniqueness of space, the belief that "it would be presumptuous to attempt to draw lessons" from the past "in the context of a space law text, regarding the future of humankind's expansion into outer space" is part of a narrative, a myth, that is told in an effort to stop any critiques of the proposed establishment of celestial property rights from emerging.[14]

To address the matter at the heart of this thesis, namely, the reason behind the relatively recent preoccupation with celestial private property rights and its potential effects, requires upsetting this narrative. In the process of doing so however, it is also necessary to place the production of this narrative within the context of the very conception of power that it operates to expulse from the literature on celestial private property, that of power as a *relation*. However, another pointed question arises at this point: why, as the thesis title denotes, use the theoretical tools of Michel Foucault to upset this narrative, explain the recent fascination with celestial property and interpret both in the context of power relations? What can a French philosopher, a historian of systems of

[13] Tennen, Leslie I., "Enterprise Rights and the Legal Regime for Exploitation of Outer Space Resources" (2016) 47 The University of the Pacific Law Review 281, at 281 [emphasis added]

[14] Reynolds, Glenn; Merges, Robert, *Outer Space: Problems of Law and Policy* (Boulder: Westview Press, 1989), at 10

thought, who never wrote about space and private property nor spared law more than a cursory glance, tell us about private property in celestial bodies? Foucault, perhaps most famously known for his views on the concept of power – which has been identified as central to any question pertaining to property –, developed through his works a method of discourse analysis that, as the final sections of the first chapter will further explain, is ideal for dismantling the myth of celestial property's unique nature and explaining the intense discussion that has developed around the establishment of celestial property in recent years. This method is genealogy, which analyses discourses - meaning bodies of knowledge like space law - by reconnecting them to "the historical struggles and exercises of power that shaped their character".[15] It is best understood as an alternative to traditional historiography that attempts to identify "the origin of what we take to be rational, the bearer of truth" and show that it "is rooted in domination, subjugation, the relationship of forces – in a word, power".[16]

Having problematized the existing scholarship on celestial private property rights, the first chapter will conclude by further explaining the benefits of an analysis using Foucauldian tools and give way to the second chapter of this work which will begin by exposing the notions that have been made to "function as true" by contemporary space law discourse.[17] The reason for this exposition lies, as it will be shown, with the fact that according to Foucault, "the exercise of power in our

[15] Garland, David, "What is a "history of the present"? On Foucault's Genealogies and their Critical Preconditions" (2014) 16:4 Punishment & Society 365, at 373

[16] Arnold I. Davidson, "Archaeology, Genealogy, Ethics," in Couzens Hoy, David (ed.) *Foucault: A Critical Reader* (Oxford: Basil Blackwell, 1986), at 225.

[17] Michel Foucault, "Truth and Power" in Gordon, Colin (ed.), Power/Knowledge: Selected Interviews and Other Writings 1972-77: Michel Foucault (Brighton: The Harvester Press, 1980), at 131

society" does not demand "only acts of obedience and submission, but truth acts".[18] The prominent such "truth" in this case, is the notion that private property rights in celestial bodies are not only capable of being established under international law but, more importantly, *ought* to be. Subsequently, after taking into account the fact that celestial private property rights have only been a distinct object of discourse since the mid-twentieth century, it will be posited that this "truth" that is produced about them is the latest in a series of "truths" on the relationship between sovereignty, the commons and private property rights. Taking as a guide Foucault's separation of the past millennium into four distinct periods, each with their own unique modality of thought, the second chapter will show that in each of these periods, different conceptions of the relationship between sovereignty, the commons and private property were presented as "true knowledge" by the truth-producing apparatuses of the time (such as educational institutions, the Church and so on).

More specifically, it will be shown that in what Foucault termed the Pre-Classical Age (which ran from the late Middle Ages to 1650s), throughout Catholic Europe, it was held that all of creation was the sovereign dominion of the Christian god and all his followers could have private property in fulfilling their duty to be good stewards of God's dominion. However, this did not mean that all that was held in common could be made private, as was famously explained by Grotius (amongst others) in relation to the inability of the high seas to belong to any country or man. In the Classical Age (from the 1650s to the late 1700s) on the other hand, private property was presented as the *raison d'etre* for the formation of government and thus, the source of the peoples' sovereign power. At the same time, thinkers began to abandon the idea that the state of nature (where everything

[18] Foucault, Michel, *On the Government of the Living: Lectures at the College de France 1979-1980* (Basingstoke: Palgrave Macmillian, 2014), at 82

was held in common) was an ideal state and began associating it with the "savage" living of the indigenous populations. This led to the promulgation of the "truth" that the commons, like all else, could succumb to private ownership when that land was mixed with one's own labor. In turn, in Modernity (from 1800 to the 1960s), when the discussion on celestial private property became explicit, saw the emergence of a third "truth". This time, the "truth" was that celestial bodies and their resources could not be appropriated by private entities, nor should they be if they international community wanted to uphold its moral duty to maintain world peace. Finally, the Contemporary Age's (from the late 1970s to present) "truth" holds that private property and appropriation rights in celestial bodies should and will be established.

The exposition of this multitude of "truths" will not only prove the ephemeral nature of what the discourse of space law proclaims to be true but, more importantly, it will upset the narrative of the uniqueness of space, by showing that, despite having to do with uncharted territory, the discussion on celestial private property rights is but one of the many facets of a much older discussion; that on the relationship between private property, sovereignty and the commons. The second chapter of this work will also refute this narrative by utilising another tool of genealogy, that of comparison. More specifically, a comparison will be drawn between the discourse on outer space, the so-called "Final Frontier", and that on the expansion to the American Frontier. Both discourses will be shown to utilise similar themes, most notable those of "limitlessness" and the "Frontier Hero". In exposing the similarities between the ways each discourse engages with these themes, genealogy will further shake the bedrock of this narrative by showing yet another way in which

celestial property rights, despite being a modern concept, constitute a problem which has a "contingent and historical character".[19]

Having upset the narrative of the celestial domain's "uniqueness", the thesis will move onto its third chapter, where attention will be brought once again to the main question this work is attempting to answer: 'why are we speaking of owning and appropriating celestial bodies now, millennia after commencing the conversation around them?' To finally answer this question, the genealogical method will attempt to catalogue the historical emergence of the multiple "truths" uncovered in the second chapter to show how each of them, including the contemporary one, is the product of power, of a "hazardous play of dominations".[20] In contextualising the emergence of each "truth", this chapter will have to look for specific historical conditions and events. A brief exposition of the historical events of the Pre-Classical era will show that it was the exercise of sovereign power by the Roman Catholic Church and, subsequently the Catholic Monarchs of Europe, that necessitated the production of a "truth" on the relationship between private property, sovereignty and the commons as flowing from the Christian God. Similarly, it will be shown that the emergence of Classical "truth" too, can be attributed to the exercise of sovereign power, except this time the reigns of the sovereignty in question were in the hands of a demos rather than a single ruler. As a matter of fact, the Classical truth of private property as the basis and *raison d' etre* of government was instrumental, not only for the transference of those reigns from monarchs to the rising bourgeoise but, also, for the consolidation of sovereign power into the latter's hands through

[19] Ransom, John S., *Foucault's Discipline: The Politics of Subjectivity* (Durham and London: Duke University Press, 1997), at 93

[20] Michel Foucault, "Nietzsche, Genealogy, History" in Rabinow, Paul (ed.), *The Foucault Reader* (New York: Pantheon Books, 1984), at 83

the exclusion of certain parts of the populace (women, slaves, native and indigenous peoples, the poor and so on) from the democratic process.

In turn, Modern and Contemporary "truths", it will be shown, emerged from the auspices of a different type of power, one unique to Foucault's theoretical framework: governmentality. Governmentality is a modality of power that operates through the "ensemble formed by the institutions, procedures, analyses and reflections, the calculations and tactics" and "has as its target population, as its principal form of knowledge political economy and as its essential technical means apparatuses of security".[21] In Modernity, as it will be shown, this governmentality operated through the ensemble of transnational institutions like the U.N and national ones like governments, and had as its target the population of states within the international community who, in turn, were considered capable of governing and guiding their individual populations. Utilising what Foucauldian scholar Nikolas Rose termed "ethopower", as well as disciplinary mechanisms, this modern governmentality attempted to govern the states to whom the international space legal regime applied, by setting certain moral standards that enabled the government of these states through "shame, guilt, responsibility, obligation, trust, honor, and duty", in order to bring to pass "their collective destiny, in the interests of economic advancement, social stability, and even justice and happiness".[22] It was to further solidify these moral standards that were so crucial in the operation of this governmentality that Modern "truth" emerged and compelled states to staunchly prohibit the establishment of celestial private property rights in those early years of space law.

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[21] Michel Foucault, "Governmentality" in Burchell, Graham; Gordon, Colin; Miller, Peter (eds.), *The Foucault Effect: Studies in Governmentality* (Chicago: The University of Chicago Press, 1991), at 90

[22] Rose, Nikolas "Community, Citizenship and the Third Way" (2000) 43:9 American Behavioral Scientist 1395, at 1398

Starting in the late 1970s however, as will be explained, the governmentality that had been established through the Modern period stopped being adequate in governing the community of states and, through them, the global population. That was due to the fact that the power states could exercise over their individual populations began to wane as private entities gained ground. The 'death of the state' signalled the birth of a new transnational governmentality, this one operating under a neoliberal political rationality that disseminates "the formal principles of a market economy" into all spheres of life.[23] The development of this neoliberal governmentality in turn explains the emergence of a new, contemporary "truth" which proclaims the need for the establishment of celestial private property and appropriation rights, submitting thus, that which had previously been considered to belong to humanity in common to the process of enterprization. Aware of Foucault's reluctance to term any governmentality as inherently dangerous, this chapter will conclude by providing a justification for the characterisation of this governmentality as such, drawing heavily from the work of many of Foucault's intellectual descendants such as Wendy Brown. However, this governmentality will also be shown as endangering the enforceability of international space law by undermining some of its most basic aims, such as the maintenance of peace, protection of the environment and betterment of mankind.

In thus completing the genealogical analysis of celestial private property rights, this thesis will have achieved in answering its central question: 'why do we speak of owning celestial bodies and their resources *now*, millennia after commencing the conversation around outer space?' The answer will be simple but poignant: 'because power commands it'. Power has been putting on the "endlessly repeated play of dominations", the only "drama [that] is ever staged" and truth is but

[23] Foucault, Michel, *The Birth of Biopolitics: Lectures at the College de France 1978-1979* (Basingstoke: Palgrave Mcmillan, 2008), at 131

one of the many actors in it.[24] We began to speak and advocate for owning celestial bodies and their resources over the past few decades, not because there have only been a few decades since our technology advanced enough to allow us to dream but rather, because it has only been recently that the modality of power that is exercised over the international community that makes space law and policy, changed into one that demands the total enterprization and economisation of the celestial domain.

[24] *Supra* note 20, at 85

Problematizing Space Law Literature on Private Property and Appropriation Rights in Celestial Bodies

The Curious Case of Private Property Rights in Space Law Literature

Though young, space law is a legal field characterised by uncertainties and academic dispute.[25] One of the areas in which this troubled nature of space law is best exemplified concerns private property and appropriation rights beyond the earth.[26] While some of the core principles of international space law, such as the freedom of exploration and use of outer space, non-appropriation and common interest principles enshrined in **Articles I** and **II** of the **Outer Space Treaty** appear to prohibit the exercise of exclusive rights on celestial bodies, debate rages about the continued validity of those principles in the face of arguments about the benefit of privatization.

Nevertheless, it is not only the seemingly rapid pace at which some of the core aspects of international space law became disputed that constitutes the curious aspects of space law scholarship. Instead, it is mainly the fact that the subjects and methods of the current literature are

[25] Though the first international treaty on outer space was the 1967 Outer Space Treaty, it is generally accepted that space law arose as a distinct discipline in the 1950s, a decade that saw not only the creation of the UNCOPUOS, but also the publication of numerous academic articles and books that exert influence over space legal thought to this day. See for example Haley, Andrew G, "Space Law and Metalaw – A Synoptic View" (1956) Harvard Law Record and McDougal, Myres S.; Lipson, Leon, "Perspectives for a Law of Outer Space" (1958) 52:3 The American Journal of International Law 407.

[26] Though this paper will focus solely on celestial bodies, it is not only such objects that some wish to appropriate and exercise exclusive dominion over. For example, currently orbital slots and radio frequencies are the most sought out 'real estate' in space. Due to the necessity of satellites to our everyday life on earth, this is likely to be the case even after space-faring nations and companies advance to a level that allows the extraction of resources from celestial bodies and human settlement on them. However, orbital slots and frequencies, due to their non-corporeal nature, do not provide fertile 'ground' for the discourse analysis this work aims to undertake.

so very different from those a reader from the early days of space law would expect. The writings of scholars on space law in the 1950s and 1960s– that is, prior to the adoption of the OST – engaged heavily in critical discussion that delved not only into the practicalities of future legal instruments but into intricate questions of legal theory. This engagement with the theoretical aspect of the law in turn, allowed early space law scholars to critically reflect on the questions arising from the novel nature of the celestial domain. Present space law scholarship on the other hand, appears to eschew works of such critique, deeming interdisciplinary research that delves into philosophy and critical theory instead of economics and politics, as "amateurish dabbling with theories and methods researchers do not fully understand".[27]

At the dawn of the space age, academic discussions were largely corralled into two camps, those of natural law and "positive realist" law theorists.[28] The first school of thought was best represented by the works of Andrew Haley, one of the world's first practicing space lawyers, who cautioned against the repetition of past mistakes.[29] Haley, writing in the 1950s and early 1960s, viewed the atrocities committed in the name of European expansion, especially during the 'scramble for Africa', as the failings of men's law, law that, mistakenly, stood in opposition to universal moral principles. He operated on the assumption, based on his readings of Fransisco de Vitoria, Fransisco Suarez and Hugo Grotius, that international law should have as its primary source Natural Law; that is, law that could be discoverable through the exercise of universal reason.[30] Subsequently, in

[27] Vick*, supra* note 10

[28] *Supra* note 14, at 7.

[29] Stephen E. Doyle, "Andrew G. Haley (4.11.1905 – 5.10.1995)" in Hobe, Stephan (ed.), *Pioneers of Space Law* (Leiden – Boston: Martinus Nijhoff Publishers, 2013), at 71.

[30] See Haley, Andrew G, "Space Law and Metalaw – A Synoptic View" (1956) Harvard Law Record and "Recent Developments in Space Law and Metalaw" (1957) 24: 2 Harvard Law Record.

Space Law and Government, he advocated for the creation of a body of law dealing with the celestial domain that would differ in structure from the heavily anthropocentric twentieth century international law and that would be more heavily permeated by *universal* moral principles and standards that could prevent any future conflicts between humans and other sentient beings.[31] This new type of law he termed 'Metalaw' and named the Golden Rule, 'Do unto others as you would have them do unto you', as its most basic philosophical underpinning.[32]

Although, as will be shown in the following pages, this type of moralistic approach to space law is no longer espoused by the majority of scholarly writings in the field, Haley's vision of Metalaw did partly come to life through the inclusion of certain moral principles in the **OST** and the **Agreement Governing the Activities of States on the Moon and Other Celestial Bodies** ("Moon Agreement").[33] For instance, the essence of the Golden Rule that was so dearly espoused by Haley can be glimpsed in **Articles I** and **IX** of the **OST** and **Articles 2** and **4** of the **Moon Agreement**. **Article I** of the OST provides for the 'freedom' and 'common interest' principles that have been mentioned previously in this chapter, by stating that the exploration and use of outer space, including celestial bodies, "shall be carried out for the benefit and in the interests of all

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[31] Haley, Andrew G. *Space Law and Government* (New York: Appleton Century Crofts, 1963)

[32] Though this phrasing of the Golden Rule is most often associated with the Christian faith (see Matthew 7:12), it is a rule considered to be the foundation of the Torah (see Shabbath 31a in the *Babylonian Talmud)* and thus of all Abrahamic religions. The Rule is also found in various other sources, from non-Abrahamic religions such as Hinduism (see Section CXIII, Verse 8 in *Mahabharata, Book 13*) and Confucianism (see XV.24 in the *Analects of Confucius*), to the ancient philosophies of the Greeks (see section 3.61 in Isocrates' *Nicocles or the Cyprians)*, Persians (see Shayast-na-Shayast at 13:29 in West, E. W. (trans.) "*Pahlavi Texts of Zoroastrianism, Part 2 of 5: The Dadistan-i Dinik and the Epistles of Manuskihar" (Forgotten Books*)) and Romans (see Seneca's "Slaves" in Hadas, Moses *The Stoic Philosophy of Seneca* (New York: Norton and Company, 1968) at 191*).* This adoption of the rule by a multitude of cultures and religions was what lead Haley to view it as a universal moral principle.

[33] Agreement Governing the Activities of States on the Moon and other Celestial Bodies, 5 December 1979, 1363 UNTS 3 (entered into force on 11 July 1984) ("Moon Agreement")

countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind". In its second paragraph, this Article also crucially provides that all celestial bodies are to "be free for exploration and use by all States without discrimination of any kind" and for that reason, "free access to all areas of celestial bodies" must be maintained. In turn, **Article IX**, whose wording is perhaps the one closest to the iteration of the Golden Rule in the biblical Book of Matthew, provides that when it comes to the exploration and use of outer space and all celestial bodies, the State Parties to the **Outer Space Treaty** have a duty to conduct their activities (including those of their non-governmental entities as established by **Article VI**) with "due regard to the corresponding interests of all other States Parties to the Treaty".[34]

The subsequent **Moon Agreement** included provisions reiterating the international community's commitment to the principles Haley viewed as universal, such as the Agreement's second Article, which established an obligation, on behalf of State Parties, to act with due regard to the interests of all other Parties. However, the provisions that are of particular interest are those of **Article 4(1)**, which seems to builds upon **Article I** of the OST *and* the traditional 'version' of the Golden Rule, by imposing an additional duty upon those exploring and using celestial bodies that asks of them to also take into account "the interests of present and future generations as well".[35]

The second prominent school of thought at the early stages of the discipline of space law, that of the "realistic positivists", followed the vision of Myres S. McDougal, then Professor of International Law at Yale.[36] McDougal's writings on space law and its development demanded

[34] Matthew 7:12, per the King James Version of the Bible, reads "Therefore *all things whatsoever ye would that men should do to you: do ye even so to them*: for this is the law and the prophets" [emphasis added]

[35] The Article provides that due regard must also be given to "the need to promote higher standards of living and conditions of economic and social progress and development in accordance with the Charter of the United Nations".

[36] *Supra* note 14, at 7

that readers dissociate this new, emerging body of law from idealistic and moral principles whose pursuit he thought might prove unattainable once our knowledge of the celestial domain, and our needs to engage in its exploration, expanded. Instead, he urged that the international community first wait and see what patterns of usage emerged in the unique setting of the celestial domain, before proceeding with codification. His 1958 article titled "*Perspectives for a Law of Outer Space*", co-written with Leon Lipson, includes the following statement that aptly summarises this school of thought: "[e]specially in the preliminary exploratory stage [of space] (which may last for generations), we may have to stress those aspects of legal control that permit and encourage development".[37] The authors go on to admit that though the outlawing of certain uses of outer space, such as private appropriation, would not be improbable, it should not be pursued at that early stage of humankind's venture into outer space.

This notion that the best way to proceed would be to await the 'organic' development of a body of law rather than requiring that this new type of human activity prescribe to a set of moral principles, followed McDougal throughout his work on space law. In the seminal book *Law and Public Order in Space* that he co-authored with Harold D. Lasswell and Ivan A. Vlasic, he undertook a methodology of "policy orientated jurisprudence" in an effort to "explore each major type of problem [in space law] by employing the various relevant intellectual techniques of policy oriented inquiry, including the detailed clarification and recommendation of general community policies, the description of past trends in decision in comparable problems, appraisal of the factors which appear to have affected past decisions, the projection of probable future conditions, factors and

[37] McDougal, Myres S.; Lipson, Leon in *supra* note 25, at 410.

decisions".[38] His works became archetypal of the realist, policy oriented legal thinking in space law, a school of thought that in the decades to come would question the moral values some argued were an intrinsic part of the OST, by arguing that the principles that invoke them were aspirational rather than binding.

McDougal's influence on space law survives to this day, not in the letter of the law like Haley's did, but through the literature that currently forms the most prominent body of works in space law scholarship. This literature attempts to answer the question as to the legality of celestial private property and appropriation rights by examining the practice of states in relation *to,* and debating the meaning *of,* the principles enshrined in **Articles I** and **II** of the **OST**: those of freedom of exploration and use of outer space and celestial bodies, common interest and of celestial non-appropriation. However, though McDougal may have sown the seeds for the development of space law scholarship that questions the enforceability of these principles, as Daniel Goedhuis noted in 1981, these fundamental principles and their validity were not the subject of debate during the first years of their implementation.[39] When the Treaty was first adopted, he claimed, euphoria was the principal feeling experienced by those preoccupied with space law and it was almost universally accepted that the OST "had safeguarded the interests of all countries", be they Parties to it or not, and had "established the whole of this space as the common heritage of mankind".[40] A few short years after the signing of the Treaty however, these feelings of elation and euphoria subsided and

[38] Dayal, Shiv, "Reviewed Work: Law and Public Order in Space by Myres S. McDougal, Harold D. Lasswell, Ivan A. Vlasic" (1968) 10:1 Journal of the Indian Law Institute 173; McDougal, Myres S.; Lasswell, Harold D.; Vlasic, Ivan A. *Law and Public Order in Space* (New Haven – London: Yale University Press, 1963), at V

[39] *Supra* note 9

[40] *Ibid*, at 213

the binding nature of the principles began to be contested.[41] Beginning in the late 1970s, as more countries and (in later decades) private entities developed space-faring capabilities, a multitude of writers undertook attempts to show the legal effects of the principles. Two major questions became the subject of these attempts; (a) did the principles constitute international customary law, established amongst all States that was simply codified or crystallised by the OST, and (b) if binding, are the principles to be interpreted as prohibiting private property and appropriation rights in celestial bodies?

A positive answer to the first question would mean that these principles included in **Articles I** and **II** of the **OST** would be binding to the totality of the international community, including States that had not signed or ratified the Treaty.[42] The body of works that answers in this way focuses on some of the most important events in the history of space exploration to justify their position. Firstly, such works turn to the three weeks following October 4th 1957, the day Sputnik 1 became the first artificial object to enter the earth's orbit. During the twenty-one days Sputnik 1 remained in orbit, instant customary international law was born.[43] Manfred Lachs, one of the most distinguished scholars of space law and a Judge with the International Court of Justice, noted that in the days the Soviet satellite remained in orbit, the fact that no State claimed its territorial

[41] One of the earliest examples of this new attitude towards the principles of free use and non-appropriation came from politics and not academia. In 1977, the Colombian delegate to COPUOS famously claimed that they did not constitute *jus cogens* and thus should not be considered binding to states that had not signed the OST or, like Colombia, had yet to ratify it. See U.N. Doc. A/AC.105/PV.173 (1977), at 56

[42] As of July 2018, 107 States have ratified the Treaty, while 23 more have signed but not ratified it. All States with space-faring capabilities, including the U.S, Russia, the E.S.A member states and the People's Republic of China have either ratified or acceded to the Treaty.

[43] Jakhu, Ram S.; Freeland, Steven, "The Relationship Between the Outer Space Treaty and Customary International Law" (2016) *Proceedings of the 67th International Astronautical Congress (IAC 2016): Making Space Accessible and Affordable to all Countries, 26-30 September 2016, Guadalajara, Mexico*, at 5

sovereignty had been compromised, constituted a recognition that the freedom of movement in and use of outer space was recognised as law, regardless of the generally accepted view that legal custom is not spontaneous but the result of "settled practice" by states.[44] In turn, the days following the launch of the first successful U.S satellite, the Explorer 1, as well as the first orbital flights of Yuri Gagarin and John Glenn, are seen as having allowed for the emergence of the common interest and non-appropriation principles as international legal customs, since both space-faring nations of the time claimed that their ventures into space were on behalf *of* and *for* humanity and refrained from making any territorial claims over space or non-terran natural resources. In effect, as Antonio Cassese notes, during the brief periods of those missions, the international community, helmed by the U.S and the U.S.S.R, placed outer space in the category of *res communis omnium*.[45] Professors Jakhu and Freeland have also speculated that this history of the principles might be enough to elevate them to *jus cogens* and transform them into norms that create *erga omnes* obligations for all states.[46]

If given a cursory glance the literature concerned with answering this question does not attest to anything remarkable, but the methods employed in composing it do. The majority of such works was, and continues to be, largely doctrinal.[47] In other words, the principal aim of the works in this area, regardless of whether they support or dispute the binding force of the principles, is that of all

[44] Virtually every State would have the opportunity to make such a claim as during its three-week mission Sputnik 1 passed over every inhabited area of the planet. For Judge Lach's comments see North Sea Continental Shelf Cases [1969] ICJ Rep. 3, at para 77; *North Sea,* Dissenting Opinion of Judge Lachs at 230

[45] Cassese, Antonio, *International law (2nd edition)* (Oxford: Oxford University Press, 2005), at 95

[46] *Supra* note 43, at 6,7

[47] Writing in 2006, Linda Billings, attests that concerns for notions such as ethics and culture have been expelled from discussions on space law. See "To the Moon, Mars and Beyond: Culture, Law and Ethics in Space-Faring Societies" (2006) 26:5 Bulletin of Science, Technology & Society 430, at 434

doctrinal research, namely to provide detailed and "highly technical commentary upon, and systematic exposition of, the context of legal doctrine".[48] A significant portion of these works also seems to operate under the assumption that McDouglas' perspective on space law is the correct one, and thus, they regard the moral values of reciprocity and equality that can be glimpsed in the wording of **Articles I** and **II** of the **OST** as aspirational, rather than legally binding.

Though it *is* true that sixty years ago, at the dawn of the discipline, the scales were tipped the other way around, with theoretical research being the preferred modus operandi of space law scholars, the present dominance of the doctrinal research method is not, in and of itself, troubling. Throughout the years, the principal methodology in *any* field of law is bound to change. What makes this shift in space law literature alarming is that one of its effects has been to largely expulse from the realm of 'acceptable' scholarship interdisciplinary works which engage heavily with philosophy and critical theory, by dubbing them as "amateurish dabbling".[49] Of course, the dominance of doctrinal research is not the only cause for this expulsion. If that were the case, most legal fields across the common law world, where the doctrinal method has historically been "the dominant legal method", would exhibit a similar lack of critical works.[50] Unlike in other fields of law however, this dominance in space law literature is coupled with the converse tendency of philosophers and humanities scholars to 'scoff' at the idea of critical analyses of matters relating

[48] Salter, Michael; Mason, Julie *Writing Law Dissertations: An Introduction and Guide to the Conduct of Legal Research* (Harlow, England: Pearson, 2007), at 49

[49] Vick *supra* note 10

[50] Hutchinson, Terry, "The Doctrinal Method: Incorporating Interdisciplinary Methods in Reforming the Law" (2005) 3 Erasmus Law Review 130, at 131

to space. As MacDonald observed in 2007, for these scholars, to be preoccupied with space is to concern oneself with the absurd and abstract, in a way that is beneficial to no one.[51]

As a result of this disregard for critical approaches to space law in general, from both within and without the field, critical approaches to celestial private property and appropriation are also absent from the literature, something that strikes one as quite peculiar given the 'popularity' of critical approaches to terran property. Though the traditional conceptions of private property and appropriation on earth differ from those endorsed in the primary instruments of international space law, the absence of critical engagement with celestial private property ought to be problematized. It is generally accepted, as Margaret Davies points out, that property in land - no matter where that land is - is not a concept confined to legal doctrine. As she showcases throughout her account of the Western liberal model of property in *Property: Meanings, Histories, Theories,* property relates to how we constitute ourselves, to how we interact with others and to the multitude of axes of social differentiation, such as race, gender or class, that operate within our society.[52] These relations are what make property, in essence, a power relation, "an abbreviated reference to a quantum of socially permissible power exercised in respect of socially valued resources".[53] Thus, with questions relating to property, one is obliged to acknowledge that property is a quintessential factor "in the actual distribution of forms of personal, political, economic, social or legal power".[54] Critical engagement with the topic is further necessitated by the fact that private property rights,

[51] MacDonald, *supra* note 10

[52] *Supra* note 11

[53] *Ibid*, at 52; Kevin Gray & Susan F. Gray, "Private Property and Public Propriety" in McLean, Janet, (ed.) *Property and the Constitution* (Oxford: Hart, 1999), at 12

[54] *Supra* note 11, at 52

despite being individual rights, always concern "individuals *and* communities" as they deal, foremost, with the exclusion of all but the individual owner from resources.[55]

Yet, if one were to look through the most read and influential pieces of contemporary space law literature, one would be hard pressed to find many writings that delved into these fundamental questions as to the nature of property and its relation to power, be that power political or social. [56] Though sometimes these concerns are mentioned, they are given no more than a passing glance.

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[55] *Ibid*, at 2, 18. Of course, Davies is not alone in noting the need for critique and interdisciplinary research touching on philosophy and the humanities in order to expose the power aspect of private property. The concept of private property as a vector or tool of power has inspired many critical inquiries over the centuries. Thinkers from Jean Jacque Rousseau and Adam Smith to Karl Marx and Mikhail Bakunin, have contemplated the relationship between private property and power. See Jean Jacques Rousseau, "Discourse on the Origin and Foundation of Inequality" in Gourevitch, Victor (ed.), *Jean-Jacques Rousseau, The Discourses and Other Early Political Writings* (Cambridge: Cambridge University Press, 1997); Elliott, John E., "Adam Smith's Conceptualization of Power, Markets, and Politics" (2000) 58:4 Review of Social Economy 429, at 447; Nigam, Aditya, "Marxism and Power" (1996) 24: 4/6 Social Scientist 3, at 9; Maximoff, G.P, *The Political Philosophy of Bakunin: Scientific Anarchism* (New York: Free Press, 1953), at 181

[56] Most of these works have as one of their fields of research critical geography, most notable amongst which MacDonald's article expanding the discipline of critical geography into Outer Space (*supra* note 10). There exists also a series of articles by Christy Collis which to one extent or another touch upon the subject of private property in the celestial domain, namely: "Res Communis?: A Critical Legal Geography of Outer Space, Antarctica and the Deep Sea Bed" in Dickens, Peter; Ormrod, James (eds.), *The Pelgrave Handbook of Society, Culture and Outer Space* (Basingstoke: Palgrave Macmillian, 2016); "The Geostationary Orbit: a Critical Legal Geography of Space's Most Valuable Real Estate" (2012) 57:1 The Sociological Review 47; "Territories beyond possession? Antarctica and Outer Space" (2017) 7:2 The Polar Journal, 287. In addition, Oliver Dunnet et al. in "Geographies of Outer Space: Progress and New Opportunities" (2017) XX:X Progress in Human Geography 1, engage briefly with such rights.
Another example of such research is found in Prue Taylor's *An Ecological Approach to International Law* (London and New York: Routledge, 1998) at 269-277, where the author, in composing a response to the legal challenges posed by climate changes, briefly considers the "Common Heritage of Mankind" principle (as it relates to both sea and outer space) through the lens of legal theory. Through this analysis she concludes, controversially perhaps, that non-appropriation is not a necessary element of common heritage and, most importantly from a critical theory perspective, that the principle's acceptance is intrinsically tied to the consequences States believe it will have on their sovereign *power*.

Instead, it is the legal effects of the principles on the freedom of exploration and use of outer space and celestial bodies, common interest and non-appropriation that are primarily questioned. While works delving into this matter are undoubtedly necessary for the development of space law and policy, so are works that partake, to different degrees, in interdisciplinary research that has philosophy, or the social sciences as its secondary field of inquiry and can expose the more covert effects of power on individuals as well as on States.

As MacDonald notes, "what is at stake […] in the contemporary struggle over outer space is too serious to pass without critical comment".[57] Even if one were to disregard the need for the present discourse to include wider conceptions of power, critical commentary would still be necessitated, from a purely doctrinal standpoint, to ensure adherence to the wishes of the OST drafters who, pursuant to Haley's warnings, attempted to avoid repeating the horrors and atrocities incited in the name of property and European supremacy in the sixteenth, seventeenth, eighteenth and nineteenth centuries, by installing the non-appropriation and common interest principles.[58] Though they were motivated by political and military interests, in establishing these principles which seemed to eschew private property, the drafters joined a long line of thinkers who viewed private property and appropriation rights sceptically. One of the most prominent amongst such thinkers was Jean Jacques Rousseau who regarded private property as the power which not only bore civil society into existence, but also as the source of a great social ill, writing the following passage to illustrate

[57] *Supra* note 10, at 593

[58] Herbert Reis, a UN COPUOS delegate in 1969 noted that the "negotiating history of the [OST] shows that the purpose of this provision (i.e. Article II) was to prohibit a repetition of the race for the acquisition of national sovereignty over overseas territories that developed in the sixteenth, seventeenth, eighteenth and nineteenth centuries". As cited in Valters, Erik N, "Perspectives in the Emerging Law of Satellite Communications" (1970) 5 Stanford Journal of International Studies 53, at 66

his point: "The first man who, having fenced off a plot of land thought of saying*, this is mine*, and found people simple enough to believe him, was the real founder of civil society. How many crimes, wars, murders […] might the human race had been spared by the one who, upon pulling up the stakes or filling in the ditch, had shouted to his kind: *Beware of listening to this impostor; You are lost if you forget the fruits of the earth belong to all and that the Earth belongs to no one*".[59]

Stuart Elden, whose book *The Birth of Territory* opens with this somber declaration, highlights perhaps the most important aspect of Rousseau's statement; that it was only at the precise moment private property was introduced that it should have been challenged if the horrors of which it was to be the harbinger of were to be avoided.[60] However, in reality, the horrors with which Rousseau credits private property could not have been avoided, partly, because there was no such precise moment, no single time or place where the private ownership of land was conceived and no single first man or woman who conceived it. When it comes to private property in celestial bodies, though, such a *time* does exist, and it is now; such a *place* exists, and it is all soil that lies beyond the Earth; such *'first men'* exist and they are the those to whom the loudest voices in space law and policy discourse belong. So, if at this point in reading this thesis, one were to ask why it is imperative to question the wisdom in establishing or recognising private property rights in celestial bodies into law *now*, so early into humankind's journey beyond earth, it is because this is perhaps one of the only moments when such a questioning can bear fruits. It is only now, when some have *just* stood up and requested a piece of land unknown as their own, that others can remind them that for *any* earth, it is alien to be owned.

[59] Gourevitch *supra* note 55, [emphasis added]

[60] Elden, Stuart *The Birth of Territory* (Chicago – London: The University of Chicago Press, 2013), at 1,2

This reminder, however, points to the need for a critical assessment of these proposed rights that can be fulfilled through the use of many methodologies that allow for the exploration of property in relation to power. Critical legal geography, a relatively young field of inquiry, is, for example, one of many such innovative 'lenses' through which this debate could be analysed. This lens is one through which law is viewed as "cultural technology of spatial production" and legal discourse, such as the one at hand, as a series of episodes "in the social production of space".[61] The only major works actively expanding the field of critical legal geography into Space are Christy Collis' articles on the geostationary orbit.[62] One could easily take Collis' work beyond the geostationary orbit to celestial bodies and consider the ways in which the ideological forces at play in this debate over private property and appropriation rights would go on to shape both the material and social aspect of celestial bodies in the future. Equally fruitful would be an analysis expanding *solely* on the legal aspects of the post-colonial criticism that has already been levelled against the exploration of outer space in general.[63] Yet, if taken separately, both these and other critical approaches, while able to explore the 'power-aspect' of private property rights as they would be established in celestial bodies, would not be able to also explore the power-dimension of the current discussion on these rights, the discussion this chapter has presented as curious and

[61] Collis, Christy, "The Geostationary Orbit: a Critical Legal Geography of Space's Most Valuable Real Estate" 57:1 The Sociological Review 47, at 48; Collis, Christy; Delaney, D., "Running with the land: legal-historical imagination and the spaces of modernity" (2001) 27:4 Journal of Historical Geography 493, at 494

[62] As mentioned in *supra* note 10, MacDonald first brought space law and critical geography together in his 2007 article. However, that article was one proving the need for such interdisciplinary research rather than actively using that methodology on a specific issue pertaining to outer space.

[63] Some of this pointed commentary includes Benjamin, Marina, *Rocket dreams: how the space age shaped our vision of a world beyond* (London: Free Press, 2003), where at 46 Benjamin notes that outer space is "a metaphorical extension of the American West"; Redfield, Peter, "The half-life of Empire in outer space" (2002) 32 Social Studies of Science 791, where at 795 Redfield concludes that outer space "reflects a practical shadow of empire"; MacDonald in *supra* note 10, at 596 noting that "the move into space has its origins in older imperial enterprises".

troubling. That is why this thesis, after problematizing the relevant space law scholarship - in other words the knowledge generated through the *discussion* around these proposed rights - will adopt a Foucauldian lens. Such a perspective is the most suitable, as will be further shown below, due to the connection that Foucault revealed exists between knowledge, power and the discourse they produce and are (re)produced by.

Foucault's Approach to Discourse, Knowledge and Power

Michel Foucault is widely understood as a theorist of power. Often-quoted observations like "power is everywhere" or "power is knowledge" have lead many casual readers of the French philosopher to believe his interests lay solely with explaining and cataloguing the functions of power.[64] Yet, towards the end of his life, Foucault rebuffed such accusations by stating that "it is not power, but the subject that is the general theme of my research".[65] As he explained, his objective had always been to "create a history of the different modes by which, in our culture, human beings are made subjects".[66] In his attempt to record this history he discovered three modes of objectification through which people became subjects: "the modes of inquiry which try to give

[64] Foucault, Michel, *The History of Sexuality, Vol. I, An Introduction* (New York: Random House, 1978), at 93; It should also be noted here that Foucault has rebuffed the assumption that he views power and knowledge as synonymous, saying in an interview "you have to understand that when I read - and I know it has been attributed to me - the thesis 'Knowledge is power', or 'Power is knowledge', I begin to laugh, since studying their relation is precisely my problem. If they were identical, I would not have to study them and I would be spared a lot of fatigue as a result. The very fact that I pose the question of their relation proves clearly that I do not identify them". See Lawrence D. Kritzman (ed.), *Michel Foucault: Politics, Philosophy, Culture: Interviews and other Writings 1977-1984* (London: Routledge, 1988), at 43

[65] Michel Foucault, "The Subject and Power," in Dreyfus, Hubert; Rabinow, Paul (eds.), *Michel Foucault: Beyond Structuralism and Hermeneutics* (Chicago: University of Chicago Press, 1982), at 208

[66] *Ibid*

themselves the status of sciences", the "dividing practices" which are "modes of manipulation that combine the mediation of a science (or pseudo-science) and the practice of exclusion" and thirdly, the ways people turn their own selves into subjects.[67] It was in an effort to catalogue these modes of objectification that Foucault found himself dealing with the concepts he is often most closely associated with and will be touched upon in this work, those of discourse, power and knowledge.

Before Foucault took a critical approach to it, discourse was firmly placed in the domain of structural linguistics.[68] For some, discourse analysis was but a form of linguistic analysis that sought to peel the layers off texts to uncover a set of fundamental linguistic or communicative rules.[69] For others, the primary function of discourse analysis was to uncover the common knowledges that inform the rules and procedures of human conversations.[70] Foucault instead saw discourses not as texts or communicative cues, but as bodies of knowledge that should be analysed in relation to the history of ideas, rather than in relation to language systems alone.[71] In other words, Foucault's approach to discourse analysis differed from all that came before it because it did not ask "according to what rules has a particular statement been made, and consequently according to

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[67] *Ibid*

[68] McHoul, Alec; Grace, Wendy *A Foucault Primer: Discourse, Power and the Subject* (New York: New York University Press, 1997), at 1

[69] For more on the formalist approach to discourse analysis see Harris, Zellig S. "Discourse Analysis" (1952) 28 Language 1; Halliday, Michael, A. K, *Explorations in the Functions of Language* (London: Arnold, 1973) among others

[70] Examples of this so-called empirical approach to discourse include the works of Harvey Sacks (i.e in the article, co-written with Emanuel A. Schegloff and Gail Jefferson, "A simplest Systemics for the Organization of Turn-taking for Conversation" (1974) 50 Language 696) and Harold Garfinkel (see the book *Studies in Ethnomethodology* (Englewood Cliffs: Prentice-Hall, 1967)

[71] For Foucault no text could be used as the basis for a discourse analysis on its own, as it cannot "exist by its own powers, […], it is a point in a network" see Foucault, Michel "Reponse au cercle d'epistemologie" (1968) 9 Cahiers pour l'Analyse as cited in Andersen, Niels, A. *Discursive Analytical Strategies* (Bristol: The Policy Press, 2003), at 9

what rules could other similar statements be made?", but rather, "how is it that one particular statement appeared rather than another?"[72]

Some of the discourses, or bodies of knowledge, that Foucault concerned himself with in his work were medicine, economics and the human sciences.[73] The reason he preferred to analyse these over other discourses with a stronger "epistemological structure" such as mathematics or physics, was the fact that the former constitute "forms of social practice which have wide-ranging effects on society generally."[74] His focus on such discursive objects allowed him to illustrate that the function of discourses is intrinsically linked to power, as they do not simply aim to promulgate discovered knowledge but rather to "establish regimes of knowledge and truth that regulate our approach to ourselves, each other and our surroundings."[75] In other words, in his early work, Foucault analysed discourse in an attempt to discover the rules that dictate when and how a statement is accepted as a reasonable one and "why […] this and no other statement was made" at a given point in time.[76] In the context of the discourse that is space law for example, a Foucauldian discourse analysis could explain why statements like '*private property and appropriation rights in celestial bodies and their resources are prohibited*' were almost universally accepted as reasonable in the literature of the 1960s, but heavily contested in that of the present.

This search for the rules which dictate the formulation of discourses led Foucault, in his later works, to the conclusion that "in any society, there are manifold relations of power which

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[72] Foucault, Michel, *The Archeology of Knowledge & The Discourse on Language* (New York: Pantheon Books, 1972), at 27

[73] See for example *Madness and Civilization*, *The Birth of the Clinic* and *Discipline and Punish*

[74] Foucault, Michel "Politics and the Study of Discourse" (1978) 3 Ideology and Consciousness 7, at 20; *Supra* note 68, at 54

[75] Andersen, Niels *supra* note 71, at 3.

[76] Foucault, Michel *The Order of Things: An Archeology of the Human Sciences* (London: Tavistock, 1970), at 156

permeate, characterise and constitute the social body, and these relations of power cannot themselves be established, consolidated nor implemented without the production, accumulation, circulation and functioning of a discourse [of truth]".[77] The observation that "[w]e are subjected to the production of truth through power and we cannot exercise power except through the production of truth" in turn pushed Foucault to explore further the relationship between power and knowledge, observing in *Discipline and Punish* that "power produces knowledge (and not simply by encouraging it because it serves power or by applying it because it is useful)".[78] In other words, relations of power always correspond to the constitution of a "field of knowledge" and at the same time, knowledge always presupposes and constitutes power relations.[79] What this would mean for the subject of this thesis is that the knowledge constituted through space law discourse is the product (and producer) of the power relations that run through the global society that this field of law is concerned with. In turn, this could mean that the reason for the difference in the corpus of statements space law accepted as reasonable or true about the legality and necessity of celestial private property rights in its early days and now, could be down to the different modalities of power operating in each time period.

Foucault, Genealogy and Space Law

Foucault's observations on the relationship between discourse, power and knowledge and their effects on the subject were made throughout a number of works written in the span of more than two decades. As a result of this long journey Foucault embarked on, archeology, the methodology

[77] *Supra* note 17, at 93

[78] *Ibid*; Foucault, Michel *Discipline and Punish: The Birth of the Prison* (New York: Random House, 1995), at 27

[79] Foucault *ibid*

he developed to examine the relationship between sciences and knowledge, grew inadequate for properly accounting for the function of power and the objectification of the subject. This led Foucault to develop from archeology a second methodology; genealogy, which he first expanded upon in the essays *Nietzsche, Genealogy, History*, *Two Lectures* and *What is Enlightenment*. The first essay began as an exploration of Nietzsche's development of genealogy as a method of historical analysis which provided an alternative to traditional historiography. Nietzsche, dealing with the subject of morals, developed the prelude to Foucault's method in an attempt to discover "the conditions and circumstances out of which [the value judgements of good and evil] developed and shifted".[80] Through his genealogy, Nietzsche traced the morals of his time to Christian doctrine and then proceeded to expose the conditions "under which the Christian religion developed in the hope that [the readers would] come to the conclusion that such an artifact as Christianity is not, in all probability, applicable to our condition of existence centuries later" due to the fact that "the conditions that produced the Christian dogma seem too local and contingent".[81]

Foucault, who believed "the role of the intellectual" was "to show people that they are much freer than they feel" by showing them that what they "accept as truth, as evidence, some themes which have been built up at a certain moment during history […] can be criticized and destroyed", saw the merits in Nietzsche's genealogy and sought to further develop it as a tool for analysing the human sciences.[82] Beginning with *Madness and Civilization*, Foucault traced through history the dividing practices that objectified the mentally ill subject. He illustrated that madness was not a

[80] Nietzsche, Friedrich *On the Genealogy of Morality* (Indianapolis: Hackett Publishing, 1998), at 5

[81] *Supra* note 19, at 79

[82] Rux Martin, "Truth, Power, Self: An Interview with Michel Foucault October 25 1982" in Martin, Luther H.; Gutman, Huck; Hutton, Patrick, H., *Technologies of the Self: A Seminar with Michel Foucault* (London: Tavistock Publications, 1988), at 10

category of being that was 'discovered' through the gradual progress made by medical and psychiatric sciences but rather, an object of discourse that has been historically constructed by psychiatry and the discursive practice that predated the discipline and now accompanies it.[83] Through his genealogical works Foucault challenged the "longstanding assumption in Western philosophy that there is a fundamental opposition between knowledge and power, that the purity of knowledge can only exist in stark opposition to the machinations of power", by showing that the expansion of knowledge or the progress of the sciences do not always free us from the shackles of power; often they tighten them instead.[84]

The genealogical method that Foucault further developed in *Discipline and Punish* and the first volume of *The History of Sexuality*, become a way for him to provide a "history of the present", to allow for the explanation of present societal problems and phenomena through an analysis of their historical emergence.[85] In search of that explanation genealogy can uncover and re-establish "the various systems of subjection […], the hazardous play of dominations" that conventional histories would have us believe were a thing of the past and not conditions which inform our contemporary practices.[86] Through this "uncovering," genealogy is thus further differentiated from traditional historiographies as it does not simply account for past events and developments but, rather, for how these events and developments constituted us as subjects in the present. Genealogy, in other words, is a historical ontology of ourselves. There are three domains in which genealogy

[83] Though *Madness and Civilization* was written before Foucault officially developed the methodology of genealogy (and archeology), in an interview given towards the end of his life, he admitted *Madness* was perhaps his most expansive work of genealogy. See Michel Foucault, "On the Genealogy of Ethics: An Overview of Work in Progress" in Rabinow *supra* note 20, at 352

[84] Farrell, Claire O', *Michel Foucault* (London: Sage Publications, 2005), at 96

[85] Foucault *supra* note 78, at 31

[86] *Supra* note 20, at 83

can conduct such an ontology: (a) "in relation to [the] truth through which we constitute ourselves as subjects of knowledge" (such as in *The Birth of the Clinic* and *The Order of Things*) (b) "in relation to a field of power through which we constitute ourselves as subjects acting on others" (*Discipline and Punish*) and (c) "in relation to [the] ethics through which we constitute ourselves as moral agents" (*The History of Sexuality Vol. I*).[87]

The distinction between genealogy and conventional historiography and the constitution of a historical ontology are best exemplified in *Discipline and Punish,* which sports the somewhat-misleading subtitle "The Birth of the Prison". A historiographer tasked with composing a work with the same subtitle, would, undoubtedly, address some of the same events Foucault does in *Discipline* and catalogue the events which gave rise to the present institution of prison. However, Foucault, unlike this fictitious historiographer, did not attempt to recount the birth of the prison in this way. What he did instead, was recognise prison as the "embodiment of a specific rationality" that not only survived to modernity, but grew to constitute modern societies into disciplinary ones.[88] Prison, in other words, was not the subject of his analysis, but the setting in which a genealogy could best illustrate the technologies of power that have shaped, and continue to shape, ourselves and our surroundings. This illustration in turn, constituted a historical ontology of the field of disciplinary power through which Foucault's contemporaries constituted themselves as subjects acting on others.

[87] Michel Foucault, "On the Genealogy of Ethics: An Overview of Work in Progress" in Rabinow *supra* note 20, at 351. It should be noted that genealogies can broach all three domains (or any combination thereof), as is done by Foucault in *Madness and Civilization.*

[88] *Supra* note 15, at 369

So how might genealogy be useful in space law research? Firstly, Foucauldian tools like genealogy are widely considered by social theorists as some of the most "fruitful approaches for coming to terms with problems that are international in character", such as the problem of celestial private property rights.[89] In turn, the discussion of whether private property and appropriation rights in celestial bodies should be recognised into law exists within a body of knowledge or discourse that, per Foucault, is correlated with power. While contemporary space law literature does sometimes touch upon the effects of economic and political power, other forms of power that can be exposed through interdisciplinary research that invokes philosophy or sociology are largely ignored. This in turn, causes the formation of a body of 'acceptable' research which - as will be further shown in the following chapter – has its own regime of truth that, in this case, upholds the notion that the world is but a standing reserve to satisfy humanity's needs and desires, in other words, that the establishment of celestial private property rights is not only necessary, but also inevitable. Foucault's genealogy is useful as it can aid in filling the research lacuna created by the lack of philosophical interdisciplinary works. More importantly however, it can also explain why and how this lacuna that constitutes the curious nature of space law literature was formed between the late 1970s and now. Foucauldian genealogy can do this by contesting the notion that beliefs in space law that are considered reasonable now, like the necessity of these exclusive rights, are the product of gradual, progressive human achievement and reasoning but instead, the product of discontinuities and 'accidents'. In exposing the discontinuities and contesting the truths produced in the discourse of space law, this work will reconnect the contemporary practice of private

[89] Muller, Benjamin J., "Governmentality and Biopolitics" (2011) Oxford Research Encyclopedia of International Studies, at 11

ownership rights to “the historical struggles and exercises of power that shaped their character” and thus, allow us to enact the resistance that Rousseau encouraged all those centuries ago.[90]

However, the main reason why Foucauldian genealogy has been chosen to conduct this thesis can be best summarised by prominent Foucauldian scholars Rabinow and Gordon. Foucauldian tools, they explain, allow one to “analyze the statements of the social sciences without judging their "progress" or lack of it, and without reducing their relative discursive and conceptual autonomy to something else seen to be more basic”, making thus genealogy the preeminent method for uncovering how certain discourses, like the fairly recent one on celestial private property rights, are “historically possible” and what are “the historical conditions of their existence".[91] In other words, Foucauldian genealogy is the best way to answer the question at the heart of this thesis, namely ‘why do we speak (be it favorably or not) of owning celestial bodies and their resources *now,* millennia after commencing the conversation around outer space?’.

[90] *Supra* note 15, at 373

[91] Rabinow, supra note 20, at 12; Colin Gordon, "Afterword," in *supra* note 17, at 230-231

Dismantling the Narrative Around the Uniqueness of the Celestial Domain

The Truth Today

The starting point for any genealogical analysis is a question posed about a present situation – in this case "why should private property and appropriation rights in celestial bodies be established by or recognised in international space law?" – and an exposition of what is presented as true in answer to it.[92] From that question Foucault would expect us to move backwards, in "descent" and attempt to find any differing and older "truths" that might have emerged in response to the same question.[93] However, prior to presenting these "truths", we need to address what is meant by the word. Foucault did not concern himself with the accuracy of the statements that a given society allows to function as true; in fact, he believed that in each society there were underlying rules in accordance to which "the conditions of possibility of all knowledge", both true and false, were established.[94] In his latter works, he explained that he conceived truths as being parts of a "regime of truth, [a] 'general politics' of truth: that is the types of discourse which [each society] accepts and makes function as true".[95] The process each society has for validating a notion as "true" was one he credited to "a few great political and economic apparatuses", apparatuses like the university, the media and State law.[96]

Reyna and Schiller, writing on Foucault's regimes of truth, have in turn explained that the truth produced by these apparatuses is "knowledge deemed to be so legitimate that it is privileged to

[92] Lawrence D. Kritzman, "Power and sex: An interview with Michel Foucault" in *supra* note 64, at 262

[93] *Supra* note 20, at 80

[94] Foucault, Michel *The Order of Things: An Archeology of the Human Sciences* (London and New York: Routledge, 2002), at 183

[95] *Supra* note 17, at 131

[96] *Ibid*

guide cognition and action".[97] However, as they note, not all knowledge can be privileged in this way, instead, there are "canons that privilege some information over other" to guide the cognition and actions of institutions.[98] In medieval Europe for example, the canon which allowed for some information to be deemed legitimate, and some to be discarded, was Christian theological thought. For international space law discourse on the other hand, the canons are not to be found in scripture, but in the scientific thought relied upon by most aspects of modern philosophy, as well as in the sources of general international law as defined in **Article 38** of the **Statute of the International Court of Justice**, which, space law scholars concur, coincide with those of international space law.[99] According to **Article 38**, these sources are international conventions that establish rules recognised by the countries in question, international custom and the general principles of law recognized by civilized nations, judicial decisions and "the teachings of the most highly qualified publicists of the various nations".[100] With these sources in mind, the two broad categories of canon that can be seen as privileging certain information over other, are the political sphere, within which conventions, customs and general principles of law are adopted and established, and the academic sphere, where the "most highly qualified publicists" engage in conversation. Thus, in searching for the knowledge that is validated as true in relation to private property rights in celestial bodies, meaning the knowledge which institutions deem legitimate in guiding their actions, this chapter will turn to the actions taken by political and academic apparatuses, be those actions the adoption

[97] Reyna, Stephen R; Schiller, Nina Glick, "The Pursuit of Knowledge and Regimes of Truth" (1998) 4:3-4 Identities 333, at 337

[98] *Ibid*

[99] *Ibid*, at 338; Ram S. Jakhu; Steven Freeland, "The Sources of International Space Law" in Jorgenson, Corrine M. (ed.) *Proceedings of the International Institute of Space Law 2013* (Netherlands: Eleven International Publishing, 2014), at 461

[100] Statute of the International Court of Justice, 18th April 1946, 33 UNTS 993

of laws, customs or statements made in public fora by State and other officials, or scholarly writings respectively.

Of course, the search for the "true" answers that have historically been given to a question on celestial private property rights might initially seem like a brief task. After all, the broader discipline of space law is barely a century old; younger even, if one traces the discipline's origins to the formation of the United Nations. However, as Foucault once explained, a discursive practice can still be in place in the absence of an established discipline or a strictly defined discursive object.[101] A model example of this is psychiatry which was established as an autonomous discipline in the nineteenth century, but incorporated subjects, like madness and nervous diseases, that doctors, public administrators, authors and philosophers had been discussing for centuries prior and thus, should be considered as having already been part of a discursive practice "with its own regularity and consistency".[102] Similar, it is argued here, is the case of celestial private property rights. Though it is true that space law was not established as a discipline and celestial private property rights as a distinct discursive object until the twentieth century, a body of knowledge that is comprised by a "group of elements, formed in a regular manner by a discursive practice, and which are indispensable to the constitution" of the object which now calls its self 'celestial private property rights', has existed for far longer.[103] It is this group of elements that will be examined in

[101] As Bacchi and Bonham explain, Foucault did not use the term "discursive practice/s" as most theorists do, namely to describe "linguistic practice/s". Instead, his use of the term should be understood as referring "the operation of the sets of relations characteristic of" a given area of discourse (i.e psychiatry, medicine, *space law*) "as an accredited form of knowledge". Bacchi, Carol; Bonham, Jennifer, "Reclaiming discursive practices as an analytic focus: Political implications" (2014) 17 Foucault Studies 173, at 182

[102] *Supra* note 72, at 179

[103] *Ibid*, at 182

this genealogical descent, in hopes of showing that throughout history it has produced different notions as "true".

The two distinct elements that have historically been formed by the discursive practice that in the 20th century allowed for the emergence of the discourse on celestial private property rights, are the following: (a) the relationship between that which is held in common by a or all people and private property, and (b) the relationship between sovereignty and private property. In the contemporary and autonomous discipline of space law, these elements take the form of the following discussion topics that, when brought together with the information privileged by the scientific canon of contemporary thought, construct the truth as to the necessity of celestial private property and appropriation rights. The first such topic is largely contained in the sphere of politics and revolves around **Article 1 of the Outer Space Treaty**, more specifically around the principles of mankind's "province" and "common heritage", and whether the latter is a component of the OST or not. The second element, which both States and legal scholars engage with their actions, broaches the question as to how private property and sovereignty are linked and what the different interpretations of that link mean in the context of the OST's second and sixth Articles. Finally, the third facet of this contemporary body of knowledge is composed by the arguments found in academic texts relating to the adoption of private property rights that use theories from various scientific fields in an attempt to imbue space law with an element of scientificity.

1. Outer Space: Mankind's Province or Common Heritage?

Early on the afternoon of June 19th 1967, Ambassador Cocca of the Argentinian delegation to the Legal Sub-Committee of the United Nations' Committee on the Peaceful Uses of Outer Space ("UN COPUOS"), introduced to the UN what would become one of, if not *the* most, highly contested terms of international space law.[104] Speaking in reference to the innovative nature of the then recently-signed Outer Space Treaty, the Ambassador drew special attention to the following two features of the emerging international space law: its recognition of mankind itself as a new subject of international law – *jus humanitatis* – and the property endowed upon this subject in common, namely outer space and all celestial bodies.[105] It is this latter feature, described by Cocca in Spanish as *patrimonio comun de la humanidad* and in latin with the more familiar phrasing *res communis humanitatis*, that is the principle now most commonly referred to as that of the common heritage of mankind. [106]

Yet, despite Cocca's assertion that the principle had been established by the OST and meant that outer space and its resources were owned by humanity in common – an assertion that went

[104] Arvid Pardo, the Maltan Ambassador to the UN is often credited with being the "father" of the common heritage principle in international law. However, though he was the one to largely expand on what the principle entailed, especially in connection to the law of the sea, his contributions came months after Cocca's statement, namely on August 17th 1967 in the form of a proposal submitted to the UN (See UN DOC A/6695, 17th August 1967) and a three hour speech at the U.N (November 1st 1967).

[105] United Nations Committee on the Peaceful Uses of Outer Space, U.N Doc. A/AC.105/C.2/SR.75

[106] Of note is the fact that though Cocca is credited as the first to explicitly use the term "common heritage" within the UN, a similar phrasing was included in the Preamble to the Convention for the Protection of Cultural Property in the Event of Armed Conflict with Regulations for the Execution of the Convention 1954, May 14, 1954, which reads "Being CONVINCED that damage to cultural property belonging to any people whatsoever means damage to *the cultural heritage of all mankind*, since each people makes its contribution to the culture of the world" (emphasis added).

unchallenged during that and following UN COPUOS meetings –, neither "common heritage", nor the meaning ascribed to it by the Ambassador are today considered to be a component of the Treaty or a guiding force behind space-faring States' actions. That is not to say however, that at that time this interpretation was undisputed outside of COPUOS meetings as well. In fact, some commentators rejected the notion that the principle was a part of the OST, since the text of the Treaty, while making references to the "common interest of mankind" and the "benefit of all peoples", only ever refers to outer space as the "*province* of all mankind".[107] Basing their claims on the fact that at one point during the Treaty's negotiation, "province" was explained as denoting that celestial bodies are "available for the undivided and common use of all states on earth, but are not jointly owned by them", early detractors of the principle formulated arguments against the binding nature of the "common heritage" principle. [108] The most notable such detractor in the political sphere, the U.S.S.R, engaged in political rhetoric that presented "common heritage" as a relic of bourgeois Roman law due to its affiliation with the *res communis* principle. In an effort to not retract their support of the OST, Soviets further argued that the principle of common heritage was fundamentally different to that of mankind's province and thus, not one the signatories of the Treaty had agreed on.[109] Instead, they posited that "common heritage" was a legal concept in international law that happened to develop contemporaneously with the principle of province of mankind and, due the similar wording of the two concepts, some had erroneously conflated

[107] See Preamble and Article I of the OST, *supra* note 6

[108] United Nations Committee on the Peaceful Uses of Outer Space, 1977, U.N. Doc. A/AC.105/196, Annex 1

[109] Dekanazov notes that the USSR traced the principle's origin back to bourgeois Roman Law. See Dekanozo. R.V., "Juridical nature of outer space, including the Moon and other celestial bodies" (1974) Proceedings of the Twenty-Ninth Colloquium on the Law of Outer Space, at 17.

them.[110] In turn, "province", though an undisputed part of the OST, was interpreted by the USSR as setting no specific obligations and thus, as being simply declaratory in nature.

However, one State's stance does not the truth make, and in the early days of the OST the Soviet stance, unsurprisingly, stood largely in opposition to that of the Americans who made it clear that their interpretations of "common heritage" and "province of mankind" were one and the same.[111] As to what that same interpretation was, the **U.S Senate Hearings on the Moon Agreement** indicate that the common heritage principle – and thus the province principle – was interpreted as allowing access to celestial bodies and outer space in general, to all States.[112] However, the American conflation of the two concepts did not stem from a willingness to accept "common heritage" as an indisputable component of international space law. Instead, it was commercial interests that were the motivators of U.S policy. At the time, commentators outside of the political sphere had began postulating that the principle of common heritage could potentially hinder trade if interpreted as necessarily the joint ownership of all celestial bodies and resources. That is why, in fear that the mankind principles, if associated solely with this market-hostile interpretation of "common heritage", would inhibit private enterprise by interfering with private entities and individuals "right to profit from the fruits of [their] labor in space", the U.S began upholding and promoting the notion that "common heritage", much like "province", was a statement falling short

[110] Malorsky, B. "A few reflections on the meaning and the interrelation of "province of all mankind" and "common heritage of mankind" notions" (1986) Proceedings of the Twenty Ninth Colloquium on the Law of Outer Space, at 58.

[111] Gabrynowicz, J.I, "The "Province" and "Heritage" of Mankind Reconsidered: A New Beginning", (1992) 2 The Second Conference on Lunar Bases and Space Activities of the 21st Century 691, at 692

[112] See statement of Robert B. Owen in United States Senate, "Hearings on the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, Before the Subcommittee on Science, Technology and Space of the Senate Committee on Commerse, Science and Transportation" *95th Congress 2nd Session*

of setting any obligations or "any terms or conditions on which international co-operation [could] take place".[113] This way the US was able to continue positing, in opposition to the USSR, that the two principles were synonymous *and* supporting the Treaty, while also claiming that private enterprise, and in turn private ownership, could be legal under international space law.

However, despite the US's opposition to a distinction between the two concepts in the early years of the OST, after the Moon Agreement was drafted, upholding the notion that "common heritage" allowed private ownership proved increasingly difficult.[114] That was largely due to the fact that the Moon Agreement expanded on the obligations that the "common heritage" principle entailed. These obligations meant that if "common heritage" and "province" were to be synonymous, private ownership of celestial resources was not something the U.S could guarantee to its private entities if it wished to comply with the OST. At the same time, some scholars began to posit that the texts of the two Treaties, one using the word "province" and the other "common heritage", finally provided irrefutable proof that there *was* a distinction between the so-called "mankind" principles. According to Malorsky, for example, this proof lay with the phrasings of the first Article of the OST and the eleventh of the Moon Agreement. More specifically, Malorsky posited that the fact that the former refers to activities ("the exploration and use of outer space") as being "the province of all mankind", while the latter refers to "material objects" ("[t]he Moon and its natural

[113] *Supra* note 111; United State Senate, "Treaty on Outer Space: Hearings Before the Senate Committee on Foreign Relations" *90th Congress, 1st Session*, at 53

[114] The current impact of the Moon Agreement is largely regarded as low, due to the fact that (as of January 2019) only four countries have signed it and, most importantly, only eighteen have ratified while most of the major space-faring states (U.S.A, the majority of the states involved with the European Space Agency and Japan) have ever declared their intention to ratify it. (Some major space-faring states like Germany, China and Russia have recently indicated a willingness to ratify the Agreement in the future).

resources") as being "the common heritage of mankind", proves that the two principles do not concern the same things and thus, should not be considered as synonymous.[115]

As at the time it became clear that recognising the distinction between the two principles was the best way for the US to continue guarding free enterprise *and* support the OST, the knowledge generated by these scholarly opinions was one the United States soon validated as true, when one of its political apparatuses, the Office of the President, took action guided by it.[116] In 1988, with the culmination of the Cold War in sight, President Reagan issued a National Space Policy Directive which characterised the "space systems of any nation to be national property".[117] As Gabrynowicz notes, "systems and activities are analogous in that they both suggest a productive dynamic in which materials are a component", meaning that the Reagan Directive should be read as declaring that 'space *activities* of any nation are to be national property'. This statement can only be valid under the Outer Space Treaty if "province" is not given the same meaning as "common heritage", which per the Moon Agreement refers to material objects, like the Moon and its resources, whose national appropriation is prohibited by the OST.[118] By thus confirming the distinction between the two mankind principles, the US was able to, over the coming years, use

[115] *Supra* note 110

[116] The U.S's strong commitment to supporting the OST can be glimpsed in the following statements of American officials: Brill, Kenneth, "Statement of Ambassador Kenneth Brill, Permanent Representative of the United States of America to the United Nations in Vienna", 41st Session of the Legal Subcommittee of the United Nations 2002; Hodgkins, Kenneth, "Statement of Kenneth Hodgkins, US Adviser to the Fifty-Seventh Session of the UN General Assembly, Statement in the Fourth Committee", October 9th 2002 . The US's unwillingness to undermine the Treaty can in part explain the differing interpretations of the Treaty's provisions they have advocated for throughout the years.

[117] Government of the United States of America, "Presidential Directive on National Space Policy", July 11th 1988, at 2, at https://www.hq.nasa.gov/office/pao/History/policy88.html [accessed 10/08/2018]

[118] *Supra* note 111

the fact that the Directive went undisputed in the international level as proof that the US was right in expunging "common heritage" from the list of binding international principles as it was only explicitly included in the ineffective Moon Agreement. Having rejected the "common heritage" principle, the US was then able to further establish the OST as compatible with free enterprise and as allowing private entities to conduct space activities without having to distribute any space resources they gathered to all nations.[119]

The knowledge produced as true by the political apparatuses of the U.S and the former U.S.S.R (currently the Russian Federation), though quite different in the early years after the adoption of the OST, now embodies the same notion: that the OST establishes outer space as mankind's "province", not "common heritage". This notion is one effectively guiding other space-faring States' actions, who by default follow the path set by the U.S. and Russia, a function that Foucault posited can only be performed by knowledge crowned as "true". This common truth produced by the two States, namely that "common heritage" is not established by the OST and that the Treaty "imposes only guiding principles, not concrete obligations" in connection with humanity's relation with outer space and celestial bodies, is the first contemporary truth genealogy uncovers.[120] Most recently, this truth has guided the actions of the modern political apparatuses of the U.S and Luxemburg, who adopted national legislations on the appropriation of celestial resources, the **U.S. SPACE Act** and **Luxemburg's Law**. Both legal instruments operate under the assumption that celestial resources are not mankind's common heritage, but rather its province; an assumption that

[119] See Gabrynowicz*, supra* note 111, at 692; See also Ambassador Goldberg's testimony at McDougall, Andrew, *The Heavens and the Earth – A Political History of the Space Age*, (New York: Basic Books, 1985), at 418; Also Christol, Carl Q. *The Modern International Law of Outer Space*, (Pergamon: New York, 1982), at 40.

[120] Zullo, Kelly M., "The Need to Clarify the Status of Property Rights in International Space law" (2002) 90 The Georgetown Law Journal 2413, at 2419

allows for resource appropriation by private entities. As the U.S. Commission clarified, their national legislation also recognises the guiding nature of **Article I**'s "province" principle and by interpreting it as guaranteeing "the right to exploitation", succeeds in "giving effect to Outer Space Treaty rights and obligations".[121] Luxemburg's Government too, recognised the "truth" of "province's" declaratory nature and its differentiation from "common heritage" when it declared in the Law's first Article that "space resources are capable of being appropriated".

2. The Sovereignty Predicament

Moving on from the discussion surrounding the first Article of the **Outer Space Treaty** and the interpretations of the mankind principles that discourse promotes as true, attention must be paid to another facet of contemporary space law discourse on the subject of private ownership in celestial bodies. That facet is composed by the answers to the following question: "can that which cannot be owned by a nation, be owned by an individual or a private entity?". This second discussion topic, engaged both at the State level and in academic texts, revolves mostly around **Articles II and VI of the OST** and the ramifications of their interpretations for private property rights. The first of these two provisions, **Article II**, succinctly states that "[o]uter 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*". Subsequently, **Article VI** adds that "States Parties to the Treaty shall bear international responsibility for national activities in outer space,

[121] U.S House of Representatives, "Report on the Space Resource Exploration and Utilization Act of 2015", June 15th 2015, at https://www.congress.gov/congressional-report/114th-congress/house-report/153/1 [accessed 14/09/2018]

including the Moon and other celestial bodies, whether such activities are carried on by governmental agencies or by *non-governmental entities*".

To claim that celestial bodies belong to no nation is uncontested; **Article II of the OST** establishes the prohibition of appropriation by a State in the letter of the law and the consistent practice of States for the past five decades has transformed this prohibition into customary international law that applies to non-signatories to the space treaties as well.[122] For this reason, controversy surrounds solely the legality of appropriation of celestial bodies and their resources by *private* entities. In academic discussions, the interpretation of **Articles II and VI** and thus, the legality of private appropriation under the OST, rests on how one defines the relationship between national sovereignty and ownership. Is it a relationship of dependency, meaning that any private claim of ownership is *predicated* upon a national claim over the entirety of a land *or* is private property a right that can be *recognised* by a State (or States) but not dependant upon a State's sovereignty over the land in question? Opinion is hugely divided on this issue.

The first of the two camps, that of recognising that private property can only be stablished where national sovereignty has been claimed, largely holds that **Article VI** means that because private activities need to be conducted through the auspices of a State, private ownership can be guaranteed only through a State's sovereignty over a celestial body or resource. Cooper, for example, notes that on the basis of **Article VI**, "property claims must occur through the State's property laws. Therefore individuals may not claim space or celestial bodies".[123] Tennen too concurs, writing that the activities of non-governmental entities are authorised by the power of a

[122] *Supra* note 43

[123] Cooper, Lawrence A., "Encouraging Space Exploration Through a New Application of Space Property Rights" (2003) 19 Space Policy 111

State's sovereignty, a power that does not include "the authority to license [private entities] subject to their jurisdiction, to engage in conduct which is prohibited by positive international law", a category in which the OST belongs.[124] Other similar conclusions have been reached by proponents of exclusive rights like Dinkin, who believes that "no one at all can make property rights claims" under the Treaty, or Markoff, who does not believe **Article II** prohibits private appropriation expressly, but nonetheless notes that "private appropriation" is interlinked with the notion of sovereignty, as it "cannot be conceived apart from a public law asset having the power for protecting it".[125]

The arguments of this school of thought are often further substantiated by the presentation of documents through which the OST's drafters' intention to forge a relationship between private property and sovereignty is supposedly glimpsed. Such documents are the ones transcribing the meetings of the UN COPUOS preceding the OST's adoption, where it was agreed, in the words of the Belgian Ambassador, that national appropriation should be seen as "covering both the establishment of sovereignty and the creation of titles to property in private law".[126] To further their argument, these works also point to discussions predating the UN COPUOS, such as that of the International Law Association in 1960, where it was concluded that any international agreement should prohibit states from making "claims to sovereignty or other *exclusive rights* over

[124] Tennen, Leslie, "Commentary on Emerging System of Property Rights in Outer Space" (2003) United Nations – Republic of Korea Workshop on Space Law

[125] Dinkin, Sam, "Don't Wait for Property Rights" (July 12 2004) Space Review, at http://www.thespacereview.com/article/179/1 [accessed 20/08/2018]; Markoff, Marco G., "Space Resources and the Scope of the Prohibition in Article II of the 1967 Treaty" (1970) Proceedings of the 13th Colloquium on the Law of Outer Space, American Institute of Aeuronautics and Astronautics, at 81

[126] UN Document A/AC.105.C.2/SR.71, August 4 1966 as referenced by Markoff, Marco G., "A Further Answer Regarding the Non-Appropriation Principle" (1970) Proceedings of the 13th Colloquium on the Law of Outer Space, American Institute of Aeronautics and Astronautics, at 84

celestial bodies", as well as 1963's Institute of International Law Conference where it was held that "celestial bodies are not subject to any kind of appropriation".[127]

The opponents of this positive relationship between national sovereignty and private property on the other hand, go to lengths to prove that the OST differentiates between the two. Some have claimed that the Treaty does not prohibit private property rights on the basis that **Article II** makes no direct reference to such rights and thus, should not be interpreted as inhibiting them.[128] As proof, the wording of a number of documents preceding the OST, and supposedly influencing it, is offered. A popular example is the **Draft Resolution of the International Institute of Space Law**, which states that "[c]elestial bodies or regions on them shall not be subject to national or private appropriation".[129] This differentiation is claimed to prove that **Article II**'s omission to make explicit reference to private appropriation means the non-appropriation principle does not encompass it.[130]

Other scholars aligned with this second school of thought base their claims on different interpretations of the notions of sovereignty and property. Wayne N. White for example, differentiates between "functional" and "territorial sovereignty", implying that a private entity

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[127] Institute of International Law, September 11th 1963, Brussells as cited in Gangle, Thomas, *The Development of Outer Space: Sovereignty and Property Rights in International Space Law* (Santa Barbara, California: Praeger, 2009), at 36

[128] *Ibid*, at 38

[129] International Institute of Space Law, "Draft Resolution of the International Institute of Space Law Concerning the Legal Status of Celestial Bodies" (1965) Proceedings of the 40th Colloquium on the Law of Outer Space, American Institute of Aeronautics and Astronautics 351. For an example of scholars of this second school of thought using this draft resolution see White, Wayne N., "Real Property Rights in Outer Space" (1965) Proceedings of the 40th Colloquium on the Law of Outer Space, American Institute of Aeronautics and Astronautics 370.

[130] Wayne White comes to that conclusion in "Interpreting Article II of the Outer Space Treaty" (2003) Proceedings of the 46th Colloquium on the Law of Outer Space 171

could claim private ownership over a celestial resource *and* receive protection of its property rights flowing from a State's "functional sovereignty" (which in turn arises from **Articles VI** and **VIII**), without the entity's action being considered a claim to expand the State's "territorial sovereignty" (prohibited by **Article II**).[131] Others attempt to reinterpret the concept of private property itself, in order to justify its legality within international space law. This is done by scholars who espouse the notion that appropriation and ownership of celestial resources is legal under international space law as long as those resources are extracted and not "in place".[132] The notion that once resources are extracted from a celestial body they can be subject to private ownership is predicated on the belief that within the freedom of use of outer space established by the OST is included "the freedom to exploit its resources".[133]

Having posited these different, competing conceptions of the relationship between sovereignty and private ownership in celestial bodies and their resources, this work has surely planted a question in its readers' minds: how can differing opinions that seemingly dominate academic discourse equally, generate a truth? How can differing opinions make up a single, "true" knowledge that becomes privileged enough to guide institutions' actions? The answer to these reasonable questions comes from Foucault himself, who notes that different arguments, "even contradictory"

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[131] White, *supra* note 129

[132] For examples of the argument that the OST word "use" should be read as including "exploitation of resources and other attributions and applications of outer space" see Goldman, Nathan C., *American Space Law: International and Domestic* (Iowa City: Iowa State University Press, 1988), at 70; White in *supra* note 129; Roberts, Lawrence D., "Ensuring the Best of All Possible Worlds: Environmental regulation of the Solar System" (1997) 6 New York University Environmental Law Journal 126, at 141 – 143; Goldman, Nathan C. *American Space Law: International and Domestic* (Iowa City: Iowa City University Press,1988), at 70

[133] Danilenko, Gennady M., "Outer Space and the Multilateral Treaty Making Process", (1989) 4:2 Berkeley Technology Law Journal 217, at 242; In this quotation Danilenko is drawing from his reading of Christol, Carl Q., *The Modern International Law of Outer Space* (Elmsford, New York: Pergamon Press, 1982), at 39-42

ones, can exist "within the same strategy", in fact, they are but "tactical elements or blocks operating in the field of force relations".[134] It is in hopes of uncovering this strategy and the notions it aims to crown as "true", that we must turn to the sphere of politics once again, where there is a clear dominance of one opinion on the relationship between private property and national sovereignty, in other words, where only one type of knowledge is seen as capable of guiding political institutions' actions.

The knowledge that seems to be deemed legitimate in guiding the actions of various States' political apparatuses is one most aligned with the second school of academic thought examined, that positing that private property and appropriation rights in celestial resources would not require the violation of the OST's national appropriation prohibition. To be more specific, institutions like the space agencies of space-faring nations have, for decades, acted on the basis of the "truth" that ownership of celestial resources does not amount to national appropriation under international space law. In fact, the international community at large has never challenged the ownership of lunar samples by both NASA and the Roscosmos, or the latter agency's numerous transfers of ownership of some of these samples to private individuals.[135]

However, it is also more prominent political institutions, like States' Governments, that through their actions validate the notion of celestial resources' ability to be privately owned, as "true". These actions take the form of national legislation like the **US SPACE Act** which establishes, in

[134] *Supra* note 64, at 101-102.

[135] A very recent example of this is the impending auction of a number of lunar samples collected by the Soviet Space Program in 1970, see "Moon Rocks Collected by Soviets Expected to Fetch up to $1 Million at Auction", Radio Free Europe Radio Liberty (31st October 2018) at https://www.rferl.org/a/moon-rocks-collected-soviet-unmanned-space-mission-luna-16-expected-fetch-1-million-dollars-at-auction-sothebys-new-york/29574237.html [accessed 01/11/2018].

§51303, that "United States citizen engaged in commercial recovery of an asteroid resource or a space resource [are] entitled to […] possess, own, transport, use, and sell" any celestial resource they extract. The **Luxemburg Law**'s first Article similarly declares that "space resources are capable of being appropriated", while Russian legislation too, states that "[t]he property rights over the physical product created in outer space shall belong to the organizations and citizens possessing property rights in the components of space technics"- meaning that a private entity in ownership of machinery that extracts celestial resources, can lay claim to those resources.[136]

With this validation by political apparatuses in mind, the strategy within which the abovementioned polarising academic discussion takes place can be seen. This strategy allows this inconclusive academic debate to act as the baseline upon which political discourse constructs a second truth, that of private property and appropriation's dissociation from national claims to sovereignty. In other words, in the sphere of politics, the schism in scholarly opinion is construed as proof that academic discourse can not provide a concrete description of the nature of the relationship between sovereignty and private property. The "truths" presented by either side in the academic debate are marginalised and invalidated. Based on this marginalisation, the practice of the two most prominent space-faring States, namely the U.S and the Russian Federation, arises once again as the only putative producer of the truth, the truth that a State can provide its entities with private property and appropriation rights in celestial bodies, without that provision amounting to a claim to sovereignty on behalf of the State and thus, a violation of the OST's second Article.

[136] See Paragraph 4 of Article 16 of the Law of the Russian Federation on Space Activity (June 20 1993)

3. The Science of Celestial Private Property and Appropriation Rights

One of the many ways of binding the individual "to the manifestation of truth" is, according to Foucault, science.[137] To gain this binding ability, modern science has declared itself as the "sole criteria of truth" by removing problems that should be considered political in nature "from the realm of political discourse, and recasting [them] in the neutral language of science".[138] When it comes to the establishment of exclusive rights in celestial bodies, arguments which employ scientific theories underscore and strengthen the validity of the two previous "truths" genealogy has uncovered.

Perhaps the most often-invoked scientific field in works exploring the issue of celestial property, is that of economics. A significant number of commentators seem to believe the notion that "the tragedy of the commons" is bound to occur in space if a doctrine as idealistic as that of "common heritage" is to be widely upheld by the international community.[139] As an answer to that potentiality, the establishment of private property rights in celestial bodies, something that will push more private entities to venture into the final frontier, is presented as the way forward. Through that establishment it is argued that incentives will be increased, which in turn will create jobs and maybe even economic booms for the countries in which the private entities that work in

[137] *Supra* note 18, at 100

[138] de Sousa Santos, Boaventura, *Rise of the Global Left: The World Social Forum and Beyond* (London and New York: Zed Books, 2006), at 16; Dreyfus and Rabinow *supra* note 65, at 196

[139] Examples include Shackelford, Scott J., "The Tragedy of the Common Heritage of Mankind" (2009) 28:1 Stanford Environmental Law Journal 109; Fountain, Lynn M., "Creating Momentum in Space: Ending the Paralysis Produced by the "Common Heritage of Mankind" Doctrine" (2003) 35 Connecticut Law Review 1753; Chaddha, Shane, "A Tragedy of the Space Commons?" (2010), at https://ssrn.com/abstract=1586643 ; Taylor, Jared, "Tragedy of the Space Commons: A Market Mechanism Solution to the Space Debris Problem" (2011) 50:1 Columbia Journal of Transnational Law 253

space will be based. [140] That latter notion is that which has most notably broken out of the confines of the academic sphere and influenced that of politics, as seen by the actions of both the U.S and Luxemburg, whose space legislation was aimed at bolstering their respective economies. However, even more supposedly utilitarian scientific arguments have been made, with authors claiming that establishment or recognition of private property rights in celestial bodies will aid developing countries by redirecting some of the profits to them and even work to alleviate the effects of any future world recessions by boosting the global market.[141]

However, the genus of works making claim to scientificity by relying on the social sciences is not limited to the use of economics. A notable argument found in some works is one engaging with psychology and anthropology by concerning itself with human nature. Individualism and "selfish procurement" is in the nature of humanity it is posited, and thus, as humanity moves beyond its home world it should establish laws that accommodate its innate need for private property rights, as to avoid any future conflicts.[142] In other words, the establishment of private property rights is necessitated, it is said, because humans are inherently selfish beings. Though they do not

[140] Van Ballegoyen, Arjen, "Ownership of the Moon and Mars?" (2000) Ad Astris, as cited by Gangle, *supra* note 27, at 39

[141]Erin Clancy in "The Tragedy of the Global Commons" (1998) 5:2 Indiana Journal of Global Legal Studies 601, posits that the "common heritage" principle (which could stop the establishment of these rights) encourages overuse and in the long-run is harmful to the growth of developing nation, while Philip Harris in his review "Book Review: The development of Outer Space: Sovereignty and Property Rights in International Space Law, Thomas Gangle" (2010) 26 Space Policy 129, mentions the existence of works which suggest that if "common heritage" in outer space is fully abandoned and property rights established, future world recessions could be less impactful.

[142] Buxton, Carol, B., "Property in Outer Space: The Common Heritage of Mankind Principle vs. the "First in Time, First in Right" Rule of Property Law" (2004) 69 Journal of Air Law and Commerce 689, at 706; It should be noted that other popular generalisations about the nature of humans (outside of space law), have been the targets of criticism for decades, like the myth of Man the Hunter. See Sussman, Robert, W., "The Myth of Man the Hunter, Man the Killer and the Evolution of Human Morality" (1999) 34:3 Zygon 453

accompany their claims about human nature with empirical evidence, or even entertain the possibility of enacting laws that counteract the effects of this "nature", these works, under the auspices of objectivity and rationality due to their association with a science, are free to promulgate this generalisation as true and on it base the argument that eventually, "space faring nations will resort to the age-old, primitive ""first in time, first in right" rule of property that the international community attempted to avoid".[143]

Finally, to a lesser degree, the hard sciences are also invoked to provide this discourse with a modicum of scientificity. However, their invocation is superficial. Instead of the methods and theories of science being used to justify the need for the establishment of private property rights, it is scientists that are given voice. Assumed to be imbued with the same spirit of neutrality and rationality as the scientific fields they serve, scientists of the space sector campaign for the establishment of exclusive celestial rights. Their pleas are supposedly a response to the "scientific stagnation" caused by private enterprises' inability to currently legally profit from celestial bodies.[144] If such rights are established, it is posited, and more than just national agencies venture onto celestial bodies, the sciences – from technology to physics and even medicine – will leap forward with even greater speed, benefiting the whole of humanity in the process.[145]

What these works making a claim to scientificity by invoking a number of sciences in the construction of their arguments achieve, is to offer a 'readily available' rationality for the need to establish private property and appropriation rights in celestial bodies. This rationality is the third "truth" genealogy we will attempt to disturb, a "truth" that combined with those emerging from

[143] Buxton *supra* note 142, at 691

[144] Fountain *supra* note 139

[145] *Ibid*, at 1776

the discussions around the mankind principles and the relationship between national sovereignty and private property rights, validates with the stamp of "true knowledge" statements which posit that private property and appropriation rights in celestial bodies *can* and *should be* established in international space law. In other words, the 'ultimate' truth this work will undermine, is that of the inevitability and necessity of private property and appropriation rights in celestial bodies.

The Strategy of Genealogy

Having acknowledged the contemporary "truth" which this genealogy aims to upset, it is necessary to expand on the process through which it hopes to do so. In the previous chapter, the benefits of Foucault's genealogy as an analytical method were presented. However, little was written about the practical application of the method. In truth, little *can* be written about the actual methodology of genealogy. Other than saying genealogy should pursue a historical ontology in relation to either truth, power, ethics or a combination thereof, Foucault himself did not adhere to a detailed set of rules, nor did he want those who would follow in his footsteps to research in accordance with a methodological itinerary.[146] He did not care "to dictate how things should be", an attitude that Valerie Harwood found necessary if Foucault wished to avoid falling "foul of his own critique of truth and science".[147] As a result, no single genealogy employs the same strategy; the genealogies

[146] For more on this tripartite ontology see *supra* note 87; Ransom, in *supra* note 19, at 85, writes that Foucault left "the techniques […] of genealogy ambiguous", while Andrew Thacker, "Foucault and the Writing of History" in Lloyd, Moya; Thacker, Andrew (eds.), *The Impact of Michel Foucault on the Social Sciences and the Humanities* (London: Macmillian Press LTD, 1997), at 50 notes that "Foucault's work on history is not […] a methodology in any conventional sense".

[147] Michel Foucault, "Questions of Method" in Faubion, J.D. (ed.) *Michel Foucault: Power Vol. 3* (New York: The New Press, 1980), at 236; Hardwood, Valerie, "Truth, power and the self: A Foucaultian analysis of the truth of

of sexuality and the disciplinary society written by Foucault himself are proof of that, as are those written by Foucauldian scholars, be they on racism, education, youth counselling, or something else.[148] However, despite the intentional ambiguity that permeates Foucault's genealogical work, a number of commentators have since identified the broad confines of the lines of inquiry that need to be followed by a genealogist – however he or she may see fit – in order to disturb a regime of truth, show its ephemeral nature and unmask the "cumulative effect of [the] many discrete influences" of power.[149]

First among these lines of inquiry is one that is conducted through a wide historical search. This search is one for points of comparison, a search that allows the genealogist to "point to the contingent, historical character of the "problem" we confront today" in an effort to destabilize or denaturalize "the kind of individuality (and ethics connected with it) that dominates us now".[150] Foucault's use of this line of inquiry was most evident in the second volume of *The History of Sexuality* where the philosopher spent a considerable portion of the book exploring sexual ethics in ancient Greece. Through this exploration Foucault concluded that in ancient Greece, the ethos of self-discipline when it came to (same-sex) sexual desires was not the result of religious dogma but rather a self-imposed duty upon free, property-owning males to govern themselves as to be

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Conduct Disorder and the construction of young people's mentally disordered subjectivity" Unpublished Doctor of Philosophy Thesis, University of South Australia, Adelaide, at 42.

[148] In order the genealogies mentioned are found in: Foucault's *The History of Sexuality Volume II* and *Discipline and Punish: The Birth of the Prison*; Rasmusse, Kim Su, "Foucault's Genealogy of Racism" (2011) 28:5 Theory, Culture & Society 34; Graham, Linda J., "Discourse analysis and the critical use of Foucault" (2005) Paper presented at Australian Association for Research in Education, Sydney, Australia; 27 Nov. – 1 Dec. 2005; Besley, Tina, *Counseling youth: Foucault, power, and the ethics of subjectivity* (Westport: Praeger, 2002).

[149] *Supra* note 19, at 94 .

[150] *Ibid*, at 93.

able to "rise above other citizens to a position of leadership".[151] For Foucault, this act of self-government, though quite obviously unrelated to Christian teachings, very much resembled the sexual ethos of modernity and proved that modernity was not the first time in which sexuality had been used to govern individuals.[152] While he was quick to admit that a comparison between two eras presenting a similar problem, such as the one he made in *The History of Sexuality*, was not an attempt to find a solution to the present predicament, he believed that by proving the historical character of a problem allowed for a better analysis of "what's going on now – and [how] to change it".[153]

The second line of inquiry that needs to be undertaken is one which questions the validity of any claims to truth by exposing their ephemeral nature. To effectively conduct this line of inquiry, a genealogist can present the various iterations of the "truth" about the subject matter at hand throughout different time periods. By producing a record of a concept in a number of different time periods, genealogical works can bring attention to the "discontinuities and ruptures in thought" that facilitate the emergence of each successive regime of truth and prove that what is presented as true, natural or inevitable in the present, is not a priori, nor the result of scientific development and rationality but, is instead that of a "confluence of encounters and chances". [154] Foucault however, did not leave any explicit guidance for how a genealogist can go about determining which time periods ought to be examined. As was mentioned earlier in this chapter,

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[151] Foucault, Michel; Hurley, Robert (tran.), *The Use of Pleasure* (New York: Random House, 1985), at 75

[152] Michel Foucault, "On the Genealogy of Ethics: An Overview of Work in Progress" in *supra* note 65, at 231.

[153] *Ibid*, at 231, 236

[154]Robin Bunton; Alan Peterson "Foucault's Medicine" in Burton, Robin; Peterson; Alan (eds.), *Foucault, Health and Medicine* (London: Routledge, 1997), at 3; Michel Foucault, "Critical Theory/Intellectual History" in Kritzman (ed) supra note 64, at 37

despite celestial private property rights becoming a distinct object of discourse only within the past few decades, they have emerged from a discursive practice that has been in operation for much longer. In fact, as will be shown below, the discussions around the elements of this practice, namely the relationships between sovereignty, the commons and private property, can be traced to as far back as the time of Saint Thomas Aquinas who wrote extensively on these relationships and is in fact credited for it in a number of contemporary works on the principle of common heritage, both within and outside of space law.[155] For that reason, when conducting the genealogy of the discursive practice that facilitated the contemporary emergence of celestial private property rights as a distinct discursive object, one must begin their analysis in the midst of the Middle Ages, when Aquinas articulated the first in a line of truths on the relationships between sovereignty, the commons and private property.

The final line of inquiry a genealogist ought to undertake, which will be the subject of the following chapter, aims to provide the context of these "discontinuities and ruptures" by exposing the conditions, "the network of contingencies", through which those forms of rationality *emerged*.[156] In pursuing the 'how' and 'why', the record of the history of the concept at hand that was created during the "discontinuities" inquiry is used and placed within the context of power relations, which according to Foucault operate under different modalities in each epoch. Through this process, a

[155] See Williams, Sylvia Maureen, "The Law of Outer Space and Natural Resources" (1987) 36 ICLQ, at 144; Travieso, Juan A. "El Patrimonio Comun de la Humanidad en el Nuevo Orden International" (1981) 2 Revista del Colegio de Abogados de Buenos Aires as cited in Oduntan, Gbenga *Sovereignty and Jurisdiction in Airspace and Outer Space: Legal Criteria for Spatial Delimination* (Routledge: New York, 2012) at 191; Halligan, Patrick, "The Environmental Policy of Saint Thomas Aquinas" (1989) 19:4 Environmental Law 767

[156] Burton *supra note 154*, at 3; Foucault, *ibid*, at 37

genealogist hopes to show how the various valuations and interpretations of the concept, each perpetuate the "domination of certain men over others" and work to constitute the subject.[157]

A Genealogical Comparison: The Frontier Problem

The comparative line of inquiry is especially useful in this analysis, as it can disturb the 'myth' upon which the hold of contemporary truth is based. This myth was best summarised by Leslie Tennen when he perpetuated it by claiming that "space is a unique medium with attributes unlike any physical area on Earth. As such, it requires an approach that is also unique, one that is not burdened with the historical shackles of terran-based legal regimes".[158] Tennen is not the only legal professional to think so. In fact, it is widely held that "the transplantation of archaic political and legal features from the earth on the planets" will not be beneficial.[159] To a limited extent, this thesis is in agreement. However, the notion that space is a tabula rasa, a domain in which humanity's past actions in the legal, political and social sphere have no consequences, is by no means accidental. It is, instead, part of a narrative, a myth, that works to uphold the "truth" this genealogy discovered. This narrative posits that "it would be presumptuous to attempt to draw lessons" from the past "in the context of a space law text, regarding the future of humankind's expansion into outer space", in an effort to stop any critiques of the proposed establishment of celestial property rights from emerging.[160] Genealogical comparison, thus, can prove invaluable in shaking the

[157] *Supra* note 19, at 85

[158] *Supra* note 13

[159] Markoff *supra* note 125

[160] *Supra* note 14

bedrock of this narrative, by showing that celestial property rights, though very much a modern concept, constitute a problem which has a "contingent and historical character".[161]

As the opening of every Star Trek episode reminds us, space is the Final Frontier. This characterization, though made popular through the 1960s television series, is one that has broken the confines of popular culture. News commentators, politicians and academics alike have taken to referring to space as the final or next frontier.[162] However, space is not the only frontier to capture Western imagination. The American Frontier and the narratives weaved around it, have heavily influenced the culture, identity and art of the Western world (particularly that of the U.S), over the past four centuries. While the American Frontier engages "a set of narratives" too complicated to significantly expand upon in this thesis, there are certain notable motifs within these narratives that are also prominently present in the narrative of the Final Frontier, thus making outer space "a metaphorical extension of the American West".[163]

The first such motif is that of limitlessness. The vastness of the American Frontier, which seemed limitless to European colonizers, combined with the myth of its unexplored state, was what allowed America to proclaim itself the land of "unlimited opportunity".[164] The most prominent theme of the myth of the American Frontier was that in it, everyone, regardless of their previous circumstances, would be able to elevate their status if they worked hard enough. Over the centuries however, the amount of unclaimed land in the West was exhausted and the myth of the American

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[161] *Supra* note 19, at 93

[162] However, it should be noted that President Kennedy's infamous 1962 speech at Rice University is perhaps the one to be credited with the popularisation of the term "next frontier".

[163] Slotkin, Richard, *The Fatal Environment: The Myth of the Frontier in the Age of Industrialization, 1800-1890* (New York: Antheneum, 1985), at 19; Benjamin *supra* note 63

[164] Slotkin, Richard, *Regeneration Through Violence: The Mythology of the American Frontier, 1600-1860* (Middleton: Wesleyan University Press, 1973), at 5

Frontier as a secular Promised Land was laid to rest. That is until the mid twentieth century, when technological advancements made the venture into a new frontier, that of outer space, possible. In turn, this Final Frontier's offer of unlimited opportunities derives from its "limitless resources" that scientists and academics refer to constantly.[165]

The only staggering difference in the way this theme of unlimited opportunity plays out in the two frontiers is in relation to the people to whom that opportunity is promised. The "strong, ambitious, self-reliant" individuals whose labour could lay claim to the resources of the American Frontier were any white persons (predominantly men) who had what little money was necessary to start moving West.[166] In outer space however, mobility is a privilege of the very few and thus, it is only to those few - who usually are not persons but entities – that unlimited opportunities are promised. This difference in the way this theme unfolds in the two frontiers however, is also proof of the contingent character of the 'frontier problem'. Both in the American and the Final Frontier the "unlimited opportunity" promised, is a promise made to a small, already privileged part of the relevant population. The American West could yield riches for the white men who, on top of being risk takers, were afforded the privilege of freedom and personhood but, to any other person who dared to explore it, it was an unattainable land of danger and uncertainty. The Final Frontier, in turn, promises to enrich those who already have enough capital to take on space exploration - it

[165] Neil Degrasse Tyson is one of many to use this characterization as is seen in this interview: Kramer, Katie "Neil deGrasse Tyson Says Space Ventures Will Spawn the First Trillionaire" (3rd May 2015) *NBCNEWS*, at https://www.nbcnews.com/science/space/neil-degrasse-tyson-says-space-ventures-will-spawn-first-trillionaire-n352271,[accessed 22/07/2018]; Similar phrasing is also found in academic texts like Benaroya, Haym, *Turning Dust to Gold: Building a Future on the Moon and Mars* (Chichester, UK: Praxis Publishing, 2010), at 79; Wassenbergh, Henri A., *Principles of Outer Space Law in Hindsight* (Dordrecht: Kluwer Academic Publishers, 1991) at 121

[166] *Supra* note 164, at 5

might even create the first trillionaire.[167] Yet, for those who are not associated with private entities that could one day reach space, in other words the majority of the world's population, this Frontier too is an uncertain and unattainable one.

The second theme featured heavily in the rhetoric of both Frontiers is that of the Explorer and the Frontier Hero. The Explorer is a figure showered with praise and its embodiments are Europeans like Christopher Columbus and astronauts like Neil Armstrong. Unlike the Frontier Hero, who will be spoken of shortly, the Explorer does not simply benefit himself with his actions but humanity at large. Columbus (even when criticized) and Armstrong are seen as ushering in a new era for the world, by being the first to brave the frontiers ahead of them. But Armstrong, his fellow astronauts and all those who the Final Frontier narrative encourages to follow in their footsteps, share commonalities with the American Frontier Hero too. That hero - whose embodiments were both real, like Daniel Boon, and fictional, like Pecos Bill – is one triumphant over nature and wilderness, much like the Space Frontier hero is triumphant over the vast and empty expanse of outer space.[168] The Frontier Hero is a bastion of individualism, a figure held as proof that the expansion into new frontiers is necessitated upon the spirit of individualism, rather than that of the community.[169]

Finally, the contingent and historical problem of the Frontier is characterised by the promulgation of the notion that there is a necessity for the establishment of private property rights. In the American Frontier this establishment was seen as the only antidote to the lawlessness and the chaos

[167] Kramer *supra* note 165

[168] "An American hero is the lover of the spirit of the wilderness, and his acts of love and sacred affirmation are acts of violence against the spirit and her avatar ", writes Slotkin in *supra* note 164, at 34.

[169] Ray Allen Billington in *America's Frontier Heritage* (Albuquerque: University of New Mexico Press, 1993) posits that the spirit of individualism that characterizes modern Americans, is largely the heritage of the Westward expansion of the American Frontier, rather than that of European colonialism alone.

of the "Wild West". In the Final Frontier the establishment of exclusive rights in celestial bodies is supposedly the only way to guarantee that when private entities begin mining asteroids, they will be acting within a widely accepted legal framework. With that in mind, it is really no surprise that the US **Homestead Act of 1862**, which established these rights in the American West, has been favorably compared to the **US SPACE Act of 2015**.[170]

Discontinuities and Ruptures

The previous section of this chapter provided proof as to the historical character of the problem at the heart of this genealogy; this section, however, hopes to show that the "truth" generated in present day as a response to this problem has no such historical character but, is instead ephemeral. To do this, as explained, this analysis will look for the different truths produced by the discursive practice at hand throughout time, starting with its iteration in the later Middle Ages when Saint Thomas Aquinas laid down the foundations for the principle that what would one day be referred to as that of "common heritage of mankind". Foucault, perhaps inadvertently, provided a basis upon which to separate this large window of time, spanning from the eleventh century to now, into different periods that each produce their own regime of truth. In *The Order of Things*, he posited that there were four "epistemological eras", the Pre-Classical (from the later middle ages to the mid 17th century), Classical (from the mid 17th century to the 18th century), Modernity (19th century

[170] See Planetary Resources, "Planetary Resources Applaus U.S Congress in Recognising Asteroid Resource Property Rights" (10 November 2015), at https://www.planetaryresources.com/2015/11/planetary-resources-applaus-u-s-congress-in-recognizing-asteroid-resource-property-rights/ [accessed 09/07/2018]

to shortly after Foucault finished writing, in the 1960s), and Contemporary (approximately from the 1970s to present) eras, that were to be differentiated on the basis of the "structural patterns" characteristic to each of them. [171] These "structural patterns", which connect the various discourses (i.e on language, life, labor) within each era and which are "more powerfully apparent than the internal continuities that characterized any one of these discourses as it developed over time", made up the *episteme* of each era, the unique way each era had of making sense of things.[172] The episteme of each era, in other words, constitutes the "the condition[s] of possibility of discourse in a given period; […] an a priori set of rules of formation that allow discourses to function, that allow different objects and different themes to be spoken at one time but not at another."[173] What the presence of these succeeding conditions of possibility means, though Foucault himself never puts it in as many words, is that by virtue of each episteme facilitating a different set of discourses, whose "production, accumulation, circulation and functioning" in turn establishes, consolidates and implements a different set of relations of power, in each era a different regime of truth, or knowledge that political and economic apparatuses privilege enough to influence action, is in

[171] In *Order*, Foucault only examines at length the Pre-Classical, Classical and Modern epistemological eras. The term 'Contemporary Epistemological Era' has been given to the post-1960s (when Foucault was writing Order) epistemological era that Foucault predicted would soon succeed Modernity. See Merquior, José Guilherme, *Foucault (2nd edn.)* (London: Fontana, 1991), at 37,39

[172] *Supra* note 15, at 370; In the Pre-Classical era knowledge was constituted through resemblances; "[t]o know [was] to interpret: to find a way from the visible mark to that which is being said by it and which, without that mark, would lie like unspoken speech, dormant within things". In the Classical age resemblance gave way to representation and in this way the sciences, and thus knowing, became "situated with the object". In turn, the Modern era, ushered in by Immanuel Kant's proposition that man is to be both the empirical object of representations and its transcendental source, is one in which knowledge surrounds the figure of man; man is both the "object of knowledge and [the] subject that knows". However, Foucault saw within Man a finitude and thus, writing in the 1960s, predicted the imminent end of the Modern Era and the beginning of a new epistemological period that some, following in his footsteps, have termed the Contemporary Era. *Supra* note 94, at 32, 265, 340

[173] McNay, Lois, *Foucault: A Critical Introduction* (Cambridge: Polity Press, 1996), at 52

operation.[174] This then means that there are four truths this genealogy must touch upon: the Pre-Classical, Classical and Modern truths that are to be expanded upon below and the contemporary truth, spoken of in the beginning of this chapter.

1. The Pre-Classical Era

From the later Middle Ages to the mid 17th century, "truth" flowed from the divine. Political and economic apparatuses deemed as legitimate in guiding their actions only those knowledges that could be seen as containing the word of God. Despite the fact that some of the apparatuses of Modernity that Foucault identified, like the media, were not present in the Pre-Classical era, institutions like the university were in operation in both periods and that is why the academic sphere will be the one examined in this section.

Unsurprisingly, this sphere was one which was largely dictated by Catholic doctrine. In fact, the first European universities were established by Papal Decree at the end of the 11th century, as a response to the growing demand for an even more educated clergy.[175] Though those institutions would soon grow to be independent of the Church, their actions, meaning the writings they produced and disseminated, were ones guided by the Christian "truth". Saint Thomas Aquinas was perhaps the first to speak of an aspect of this truth that is of upmost relevance to this analysis. Touching upon the three pillars of the Contemporary truth genealogy uncovered, namely; sovereignty, the commons and their relationship with private property, Aquinas established as

[174] Burchell, Gordon and Miller *supra* note 21, at 93

[175] Oestreich, Thomas, "Pope St. Gregory VII" in Herbermann, Charles (ed.) *Catholic Encyclopedia* (New York: Robert Appleton Company, 1913)

generally accepted knowledge the following: Firstly, sovereignty was a right solely belonging to God (whose divine will is then for Monarchs to rule over their people) and its subject was the entirety of creation. In turn, mankind was entrusted with being the good steward of God's sovereign dominion. This good stewardship by men however, did not mean that they held all things and beings that could be possessed collectively. Due to the fact that man had committed the original sin and left behind the state of innocence (the only domain in which collective ownership would not lead to strife) the establishment of private property and appropriation was held by Aquinas to be necessary for the betterment of human life.[176] Many scholars would go on to consider Aquinas' views on these relationships, and especially on good stewardship, as the prelude to the common heritage of mankind principle.[177]

Though in the centuries following the publication of Aquinas' writings, many more would go on to discuss the interplay between sovereignty, the commons and private property, most would follow along the same lines of his arguments. The most notable among these writers is Hugo Grotius. Writing towards the end of the Pre-Classical era, Grotius' views are of special importance both because they show that, as hypothesised, the truth present in Aquinas' works persevered throughout the epistemological period and because they are the works of man widely accepted as the father of international law, within which international space law operates. Like his predecessors, Grotius saw God as the Sovereign of all things who speaks "through the voice of

[176] Hallebeek, Jan, "Thomas Aquinas' Theory of Property" (1987) 22 Irish Jurist 99, at 103-104 referencing Aquinas' *Summa Contra Gentiles*

[177] Agius, Emmanuel, "The Concept of the Common Heritage of Mankind in the Catholic Social Tradition" (1991) XLII:1 Melita Theologica 1; See also Williams; Oduntan; Halligan at supra note 155

nature".[178] However, unlike the theologists that came before him, Grotius did not see the commons as something that had successfully existed only in the state of nature of the distant past. He saw the state of nature reflected in the way the indigenous peoples of the Americas organized their lives but, most importantly he saw the preservation of the commons in relation to the sea as a necessity, positing that that which is "limitless […] cannot become a possession of any one".[179]

In summation, the Pre-Classical era provides an easily 'observable' "truth" towards the end of the 11th century, when the first political apparatuses resembling those Foucault credited with validating "true knowledge", were established. These apparatuses largely abided by Catholic doctrine and thus, crowned as "true" the knowledge which was based on the Divine. When it came to private property and appropriation rights, this truth proclaimed them to be established only in an effort to fulfil individuals' obligation to God, the true sovereign. As for the truth on the relationship between the commons and private property, the Pre-Classical era upholds two notions; firstly, that when it comes to land, common ownership is only attainable in the ideal that is the state of nature and thus, private appropriation is necessitated in civil society, while something as vast as the sea, should only be held in common.[180]

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[178] Grotius, Hugo, *The Freedom of the Seas* (1609), at Chapter I, at http://oll.libertyfund.org/titles/grotius-the-freedom-of-the-seas-latin-and-english-version-magoffin-trans [accessed 17/10/2018]

[179] *Ibid*

[180] The notion that "all property relations are determined by the sovereign" is also present in Hobbes' Leviathan which was written at the end of the Pre-Classical era and first published in 1651. Though Hobbes refers to the King when he speaks of "the sovereign", it was universally accepted at the time that Kings' sovereignty was a manifestation of that of God. See Lopata, Benjamin B., "Property Theory in Hobbes" (1973) 1:2 Political Theory 203, at 204

2. The Classical Age

The Classical Age began rather abruptly, in the middle of the 1600s. The fact that the 17th century was seen by Foucault as touching two epistemological periods, means that thinkers like Grotius, Hobbes, Locke, Pufendorf and Quesnay, though considered to be contemporaries and to speak on largely the same issues, belong into two different epistemes that each produce knowledge differently and thus, operate under different regimes of truth. That is not to say however, that Classical knowledge and truth was distanced from the divine. On the contrary, Classical thinkers unapologetically relied upon natural law even more than before. However, there was a significant difference in the way the two eras conceived the truth when it came to sovereignty, the commons and private property. That difference can largely be attributed to a shift that occurred in the discussion around sovereignty. While during the Pre-Classical era, sovereignty was recognised as belonging to God, who could gift it to monarchs, in the Classical era, the notion of sovereignty was redefined, as the prospect of independent States, governed by their own people, became more and more plausible. Thus, the thinkers of this era, beginning with Locke, validated through their writings a new "truth" about sovereignty that allowed them to claim that the people, who come together to form a State, were the ones to whom God transfers his sovereign power. This truth brought private property rights to the forefront of discourse and presented the need for their protection as the *raison d'etre* of Government and thus, the source of the peoples' sovereign power.[181] Opponents of private property too, like Rousseau came to legitimise this notion as "true

[181] In the second Treatise, Locke posits that people exited the state of nature united "into societies so as to have the united strength of the whole society to secure and defend their properties". See paragraph 136 in Locke, John, *The Second Treatise on Civil Government,* at https://earlymoderntexts.com/assets/pdfs/locke1689a.pdf [accessed 05/09/2018]; Quesnay too held that the defence of the right to property is the only function of government, see Higgs, Henry, *The Physiocrats* (New York: The Langland Press, 1952), at 45; It should also be noted here that one of the

knowledge" by recognising that the establishment of exclusive rights in land was the starting point of civil society.[182]

In turn, the "truth" around the commons and *its* relationship with private property also began to change. As Enlightenment rationalism was ushered in by the Classical era, thinkers began to abandon the notion that the state of nature was a formidable ideal, seeing it, instead, as a state in which only savages still remained. For that reason, the truth became that, while some land should always belong to people in common, one can claim ownership over any resource or land that one mixes with one's own labour and as long as enough remains for others.[183] This "truth" was not only validated by the institutions of university and writing, in other words through the actions of thinkers but, also, through the actions of military and other State institutions that, guided by the knowledge that the establishment of private property was possible in the commons, furthered the colonization of lands held by their indigenous people in common.

3. Modernity

The expansion of the Modern era from 1800s to the late 1960s, allows one to search for its "truth" within the early years of space law itself. The political apparatuses to which this work will turn in an attempt to identify the knowledge deemed legitimate in guiding their action, are international

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most significant institutions that validated Locke's truth on sovereignty, and thus private property as its source, was the British Parliament when it passed the **Coronation Oath Act of 1688** and the **Bill of Rights of 1689** which allowed William II and Mary II to ascend to the throne and bring an end to the Glorious Revolution on the condition that the monarch's power be limited and the Parliament (and thus the people) be recognised as the true sovereign from which laws gained their validity.

[182] See *supra* note 97

[183] See paragraph 27 in Locke, *supra* note 181

institutions like the U.N. As touched upon in the previous chapter, the two most well-known instruments produced by the U.N in regards to space law, the OST and the Moon Agreement, drew from Andrew Haley's vision of Metalaw. Haley's vision spoke of the existence of a set of universal moral principles, like the Golden Rule, that should feature in international space law, a law whose subjects were the entirety of humanity, present and future. When it came to celestial property rights, this vision generated a "truth" that was expressed most notably in **Articles II of the OST** and **9 of the Moon Agreement** and confirmed by comments in the UN COPUOS such as those of Ambassador Cocca. This "truth" was that celestial bodies and their resources were incapable of being appropriated by private entities, as they belonged to humanity in common and even if they were not, their appropriation could only occur under the auspices of a national claim to sovereignty which was prohibited.

The seeds of this modern truth however, were sown long before the U.N. was established. As Reynolds and Merges note, the first attempt at a Russian space program was made in the early twentieth century by the Bolsheviks when, convinced by the famed engineer Konstantin Tsiolkovsky's belief that the abundance of celestial resources would stop the unequal distribution of wealth around the world, they began funding research into rockets.[184] Going even further back to the works of Kant, who according to Foucault ushered in Modernity, we find what is commonly accepted as the 'early draft' of the "common heritage" principle: the notion of cosmopolitanism. Kant's vision of a cosmopolitan world, much like Haley's vision of Metalaw and the Bolsheviks' vision of an egalitarian utopia, was brought together by adherence to a universal morality

[184] *Supra* note 14, at 1-2

according to which the control and use of any resources should be consented to by all those affected by their use, as "the right to the earth's surface […] belongs to the human race in common".[185]

The Absence of 'Real Truth'

This brief excursion through the "truths" generated in relation to sovereignty, the commons and their relationship to private property in each of the epistemological eras that Foucault identified, confirms the hypothesis that each truth differs from the next. What the presence of this multitude of truths (each corresponding to a different era with its own unique constitution of knowledge) shows, is that the "truth" of today is anything but objectively true. The need for the establishment of celestial private property rights has not emerged through the process of rational thinking spanning centuries, as the contemporary arguments making claim to scientificity allude. It is, instead, an ephemeral notion conceived after a series of "discontinuities and ruptures in [the] thought" that relates to sovereignty, the commons, private property and the relationships thereof.[186]

[185] Kant, Immanuel *Practical Philosophy* (Cambridge, Cambridge University Press, 1996), at 329

[186] Bunton *supra* note 154

Celestial Private Property Rights and Power

The Emergence of Truth

The previous chapter exposed the successive "truths" that have historically emerged from the same group of elements that in present day constitute the discourse on celestial private property rights. The constitution of these discursive elements, namely the relationships between sovereignty, the commons and private property, can be traced as far back as the Pre-Classical era when private property rights were seen as deriving from and protected under God's sovereignty and, though they could be established in what was once the commons, not all of the commons could be reduced to patches of private properties. The Classical era in turn was shown as validating as true a very different notion, that of private property as the end of government and source of sovereignty, and as a primarily individual right that can be established over the commons. Modernity too, ushered in a new truth which privileged the preservation of the commons over the need for private property, positing that outer space and celestial bodies belong to all and nor states, nor private individuals could exercise property rights over them. Finally, in the Contemporary era the notion of celestial bodies as mankind's "common heritage" is being marginalised to the realm of illegitimate knowledge, with the notion that private property rights *can* and *should* be established in celestial bodies under international space law, emerging as the only "true knowledge".

With this multitude of truths as a starting point, what this final chapter hopes to do, is provide an explanation for their emergence and show that each of them was "a tactical element in the functioning of a certain number of power relations".[187] In other words, this chapter will place each truth in the context of the power relations within which it is "thoroughly imbued", in order to

[187] Lorenzini, Daniele, "What is a 'Regime of Truth'?" (2015) 1:1 Le Foucaldien, at 3

finally answer the question posed at the beginning of this thesis: 'why do we speak, be it favorably or not, of owning land in celestial bodies *now*, millennia into the global discussion around space?'.[188] However, the reason why it is necessary to contextualise the emergence of all four truths in order to answer a question as to the latest, needs to be expanded upon further. While a "truth", like the Contemporary one, may be historically specific, its emergence is but another production of the "single drama [that] is ever staged"; "the endlessly repeated play of dominations".[189] Thus, to fully understand the effects of Contemporary "truth" and power and how to counter them, it is necessary to look at the entirety of this "play" by exploring the emergence of the truths of the previous eras and exposing "the network of contingencies", meaning the events and circumstances that facilitated their production.[190] In other words, in conducting this genealogical analysis, "we must […] turn to specific historical conditions", while also being conscious of the fact that "[e]vents, no matter how specific, cannot happen just anyhow".[191]

Prior to exposing the "particular stage of forces" upon which the emergence of the truth on the relationship between sovereignty, the commons and private property has played out however, what Foucault considered 'power' to be needs to first be expanded upon.[192] Foucault posited that power is not simply negative or repressive; it is not, as most traditional and critical conceptions of power at the time of his writing posited, always a boot on the neck of the weak or a thing possessed by

[188] *Supra* note 19, at 83

[189] *Supra* note 20*,* at 85

[190] Foucault, Michel "Structuralism and poststructuralism: An interview with Gerard Raulet" (1983) 55 Telos: A Quarterly Journal of Critical Thoughts 195, at 206

[191] *Supra* note 68, at 114

[192] *Supra* note 20*,* at 83

only a few.[193] Instead, power evolved and "[w]hat makes [it] hold good, what makes it accepted, is simply the fact that it doesn't only weigh on us as a force that says no, but that it traverses and produces things, it induces pleasure, forms knowledge, produces discourse. It [is] a *productive network* which runs through the whole social body".[194] According to Foucault, power that "produce[s] reality […], domains of objects and rituals of truth", though always extant, does not always take the same form.[195] In fact, the forms power takes are historically specific, meaning that each epoch has its own techniques of power that any of its institutions (prisons, legal and administrative apparatuses, psychiatric institutions, etc.) can use.[196]

1. "Truth" and Sovereignty

In the epoch that encompassed the Pre-Classical and Classical epistemological eras, the dominant form of power was Sovereign power.[197] This modality of power was "expressed in recognizable ways through particular and identifiable individuals" or groups of individuals, who were "visible agents of power [and] known by others and themselves to be such".[198] The techniques of Sovereign

[193] It should be noted that though Foucault viewed power as a relation that was not inherently repressive, he did recognise that "certain positions preponderate and permit an effect of supremacy to be produced". See *supra* note 17, at 156

[194] *Supra* note 17, at 119

[195] Foucault s*upra* note 78, at 194

[196] *Supra* note 68, at 63, 66

[197] From this point in the thesis onwards, the words 'Sovereign' and 'Sovereignty' will be capitalised when referring to the Foucauldian notions of pre-modern power, so that they can be distinguished from references to sovereignty as one of the legal concepts with which the "truth" of each era is concerned.

[198] Covaleski, J. "Power goes to school: Teachers, students and discipline", (1993) Philosophy of Education Society Yearbook, at https://web.archive.org/web/20060426005011/http://www.ed.uiuc.edu:80/EPS/PES-Yearbook/93_docs/COVALESK.HTM [accessed 05/11/2018]

power employed by institutions in this first epoch to produce and sustain truth, relied on "displays of physical force or violence".[199] In the institution of prison that Foucault examines in *Discipline and Punish* for example, the exercise of power on criminals at the end of the Classical age took the form of beatings, tortures and public executions. As for the aim of Sovereign power, its "telos" is the "maintenance and extension" of the sovereign(s)' "principality".[200] It is in pursuit of this aim, through "particular and identifiable individuals" and the use of forceful means, that it will be shown that the truths of the Pre-Classical and Classical Eras emerged. To put it more simply, the following analysis will search for the "specific historical conditions" and events that show that the truths produced and promulgated in each of the two eras on the relationship between sovereignty, the commons and private property, were aimed at perpetuating the "domination[s] of certain men over others", in an effort to secure the "principality" of each Sovereign.[201]

i. Pre-Classical "Truth"

In the Pre-Classical Era, the "truth" that all of creation was the sovereign dominion of God and rights such as those to private property and appropriation were only in place because they allowed people to fulfil their obligation to him to be the good stewards of his creation, was best reflected in the works of Aquinas. Though written in the later half of the 13th century A.D, Aquinas' works rose to popularity and the notions found in them were eventually validated as true largely due to the "specific historical conditions" of the proceeding centuries in the Roman Catholic Church

[199] *Supra* note 68, at 67

[200] Singer, Brian C.J.; Weir, Lorna, "Politics and Sovereign Power: Considerations on Foucault" (2006) 9:4 European Journal of Social Theory 443, at 451; *Supra* note 21

[201] *Supra* note 68; *Supra* note 20, at 85

("RCC") that had placed the reigns of Sovereign power in the hands of the pontiffs.[202] The beginning of the Pre-Classical Era, meaning the later Middle Ages, was a turbulent time for the RCC, with the Schism between the Roman and Byzantine churches taking place in 1054 A.D. The East-West Schism left each church with a need to protect its "principality" by establishing its authority as the true representatives of God. Instrumental to the RCC's effort to do so was Pope Gregory VII who came to power two decades after the schism and declared that not only was the Roman Pope the true representative of God but, that he also had the right to both enthrone *and* dethrone the kings of the Holy Roman Empire ("HRE"). This was the first indication that throughout Catholic Europe, the "particular and identifiable individuals" through which Sovereign power was being expressed were the members of the RCC and most notably, the Pope.[203]

Having bestowed upon his office sovereignty over men and kings alike, Gregory VII decreed the creation of the educational institutions that would soon after transform to the first European universities, thereby adding to the RCC's arsenal of truth-validating apparatuses.[204] A little over a century later, Pope Innocent III extended the domain of papal Sovereign power by further establishing the Church's supremacy over the HRE and its kings, reinvigorating the prosecution of heretics and waging crusades to reclaim the Holy Land. In fact, following his reign, the superiority of the Pope and the Church over monarchs was such, that for fifteen years, from 1257 to 1273 A.D, the Holy Roman Empire had no emperor, actual or elect, with no significant issues

[202] Though the term "Roman Catholic Church" did not become the moniker for the communion of the Western Church with the Holy See until after the Protestant Reformation of the 16th century, it is used in this work for the reader's and author's convenience.

[203] *Supra* note 198

[204] See *supra* note 175

arising from this vacancy.[205] It was at this prosperous time that the Church established two more educational institutions, the Franciscan and Dominican Orders of monks, whose aim was to disseminate religious knowledge - meaning knowledge which the RCC validated as "true" - to 'everyday people'.[206]

It was at this point in time when the works of Aquinas, who was a Friar of the Dominican Order, found such resonance with the RCC that they became not only the basis of Catholic dogma but, also the Pre-Classical Era's truth on the relationship between sovereignty, the commons and private property. Aquinas' view of this relationship, if held as "true", had, after all, the capacity of greatly benefitting the Papacy by further solidifying its power. First, the notion that sovereignty belonged to God alone, when promulgated as true, allowed Popes, the 'true representatives' of God, to tighten their grip on their own Sovereign power by declaring that it was "necessary to salvation for every human creature", including monarchs, "to be subject to the Roman pontiff".[207] Second, the notion that Christians were the good stewards of God's sovereign dominion and obliged to have private property in honor of their duty to him, provided a justification for the numerous crusades and proselytization efforts that throughout the Middle Ages were aimed at expanding the RCC's sphere of influence, or in other words, its "principality". Similarly, the forceful expulsions of the Jewish populations from England, France, Spain and Portugal in the 15th century, which the RCC encouraged, had the effect of creating Christian-only domains, thus

[205] It should be noted however, that this fifteen year period fell within the Great Interregnum of the HRE, whose 67 year duration *did* have significant adverse effects for the Empire. See Asimov, Isaac; Stamatakis, Nikiforos (trans.), *To Xroniko tou Kosmou* (Iraklio: Crete University Press, 2006), at 269

[206] *Ibid*, at 256

[207] Pope Boniface VII, *Unam Sanctam - Papal Bull of Pope Boniface VIII* (18 November 1302), at http://catholicism.org/unam-sanctam.html [accessed 20/11/2018]

ensuring the maintenance of the RCC's principality throughout Western Europe.[208] Finally, the link between sovereignty, private property and the commons that was forged by the Pre-Classical truth was instrumental for the colonization efforts of the New World. Pope Alexander VI especially, utilized the Pre-Classical truth on private property, sovereignty and the commons in an effort to expand the Church's principality, when he awarded to Spain and Portugal ownership over the New World, facilitating thus the expropriation of indigenous, non-Christian peoples from their lands, the appropriation of "unowned lands" and the enslavement of non-Christians.[209]

This truth of the Pre-Classical era on the relationship between private property, sovereignty and the commons remained pivotal for the extension into the New World, even as events such as the seven decades of the Avignon Papacy, the appearance of the Ottoman threat and the Protestant Reformation caused the RCC to lose its might and relinquish Sovereign power back to monarchs. Reiterated by Grotius in the early 17th century, this truth allowed for the "maintenance and extension" of kings' principality. A prime example is the utilization of this truth by the Dutch, who, after creating the East and West India Companies, took over the East Asian territories of Malacca and Sumatra (among others), 'discovered' New Zealand and Tasmania and even settled on North American shores. By promoting once again the notion that Christians were the good stewards of God's sovereign dominion and thus, obligated to take control of non-Christian

[208] *Supra* note 205, at 314

[209] Rivera asserts that the three Bulls issued by Pope Alexander VI in 1493 (known as the Donation Bulls) allowed the Spanish and Portuguese colonisers to enslave natives, while Minnich adds that "slave trade" was *encouraged* by the Papacy as it was seen as an efficient way of facilitating conversion to Roman Catholicism. See Rivera, Luis N. *A Violent Evangelism: the Political and Religious Conquest of the Americas* (Louisville, Kentucky: John Knox Press, 1992), at 28; Minnich, Nelson H. "The Catholic Church and the Pastoral Care of Black Africans in Renaissance Italy", in Earle, T.F; Lowe, K. J, *Black Africans in Renaissance Europe* (Cambridge: Cambridge University Press, 2010), at 281

territories, this European Christian state was able to solidify its claim over these 'new-found' lands. Equally important was Grotius' clarification on the relationship between the commons, property and sovereignty as it relates to the high seas, which strategically prohibited any sovereignty claims in an effort to enable European states to roam the seas freely when attempting to expand their "principality".

ii. Classical "Truth"

Though both in the Pre-Classical and the Classical Eras the primary modality of power was Sovereignty, from each Era emerged a different truth on the relationship between sovereignty, the commons and private property because the reigns of Sovereign power were transferred from the hands of Popes, monarchs and nobles to those of the rising bourgeoisie. In England, this shift was heralded by the order of execution issued by the English Parliament against King Charles I in 1649, for advancing and protecting a "personal interest of will, power, and pretended prerogative to himself and his family, against the public interest, common right, liberty, justice, and peace of the people of this nation".[210] The replacement of monarchs by the English Parliament as the Sovereign in the Classical Age, necessitated the production and thus, *emergence*, of a truth that could aid in the "maintenance and extension" of the Parliament's sovereignty. That is why, the notions found in the Treatises of John Locke, which were written during the reign of Charles I's successor and 'confirmed' that sovereignty belonged to the people rather than the monarchs, were accepted as true through the adoption of the **Coronation Oath Act of 1688** and the **Bill of Rights of 1689**.

[210] Gardiner, Samuel Rawson, *The Constitutional Documents of the Puritan Revolution 1625–1660 (Third ed.)* (Oxford: Clarendon Press, 1906), at 371–374

It would take another century however, for those same notions to be given the status of "true knowledge" across the Atlantic. That delay could be attributed to the fact that it took until the mid 1700s for the American colonists to feel towards the English Parliament similarly to how the latter had felt towards King Charles I in the 1600s, or even to the fact that the Age of Enlightenment did not properly arrive at American shores until 1749.[211] Whatever the reason for this delay may have been, in the latter half of the 18th century the Americans turned to the works of John Locke and used the knowledge within them to regain Sovereignty from the very body that had popularised them, the English Parliament. Focusing on the notion that private property was the *raison d'etre* of government and thus, the source of sovereignty, the rising American bourgeoise legitimized their ascension as Sovereigns of the United States. However, like any Sovereign's link to their "principality", the link between the American demos and its territory too was tenuous and necessitated the preservation of a truth that would "bind [their] subjects ever more tightly to [them], and thereby freed [them] to concentrate on external threats".[212] That is why, for decades to come, the American political apparatuses would continue to produce the Lockean-inspired truth on the relationship between sovereignty and private property, that those who did not own land - a group almost always synonymous with Native Americans, slaves, indentured servants, women, workers, the poor and anyone in the intersection thereof – ought to be excluded from the political process

[211] Isaac Asimov explains that though many of the Enlightenment ideals were familiar to the Americans who had the funds to maintain contact with Europe, it was not until 1749, when Benjamin Franklin created the lighting rod and thus, proved that man could tame nature, not through prayer and worship but, through science and reason, that the ideals of Enlightenment were popularised throughout the North American British colonies. See *supra* note 205, at 341

[212] Baker, Lynn A, "Pastoral Power, Governmentality and Cultures of Order in Nineteenth-Century British Columbia" (1999) 24:1 Transactions of the Institute of British Geographers 79, at 82

on the basis that they had no deep attachment to the community but, most importantly, no primordial right to protect by participating in a government.

2. "Truth" and Government

From states like the U.S winning their independence from Imperial control, to colonial powers denouncing slavery, marginalised groups reclaiming their rights and the coming together of states in common pursuit of peace in the form of the U.N, the past two and a half centuries that encompass the Modern and Contemporary Eras, have brought many seemingly welcome developments. That is why it might seem odd to suggest that these two eras too, through the truths on celestial private property and appropriation rights that they each facilitated, belong to an "episode in a series of subjugations", as Foucault's theory of emergence alludes they do.[213] After all, developments such as the abolition of slavery and the peaceful coming together of nations in the form of the U.N in adherence to a common moral code, are more likely seen as dismantling the "dominations of certain men over others", rather than perpetuating them.[214] Foucault, however, warned that this 'humanisation' that Modernity brought with it was but a front, an attempt to hide the "discrete influences" of a power that no longer manifested through a Sovereign and his violent means.[215] However, despite the more covert ways that power began to adopt, "the perpetual instigation of new dominations and the staging of meticulously repeated scenes of violence" that come hand in hand with it continued.[216]

[213] *Supra* note 20 at 83

[214] *Ibid*, at 85

[215] *Supra* note 19, at 94

[216] *Supra* note 20, at 85

The 'humanitarian' character of Modernity, in other words, was successful in distracting from the fact that while the repressive function that was characteristic of Sovereign power became subdued, the "new dominations" and "scenes of violence" in the exercise of power became harder to identify and, thus, more difficult to counter. Gone were the violent techniques of Sovereign power and its "spectacular displays of force" that let the people of the Pre-Classical and Classical eras "know that [they] ha[d] been acted upon, in what ways, and by whom"; the visibility of power had decreased.[217] The telos of state power too, changed. It was no longer directed towards maintaining and extending the "principality" of the Sovereign but, rather, towards guaranteeing the welfare of the population.[218] Societies, of course, did not stop employing the techniques of Sovereign power altogether – after all, Sovereign power can still be seen in operation in the domestic affairs of states to this day – but, it became abundantly clear that "too many things were escaping the power of sovereignty, both at the top and at the bottom, at the level of detail and at the mass level".[219] To account for all possible domains of governance that the model of Sovereign power was failing to, a new modality of power developed "over a long period and throughout the West" and eventually became pre-eminent "over all other forms (sovereignty, discipline and so on)" and facilitated the production of the new truths on the relationship between private property, sovereignty and the commons.[220] Foucault termed this new form of power "governmentality".

[217] Joseph Rouse, "Power/Knowledge" in Gutting, Gary (ed.), *The Cambridge Companion to Foucault* (New York: Cambridge University Press, 2005), at 98; *Supra* note 198

[218] Michel Foucault, "Technologies of the Self" in *supra* note 82

[219] Foucault, Michel, *Society Must be Defended: Lectures at the College de France 1975–76* (New York: Picador, 2003), at 249

[220] *Supra* note 21, at 102

Governmentality, for Foucault, is the contact between "the technologies of domination", "which determine the conduct of individuals and submit them to certain ends or domination[s]", and the "technologies of the self, which permit individuals to effect by their own means or with the help of others a certain number of operations on their own bodies and souls, thoughts, conduct, and way of being, so as to transform themselves in order to attain a certain state".[221] This contact is made manifest in "[t]he ensemble formed by the institutions, procedures, analyses and reflections, the calculations and tactics that allow the exercise of this very specific albeit complex form of power, which has as its target population, as its principal form of knowledge political economy, and as its essential technical means apparatuses of security."[222] Governmentality in turn, utilises biopower – an umbrella term for those "technologies of power that refer to "the management of, and control over, the life of the population", as well as the mechanisms of "older" forms of power, such as sovereign, pastoral and disciplinary.[223] Furthermore, governmentality is a power that results "in the formation of a whole series of specific governmental apparatuses, and […] in the development of a whole complex of *savoirs*" or knowledges.[224]

[221] *Supra* note 82, at 18

[222] *Supra* note 21

[223] Guerra-Baron, Angelica, "Biopower and International Relations" (2017) Oxford Encyclopedia of International Studies, at 3; Though its name might lead one to assume biopower has to do solely with biological aspects of the population and the species, bio-power is a technology that is concerned with the "social, cultural, environmental, ***economic*** and geographic conditions, […] public health issues, patterns of migration, levels of economic growth and the standards of living. It is concerned with the bio-sphere in which humans dwell." See Dean, Mitchell, *Governmentality Power and Rule in Modern Society* (London: Sage, 1999), at 99

[224] Foucault also used the term 'governmentality' to refer to "[t]he process, or rather the result of the process, through which the state of justice of the Middle Ages, transformed into the administrative state during the fifteenth and sixteenth centuries, gradually becomes 'governmentalized'". See Foucault *supra* note 21, at 103

In turn, the distinguishing element of each governmentality is the rationality that pervades it. As Paul-Antoine Miquel points out, "[f]or Foucault power needs a will".[225] This necessity is reflected in, among others, the definitions of the 'wheels' through which governmentality operates, the technologies of power and the self: the former technologies submit individuals to "certain ends or domination[s]", while the latter are employed to allow individuals to transform themselves as to "attain a certain state".[226] However, these "ends" and desired "states" do not emanate "from the intentions of rulers or participants nor [are they] driven by either material conditions or ideology".[227] Instead, they develop under the auspices of a "political rationality", meaning under "the governing form of normative reason" that co-exists, but is not synonymous, with power.[228] Political rationalities which, like the eminence of one type of power over others, are historically contingent, are best understood according to Brown as the "condition(s) of possibility and legitimacy of [the] instruments [of governmental practice], the field of normative reason from which governing is forged."[229] The two rationalities that Foucault analysed in his works and have thus become the ones Foucauldian scholars turn to most often, are the liberal and neoliberal political rationalities.

To summarise, the presence of a governmentality presupposes the presence of the following features: i) an ensemble of "institutions, procedures, analyses and reflections, the calculations and tactics that allow" its exercise; ii) a population as the "target" of power; iii) political economy as the principal form of knowledge; iv) apparatuses of security as its main technical means; v) the

[225] Miquel, Paul-Antoine, "From Power to Biopower" (2011) 15:6 Journal of the Studies of Humanities 259, at 267

[226] *Supra* note 82

[227] Brown, Wendy, *Undoing the Demos: Neoliberalism's Stealth Revolution* (New York: Zone Books, 2015), at 115

[228] *Ibid*

[229] *Ibid*, at 116

development of unique *savoirs*; and vi) a political rationality. One by one, every single one of these elements of governmentality can be observed in the Modern and Contemporary eras and their respective discourses and truths on the relationship between private property, sovereignty and the commons in the celestial domain. Firstly, in both the Modern and Contemporary eras, unique *savoirs* have been created as a result of power. In Modernity, this *savoir*, or (body of) knowledge, was, as the previous chapter showed, one whose truth spoke of the need for the preservation of the celestial commons overcoming that for the protection of private property, positing along the way that outer space and celestial bodies belong to all and nor states, nor private individuals could exercise property rights over them. The Contemporary *savoir* on the other hand, establishes a regime of truth that constructs the world as a standing reserve to satisfy mankind's needs and desires and thus, speaks of the necessity and inevitability of private property and appropriation rights in celestial bodies. In turn, due to the global scale of space law discourse, the ensemble of institutions at the heart of this governmentality, is not be found within the confines of a single state. In other words, in the search for the "institutions, procedures, analyses and reflections" of this governmentality one can turn to institutions of domestic governance, like State governments and their legal instruments, as well as to those of global governance, which are seen as "simply above national states", like, in this case, the U.N and its treaties, declarations and resolutions, and transnational private companies.[230] Due to this transnational aspect of the governmentalities in question and the very texts of international space law that designate humanity, as a whole, as a

[230] Ferguson, James; Gupta, Akhil, "Spatializing states: toward an ethnography of neoliberal governmentality", (2002) 29:4 American Ethnologist 981 , at 989-990

subject of space law, it is then posited that the targeted populations are both the world population and the "'population' of states" within the international community.[231]

It is at this point, after identifying features i), ii) and v) of the governmentalities operating through the modern and contemporary space law discourses, that the commonalities between the two end. The "political economy" that is to act as the "principle form of knowledge" of each governmentality, the "apparatuses of security" that act as each era's technical means and the political rationalities that characterise them, all differ greatly.[232] To understand the difference between the governmentality operating in each era and its consequences, we must go back to the task of contextualising the emergence of each era's truth. That is because by exposing the historical circumstances that facilitated these emergences, we can more easily identify the forms of control exercised as part of a "political economy", the ways in which a sense of security is afforded to the population and its members through the determination and control of the "behaviors, opinions or discourses of living beings" (meaning the "apparatuses of security"), as well as the "normative forms of reason" that act as each governmentality's political rationality.

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[231] Jaeger, Hans-Martin, "UN Reform, Biopolitics, and Global Governmentality" (2010) 2:1 International Theory 50, at 66; Following the signing of the OST, Ambassador Cocca's noted that the Treaty had created a new subject of international law, that of humanity - *jus humanitatis.* See *supra* note 105

[232] With the term "political economy" Foucault referred to the "economy at the level of the entire state", or in this case the international community, "which means exercising towards its inhabitants and the […] behavior of each and all, a form of surveillance and control as attentive as that of the head of a family over his household and his goods". "Apparatuses of security" on the other hand, refer to "anything that has in some way the capacity to capture, orient, determine, intercept, model, control or secure the gestures, behaviors, opinions or discourses of living beings" as to offer a sense of security to the population and each individual. See Foucault supra note 21, at 92; Agamben, Giorgio, *What is an Apparatus? And Other Essays* (Stanford: Stanford University Press, 2009), at 14

i. Modern Governmentality

The latter half of the 18th century brought with it not only the dawn of an independent United States and a democratic France, but also the beginning of the Modern epoch. In the early years of this era, one of the works that laid the foundations for the "truth" of space law discourse on celestial property rights that would emerge a century and a half later, was published: Kant's *Perpetual Peace*. Kant's theory of cosmopolitanism that was first posited in *Peace,* is not pivotal to the development of the modern truth of celestial property discourse only because it acts as a thematic prelude for the "common heritage" principle but, more importantly, because it signals the arrival of a new pillar of truth: common morality.

This metaphorical pillar was cemented further through a series of developments occurring in the 19th and 20th centuries. Firstly, the 1800s saw the adoption of laws pursuant to equality and justice, that extended historically disenfranchised groups' liberties, be it by abolishing slavery or extending voting rights to non property-owning freemen.[233] The 20th century, in turn, saw the rise of a number of equal rights groups and movements like the suffragettes, the civil rights movement, workers' unions and LGBT activists who, by putting pressure on political institutions in the form of demonstrations, riots, debilitating strikes and general unrest, pushed for the adoption of more laws pursuant to equality, like the **Representation of the People (Equal Franchise) Act of 1928** (U.K) and the **Civil Rights Act of 1964** (U.S). Most importantly however, the 20th century saw the voluntary coming together of nations, first as the League of Nations and then, as the U.N, in an

[233] In the U.K slavery was abolished in August of 1833 with the **Slavery Abolition Act**, while the **Representation of the People Act** of 1832 began the expansion of the electoral franchise, which in 1858 extended again to allow non-land owners to be voted *into* Parliament. In the U.S slavery was abolished across the country following the Northern victory in the Civil War, through the 1865 adoption of the **Thirteenth Amendment to the U.S Constitution**.

effort to avoid the repetition of the atrocities of the two World Wars. This global commitment to the maintenance of peace and to the observation of universal moral principles like the Golden Rule, laid the scene for the emergence of the early space law discourse's "truth" that celestial bodies and their resources were incapable of being appropriated by both states and private entities, as they belonged to humanity in common.

However, these developments should not be seen as accidental or as implying the loosening of power's grip. "Force", as Foucault explained, "reacts against its growing lassitude and gains strength; it imposes limits, inflicts torments and mortifications; it masks these actions as a ***higher morality*** and, in exchange, regains its strength".[234] For that reason, these developments, through which "true knowledge" came to be that which appealed to the notion of a universal morality and sense of justice, equality and liberation, should be seen as part of this reaction to the "growing lassitude" of Sovereign power. Even the commitments to peace that act as the pillars of the U.N and therefore the OST, are part of this reformation of power due to the fact that, as Foucault noted, "[t]he desire for peace, the serenity of compromise, and the tacit acceptance of the law", though they may claim to be the opposite, are "far from representing a major moral conversion or a utilitarian calculation that gave rise to the law".[235] Instead, they permit "the perpetual instigation of new dominations and the staging of meticulously repeated scenes of violence".[236]

When one considers Foucault's words, they can easily identify these "new dominations" and "scenes of violence" that modern governmentality enacted. In America during the Civil War, as

[234] *Supra* note20, at 84

[235] *Ibid*, at 85; International space law's commitment to the maintenance of peace is not only made explicit in the OST but, also, in the preambles of all space law treaties

[236] *Ibid*

the Union was fighting to abolish slavery in the entirety of the United States, fulfilling supposedly a moral obligation in doing so, Native Americans found themselves at the wrong end of these "new dominations", dominations that staged scenes of horrific violence in the form of acts of genocide.[237] Throughout the next century, Americans, while shouldering the "White Man's Burden" to colonise, would stage similarly violent scenes across the Americas and the island nations.[238] The European Great Powers on the other hand, were carrying their "Burden" through the "civilizing mission" (*mission civilisatrice*) which formed the second wave of imperialism that swept through the world and brought with it "new dominations".[239] Through it all, prominent European thinkers were justifying these new exercises of power by framing them as the fulfillment of duality of moral obligations their compatriots had. Marquis de Condorcet for example, notoriously posited that the carrying out of the *mission civilisatrice* in Africa and the Americas was not only the first step in fulfilling the need to unify humanity, regardless of race, culture, gender and religion but, also, an ethical obligation upon the 'more civilized' nations.[240]

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[237] The American continental expansion, in pursuit of which the conflicts which lead to the radical and violent reduction of the Native American population occurred, was framed through the invocation of morality, as the only ethical alternative to "preserving a perpetual desert for savages". See Gates, Charles M., "The West in American Diplomacy, 1812-1815" (1940) 26:4 Mississippi Valley Historical Review 499, and Asimov, *supra* note 205, at 677, 678

[238] For a history of the "White Man's Burden" to colonise see Murphy, Gretchen, *Shadowing the White Man's Burden*: *U.S. Imperialism and the Problem of the Color Line* (New York and London: New York University Press, 2010)

[239] The Berlin Conference of 1884–85 (also known as the Congo Conference), where European powers conferred to legitimise the Scramble for Africa (which by 1910 had left only two African states, Liberia and Ethiopia, independent), ushered in this wave of New Imperialism. See Brantlinger, Patrick, "Victorians and Africans: The Genealogy of the Myth of the Dark Continent" (1985) 12:1 Critical Inquiry 166

[240] Condorcet famously said that a duty was imposed upon the "civilized" Europeans to help those who "to arrive at civilization, appear only to wait till [Europeans] shall furnith them with the means". See de Condorcet, Marquis, Outline of an Historical View of the Progress of the Human Mind (London: J. Johnson, 1795), at 324, at https://archive.org/details/outlinesofhistor00cond/page/n11 [accessed 02/10/2018]

The question remains however: 'What do these new scenes of violence and their masking as higher morality have to do with modern governmentality? What can they tell us about the elements of this governmentality yet to be identified?' The answer is 'everything'. The exploration of these events has accounted for the political economy, the apparatuses of security *and* the political rationality of modern the governmentality that can explain the emergence of the modern truth on celestial private property rights. More specifically, the political economy that acts as the "principle form of knowledge" of this governmentality and the ways in which the global population as well as the population of states within the international community were made to feel secure throughout Modernity, were formed through the ethopolitcal configuration of the technology of biopower and the operation of disciplinary mechanisms that together staged these "scenes of violence". In turn, the notions of morality, freedom and equality that informed these mechanisms and technologies, reflect the liberal normative reason that acted as the political rationality at the heart of this governmentality.

Let us begin by identifying political rationality under the auspices of which the technology of ethopower and the disciplinary mechanisms of this governmentality operated to control the global population, as a liberal one. A "fundamental theme" of liberal governmentalities is the idea of progress that is guaranteed through the coming together of nations for their "collective" and "unlimited enrichment", rather than "through the enrichment of some and the impoverishment of others."[241] What is of particular importance for this case, is Foucault's observation that this collective enrichment is achieved through "perpetual peace". In other words, the pursuit of progress and perpetual peace that guided the actions of the European states in the nineteenth century and of the wider international community in the twentieth century, and facilitated the

[241] *Supra* note 23, at 54,55

production of the Modern "truth" on the relationship between private property, sovereignty and the commons, was not a coincidence but rather, part of the technical apparatus of a liberal governmentality. States, thus, came together, constituting a global society, for the sake of progress – or the "betterment of mankind", as international space law puts it – much like individuals in national liberal governmentalities call their state into existence "for the sake of the good life".[242]

This liberal rationality in turn, was further imbued in the ethopolitics of this modern governmentality. Ethopolitics is a term coined by Nicolas Rose in the late 1990s to describe the seemingly new politics of governing introduced in by the British Labour government, commonly known as Third Way politics, which according to him, operated through ethopower, one of the many configurations of biopower.[243] However, in his studies of this technology, Rose noted that "not much is new in this politics", allowing thus for the concept's subsequent adoption by a number of theorists to describe older and newer governmentalities, much like this thesis will be doing.[244] Ethopolitics, at its core, refers to a form of governing "through community".[245] Community in turn, is defined by "a web of affect-laden relationships among a group of individuals, relationships that often crisscross and reinforce one another" and "a measure of commitment to a set of shared values, norms and meaning".[246] With these definitions in mind, we see that when it comes to the

[242] OST *supra* note 6, at Preamble; Aristotle, *The Politics* (Oxford, Clarendon Press, 1905), at 28; As Brown notes, the individual produced by a liberal governmentality is one that resembles Aristotle's political animal, or *homo politicus*. See supra note 227

[243] As Guerra-Baron explains biopower "works as an umbrella concept" for the various "technologies of power [that] manage and control the population in order to maximize its capacities". See *supra* note 223 of full, at 2

[244] Even Rose himself notes older approaches that bare a striking resemblance to Tony Blair's Third Way Politics, like The New Liberalism of Graham Wallas, L.T Hobhouse and JA Hobson. See Rose in *supra* note 22, at 1396-1397

[245] *Ibid*, at 1399

[246] Etzioni notes that this second characteristic of community also speaks of a shared history or culture amongst the community members. However, following Rose, this thesis posits that when talking about the international community

population of states, their governance throughout Modernity has been on the basis of community. In the 19th century, the Great Powers were bound together as a community by a commitment to the set of shared values and norms that led them to carry out the *mission civilisatrice*. After this mission came to an end and more States forged relationships with each other, the international community became the League of Nations and subsequently, the United Nations. The individual states that took part in these communities were bound together and governed through "shame, guilt, responsibility, obligation, trust, honor, and duty", believing that only by being governed in this way could they avoid the horrors of war and bring to pass "their collective destiny, in the interests of economic advancement, social stability, and even justice and happiness".[247]

The technology of ethopower was supplemented in Modernity by the disciplinary mechanisms of "hierarchical observation", "normalizing judgements" and "examination".[248] Hierarchical observation refers to the techniques that make the individuals upon whom power is exercised visible, while normalizing judgements are a reference to the common norms, standards and expectations that are set for individuals and make the "domain of the non-conforming […] punishable".[249] Examination in turn, is the coming together of observation and normalization techniques to create the "normalizing gaze".[250] In a prison modeled on Bentham's Panopticon for example, the gaze is placed upon the prisoners by virtue of an observation tower that can see all

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of states, much like when talking about modern multi-cultural communities, this need for a shared culture can be ignored in favor of the need for a way in which "multiple identities receive equal recognition in a single constitutional form". This single constitutional form in turn can be considered to be the body of legal instruments at the disposal of the U.N. See Etzioni, Amitai *The New Golden Rule: Community and Morality in a Democratic Society* (London: Profile, 1997), at 127; Rose *supra* note 22, at 1401

[247] Rose, *ibid*, at 1398

[248] *Supra* note 78, at 170, 177, 184

[249] *Ibid*, at 170,171, 179

[250] *Ibid*, at 184

but whose interior cannot be seen by any. The prisoners don't know whether there is someone in the tower watching them at a specific moment but, they *do* know that they could be watched at *any* moment.[251] The *perceived* perpetual presence of the gaze causes the prisoners to comply with the expectations set for them, to enact the process of normalization as to avoid whatever punishment the prison administration could have in store.[252]

In the context of celestial private property rights under international space law during Modernity, these mechanisms were applied to the population of States - both those that have signed the OST and the wider international community to whom *jus cogens*, that some allege the non-appropriation principle belongs to, apply – rather than to prisoners.[253] First, U.N monitoring mechanisms, as well as the public eye trained to the actions of every State, placed States under observation. In turn, the universal morality that was ushered in by the theory of Cosmopolitanism, reflected in the New Imperialism's 'civilizing mission' and the U.N treaties, and cemented through the operation of ethopower, set the moral standards and norms with which States were expected to comply, in obeying international space law. Subsequently, the normalization process was enabled through the ethical values that "regulate individual conduct and […] help maintain order and obedience to law by binding individuals into shared moral norms and values" and govern states "through the self-steering forces of honour and shame, of propriety, obligation, trust, fidelity and commitment to others".[254] Finally, the coming together of these observational and normalizing techniques gave rise to a normalizing gaze under which States, in an effort to conform to the ethical norms set by the community of the United Nations, became, in the early years of international space law, staunch

[251] *Ibid*, at 201

[252] *Ibid*, at 184

[253] See Jakhu and Freeland *supra* note 43, at 6,7

[254] Rose, Nicolas, "Government and Control", (2000) 40 British Journal of Criminology 321, at 324

in prohibiting the private entities on their soil from ever claiming an exclusive property right over a celestial body or its resources. In other words, the exercise, under the auspices of a liberal rationality, of these ethopolitics and disciplinary mechanisms throughout the community of States and the global population found within them, was what necessitated the production and facilitated the emergence of the Modern "truth" of space law discourse that held celestial bodies and their resources as incapable of being nationally and privately appropriated or owned.

ii. Contemporary Governmentality

The Contemporary Era brought with it a new problem for the government of the global population that necessitated the adoption of new apparatuses of security, a new political economy and political rationality and thus, of a new governmentality with its own unique regime of truth. This problem that lead to, among other things, the replacement of the modern truth that celestial bodies were incapable of being owned or appropriated by national or private enterprises, is often referred to as the "death of the state". In recent decades, many have posited that due to the "increase in the power and normative influence of supranational organizations, such as the United Nations, World Bank, European Union, International Monetary Fund, and non-governmental organizations" and entities, the "chess game of international politics" is no longer "played out by nation-states, each governing a certain geographic area and group of people".[255] The contemporary era is an "era of privatization" and as a result, corporations "now govern society".[256] Corporations, that Hobbes had centuries ago

[255] Garren, Allison D., "The Corporation as Sovereign" (2008) 60:1 Maine Law Review 130, at 130

[256] Dickinson, Laura A., "Government for Hire: Privatizing Foreign Affairs and the Problem of Accountability Under International Law" (2005) 47 William & Mary Law Review 135, at 141-142; Bakan, Joel, *The Corporation: The Pathological Pursuit of Profit and Power* (New York: Free Press 2004), at 25

compared to "worms in the entrails of" the state, have become the main vectors of governing power, meaning that the modern technologies of ethopower and discipline that, during modernity, were aimed at governing the global population through the community of states, became inadequate.[257] For that reason, in the Contemporary Era, a different set of technologies and mechanisms was introduced into the global governmentality that operates through space law discourse.

Biopower in this contemporary governmentality does not have as its primary target the population of states within the international community, nor does it operate to "incite, reinforce, control, monitor, optimize and organize" human subjects as a population *and* as a species through ethics.[258] Instead, it has as its targets both the present global population *and* future generations. Furthermore, it utilises "the state apparatus, but also […] private ventures" for its exercise but, most importantly it relies on experts.[259] In this governmentality thus, the bio-power in operation is one exercised by the state apparatuses of countries like the U.S and Luxembourg which have introduced legislation allowing for the exercise of exclusive rights on celestial bodies, those private entities and individuals who advocate and lobby for the explicit inclusion of such rights in international space law, *and* the experts that, as the previous chapter showed, allow the discourse on celestial private

[257] At the time Hobbes wrote Leviathan (where this passage is contained), corporations did not, of course, take the forms they do now. Instead, they were what now may be referred to "the ancient corporations" like the Knights Templar, the Knights Hospitallers of Saint John, the Universities, the City of London as well as colonial enterprises like the British East India Company and the Dutch West and India Companies. Hobbes, Thomas, *Leviathan* (Oxford: Oxford University Press, 1988), at 174; Greenwood, Daniel J.H, "The Semi-Sovereign Corporation" (2005) Legal Studies Research Paper Series, at http://ssrn.com/abstracts=757315 [accessed 01/10/2019], at 2

[258] *Supra* note 64, at 136

[259] Lilja, Mona; Vinthagen, Stellan, "Sovereign Power, Disciplinary Power and Biopower: Resisting What Power With What Resistance?" (2014) 7:1 Journal of Political Power 107, at 110 referencing Foucault, Michel, "The subject and power" (1982) 8:4 Critical Inquiry 777

property to make a claim to scientificity. These experts are the legal academics arguing for the non-binding nature of the common heritage principle, the economists arguing for the economic benefits of celestial private property rights, the STEM and medical scientists speaking of all the technological and scientific advancements such rights could enable, and even the social scientists who claim that peace can only be achieved if such rights, which people supposedly pursue by nature, are established into law first, so as to avoid any conflicts.

The Contemporary governmentality supplements this biopower and creates an apparatus of security through the invocation of an 'ancient' technology of power that was first developed in the Pre-Christian East and considered by Foucault as the origin of "the art of government": pastoral power.[260] Pastoral power is a technology that, as the name suggests, operates much like the Christian pastorate, which in turn was modeled on the relationship between the shepherd (in French: "Pasteur") and his flock. It is "not exercised over a territory but, by definition, over a flock, and more exactly, over the flock in its movement from one place to another."[261] Here, the human species is the flock in question, a "multiplicity in movement", taking its first steps away from its home planet.[262] As for the identity of the shepherds, basing itself on other works that have posited that those possessing "expert knowledge" can assume the role, this thesis proposes that the shepherds in this pastorate are the "experts" identified above, those whose work supports the "truth" of the necessity and inevitability of celestial private property rights.[263]

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[260] Foucault, Michel, *Security, Territory, Population: Lectures at the College de France, 1977-1978* (Basingstoke: Palgrave Mcmillan, 2009), at 169

[261] *Ibid*, at 171

[262] *Ibid*

[263] Kennedy, David, "Challenging expert rule: The politics of global governance" (2005) 27:5 Sydney Law Review 1, at 17–18

Most importantly however, pastoral power is a power "entirely defined by its beneficence", its "essential objective […] is the salvation (salut) of the flock".[264] In the Christian pastorate for example, the salvation promised was that of the soul. Here, experts lead the global population to the "good pastures" of the celestial domain, promising salvation in the form of, among other benefits, "unlimited resources" whose extraction does not impact the well-being of the Earth, scientific and medical developments that can improve the well-being of humanity, and economic growth affecting developed countries supporting space ventures and uninvolved developing countries alike. But, this technology is also an "individualizing power"; a flock after all, can only be directed "insofar as not a single sheep escapes".[265] For that reason, salvation is not only promised to the flock as whole but, to the individual as well, as long as that person conforms so as to not stray from the flock. A way in which this conformity can be achieved is by the acceptance of the truth produced by power. Another is through the expulsion of any contradicting knowledge from the body of 'acceptable' knowledge. Experts do this by taking "what is essentially a political problem", removing it "from the realm of political discourse, […] recasting it in the neutral language of science" or, in this case, legal doctrine and shutting down any criticism or opposition by construing it "as further proof of the need to reinforce and extend [their] power."[266] This is best evidenced in this case by the contemporary expulsion of critical works from the body of 'acceptable' literature on celestial private property rights that was identified in the first chapter.[267]

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[264] *Supra* note 260, at 172

[265] *Ibid*, at 173

[266] Dreyfus and Rabinow in *supra* note 65, at 196

[267] Another notable example of such an expulsion occurred in the sphere of politics and law and took the form of the rejection of the Moon Agreement on the basis of its view on celestial property.

Lastly, the political rationality which forms the "condition(s) of possibility and legitimacy of [the] instruments [of governmental practice], the field of normative reason from which governing is forged" in the Contemporary era needs to be accounted for.[268] To identify this "governing form of normative reason" in contemporary space law discourse however, the historical developments that facilitated the emergence of the contemporary truth that celestial private property and appropriation rights are necessary and inevitable, need to be exposed. As in the previous eras, "truth" in this era, too, emerged as a response to social, political and economic developments rather than as the product of an objective rationality. In the 1970s, perhaps the most influential developments in the process of emergence of this "truth" occurred. In 1973, the oil crisis caused by the Organisation of the Petroleum Exporting Countries ("OPEC") constriction of the worldwide supply of oil, caused the economies of industrialized countries like the United States to be significantly hit.[269] Then in 1979, another oil crisis, this one caused by the strain the Iranian Revolution placed on worldwide oil trade, caused once again a scarcity. As a result of these oil crises the first instance of "stagflation", an economic situation in which high inflation and unemployment rates are recorded at the same time, while economic growth slows, occurred. However, according to Keynesian economic theory, which had been guiding the economic policies of the majority of industrialized states at the time, stagflation was an impossibility.[270]

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[268] *Supra* note 227, at 116 brown

[269] It should be noted that U.S at this time was also still experiencing the adverse economic effects of President Nixon's 1971 wage and price controls.

[270] Until this first instance of stagflation, it was generally accepted under Keynesian economic theory that inflation and unemployment had an inverse relationship. This conclusion had been extrapolated from the findings of the Phillips Curve which noted an inverse relationship between unemployment and the behaviour of wages. See Samuelson, Paul A.; Solow, Robert M, "Analytical Aspects of Anti-Inflation Policy" (1960) American Economic Review 177

This apparent failure of Keynesian economic theory to predict an oncoming crisis facilitated the rise of neoliberalism, which rejects the principle of state intervention and advocates in favor of privatization, as the dominant economic model of the Western world.[271] Neoliberalism's rise officially began in 1973, when Pinochet organised a military coup in Chile and formed the world's first neoliberal government.[272] Then, in 1979, Margaret Thatcher was elected Prime Minister of the U.K, and soon after, Ronald Raegan assumed the office of President in the U.S. Over the following decade, neoliberal economic policies would spread even further, with numerous administrations, like those of Raegan and Thatcher, and organizations like the Bretton Woods institutions (the International Monetary Fund and World Bank), cementing as "true" the notion that economic growth was directly linked to the ability of private entities to profit, as deregulation would cause economic benefits to "'trickle down' to workers and the broader economy".[273]

Yet, despite the prominence of neoliberal ideology, the popularity of the notion of "trickle-down economics," and even the individualistic spirit of "The 'Me' Decade" in the West, the U.N. was

[271] According to Foucault, during the pre-eminence of liberal governmentalities, the market became a "site of veridiction for governmental practices", meaning that the 'natural' "mechanisms of the market [came to] constitute a standard of truth which enables us to discern which governmental practices are correct and which are erroneous". With this in mind, it is no surprise that the observation of multiple stagflations – which due to being "spontaneous mechanisms" were considered part of the market's natural development and thus its truth's (per Foucault) – led to a rejection of the governmental practices that were in place at the time and had failed to account for them (i.e. Keynesian economics, liberalism). See Foucault in *supra* note 23, at 33, 32 and 31 respectively.

[272] The Pinochet Regime's neoliberal economic reforms were guided by a group of Chilean economists, commonly referred to as the 'Chicago Boys', who had studied under Milton Friedman and Arnold Harberger. See Becker, Gary, "What Latin America Owes to the Chicago Boys" *Hoover Digest* (30 October 1997) at https://www.hoover.org/research/what-latin-america-owes-chicago-boys [accessed 22/11/2018]

[273] Goodwin, Nova; Harris, Jonathan M.; Nelson, Julie A.; Roach, Brian; Torras, Mariano, *Principles of Economics in Contex*t (London and New York: Routledge, 2015), at 286

still clinging to Keynesian economics.[274] In fact, in pursuit of a global Keynesianism, U.N. agencies such as UNICEF and UNDP heavily opposed neoliberal policies like the Structural Adjustment Programs of the Bretton Woods institutions, which aimed to reduce countries' fiscal imbalances through a series of loans.[275] In the mid-1980s however, neoliberal countries seemed to have had enough, and thus began a series of attempts to transform the U.N. in accordance with neoliberal ideals. After neoliberal organizations portrayed the U.N. as a "forum for world Bolshevism", the U.S. began to cut off their funding of the organization until more market-friendly policies were adopted.[276] The emergence of a new truth in space law discourse can be seen as part of these attempts to transform the U.N. from the inside-out. The truth of the ability of celestial bodies to be appropriated by private entities and their *need* to be so, emerged in other words, not because it was a rational, objective truth but, because it was an efficient way to infuse the international space legal order with aspects of neoliberal economic theory without having to repeal the OST or wait for the

[274] Wolfe, Tom, "The "Me" Decade and the Third Great Awakening" *New York Magazine* (23 August 1976) at http://nymag.com/news/features/45938/ [accessed 10/10/2018]

[275] Buckley summarises some of the UNICEF findings thus: "According to UNICEF, over 500,000 children under the age of five died each year in Africa and Latin America in the late 1980s as a direct result of the debt crisis and its management under the International Monetary Fund's Structural Adjustment Programs". See Buckley, Ross, "The Rich Borrow and the Poor Repay: The Fatal Flaw in International Finance" 2002 19:4 World Policy Journal 59, at 62

[276] Williams, Ian, "Why the Right Loves the U.N" (1992) 254:14 The Nation; In 1988 the Reagan administration agreed to begin paying its dues to the U.N again, after the President was satisfied that the agency "ha[d] reformed its operations". See Sciolino, Elaine, "Reagan, in Switch, Says U.S. Will Pay Some Old U.N. Dues" *The New York Times* (14 September 1988) at https://www.nytimes.com/1988/09/14/world/reagan-in-switch-says-us-will-pay-some-old-un-dues.html [accessed 11/11/2018]

U.N to adopt widespread neoliberal reforms.[277] This infusion in turn, allowed for a more efficient governing of the global population that had been escaping from the grasps of state apparatuses.

In a series of lectures delivered a few months prior to Thatcher and Raegan becoming the political leaders of their countries, but after the first occurrences of stagflation had put neoliberal economic theory in a good light, Foucault provided a novel description of neoliberalism that can aid in placing this emergence of contemporary truth in the context of governmentality and thus, fully understanding the latter's consequences. Neoliberalism, he posited, was not simply an economic model that emerged concurrently with governmentality as the eminent type of power in the current era. Instead, the two were intrinsically linked. "Neo-liberalism" Foucault explained, "is not Adam Smith", nor the "market society", nor "the Gulag on the insidious scale of capitalism";[278] it is not something purely economical that simply aims to "contrive a free space of the market within an already given political society".[279] Rather, it is to be understood as a governing rationality. Its telos is best understood as being the modelling of "the overall exercise of political power […] on the principles of a market economy", meaning taking "the formal principles of a market economy and" referring and relating them to, as well as projecting them on the "general art of government".[281]

This reorientation of the government as one in sole service of the market economy, means that this global contemporary governmentality is a neoliberal governmentality which causes "the individual's life itself – ***with his relationships to private property***, for example, […] – […] into a

[277] However, it should be noted that in recent years and *following* the emergence of the contemporary space law truth, widespread neoliberal reforms *have* been adopted by the U.N, leading a number of scholars to similarly posit that through the U.N the global population is regulated by a neoliberal governmentality. See Jaeger, Hans-Martin in *supra* note 231, at 52

[278] *Supra* note 23

[279] *Ibid*

[281] *Ibid*

sort of permanent and multiple enterprise".[282] Meaning that under neoliberal governmentality, technologies of power and the self, such as those examined above, operate to constitute all individuals, "no matter how small, impoverished, or without resources", as *homines oeconomici* – beings whose every sphere of life is economised to the detriment of all non-economic concerns.[283] It is no surprise thus, that in the age of such a governmentality, space law discourse on private property and appropriation rights produced the truth of the necessity and inevitability of their establishment. This truth did not emerge, thus, simply because it was only in the late 20th century, after the Moon had been reached, that people first contemplated owning or profiting off of celestial bodies. Nor did it emerge out of objective rational thinking on behalf of those who advocated for it. Instead, this truth emerged because the neoliberal market model had infested the "art of government" at the State and U.N level. The only "truth" that could flourish alongside this infestation of the contemporary government associated with the celestial domain was, therefor, one that demanded the submission of that which had previously been considered to belong to humanity in common, to the process of enterprisation.

[282] *Ibid*, at 241

[283] *Supra* note 227, at 65

The Perils of Neoliberal Governmentality

Foucault, surprisingly perhaps, was not critical of neoliberal governmentality, nor did he believe that the exercise of power was inherently bad.[284] While this thesis acknowledges the usefulness of this 'objective' aspect with which Foucault imbued his theoretical tools, it proposes, like many Foucauldian analyses of power, that there are dangers to the application of the contemporary neoliberal governmentality. This work posits that these dangers arise from the fact that the dissemination of the market model into the government of the global population has undermined, and continues to operate so as to undermine, the basic aims and principles of the international space legal regime and as a result, compromises states' ability to adhere to it.

In particular, there are three widely accepted aims to international space law, whose fulfillment this neoliberal governmentality (of which the truth about the necessity and inevitability of celestial private property rights is a part of) greatly endangers: the maintenance of peace, the preservation of the environment and the betterment of humanity. The first aim is explicitly stated in the preambles of all international treaties of space law.[285] As **Article III of the OST** (to which all subsequent treaties refer) explains, all space activities must be conducted "in the interest of maintaining international peace and security." The second aim too, is consistently reiterated across the body of international space law and derives from the legal impetus to show respect towards the interests and rights of all States, space-faring or not. The showing of such respect, has long been

[284] In fact, some theorists have commented that towards the end of his life Foucault was becoming sympathetic towards neoliberalism as he (mistakenly according to many of his intellectual descendants) viewed it as a form of less governing of the conduct of individuals. See Zamora, Daniel, "Can we Criticize Foucault?" *Jacobin* (12 October 2014) at https://www.jacobinmag.com/2014/12/foucault-interview/ [accessed 25/06/2018]

[285] See the Preambles of the OST; the Moon Agreement; the Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space; the Convention on International Liability for Damage Caused by Space Objects; the Convention on Registration of Objects Launched into Outer Space

construed as being contingent upon avoiding the "harmful contamination" of outer space, including celestial bodies, and refraining from the infliction of "adverse changes" in the celestial and terran environments.[286] These two aims come together to create the ultimate telos of space law – and perhaps, all international law –, the "betterment of mankind". First made explicit in the **1962 Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space** which, seven years after its issue, was recalled in the **Preamble of the OST,** the notion that "the exploration and use of outer space should be carried on for the betterment of mankind" has come to underpin the entire body of international space law.

This neoliberal governmentality places the fulfillment of these aims in danger due to the fact that, through it, economic growth becomes "the North Star that guides" the efforts of States.[287] This, as Wendy Brown puts it, means that in a neoliberal governmentality, "justice, ***peace,*** or ***environmental sustainability*** may be pursued to the extent that they advance economic purposes."[288] In the context of space law this, of course, is best evidenced by the U.S. and Luxembourg's celestial resource extraction laws, which attempt to benefit each country's economy by attracting investors and companies of the space sector. The uncertainty as to the source of

[286] Article IX of the OST; In Resolution 68/74 of 11 December 2013: Recommendations on National Legislation Relevant to the Peaceful Exploration and Use of Outer Space, the U.N General Assembly also explicitly noted the need to "minimize the potential harm to the environment"

[287] White House Office of the Press Secretary, "Remarks by the President in the State of the Union Address" (12 February 2013) at https://obamawhitehouse.archives.gov/the-press-office/2013/02/12/remarks-president-state-union-address [accessed 08/12/2018]; This also makes it no surprise that bio-power is being used as one of the techniques of this governmentality. Bio-power operates to "better" the population, making thus its operation through contemporary space law discourse and "truth" even more covert.

[288] For Brown this is evidenced by, among others, the EU bailouts of Southern Europe, during which the need to avert debt default and the downgrading of the Euro's worth, surpassed the need to guarantee the welfare of entire countries' populations. See *supra* note 227, at 40

protection for any potential property rights a private entity establishes over a celestial body, is, in essence however, an uncertainty as to peace. If, for example, the rights an American company has over a celestial body or its resources are infringed upon, be it by another government or non-American private entity, the crucial questions is to what lengths will the U.S. go to offer its legal subject a remedy?[289] What will its actions mean for its relations with other states involved in this equation? And what happens if the resource or body in question has the rarest or most needed of commodities? What lengths would these countries go to have their citizens and businesses alone claim them?[290] The lack of answers to these questions proves that the potential of the application of those laws to lead to international conflict was given little thought, as was the possibility of private entities, acting upon those laws, to cause some sort of environmental damage. Under this neoliberal governmentality thus, the maintenance of peace and preservation of the celestial environment have been transformed from conditions for the observation of international space law, to being *conditional* upon economic growth.

Most importantly however, it is the fulfillment of what this thesis has identified as the telos of space law, the betterment of humanity, that neoliberal governmentality compromises. This

[289] A bill that was introduced to, but ultimately not adopted by, the 115th US Congress for example, included the following provision that was passed by the House of Representatives: "The President shall […] protect the interests of United States entity exploration and use of outer space, including commercial activity and the exploitation of space resources, from acts of foreign aggression and foreign harmful interference; (2) protect ownership rights of United States entity space objects and obtained *space resources*". See § 80111 of the American Space Commerce Free Enterprise Act of 2017, H.R. 2809, 115th CONGRESS, 25 April 2018

[290] It is interesting to note that in the past corporations that have supplemented States in their governing duties as they concerned the ventures into new worlds, have been afforded extraordinary rights. Famous examples include the East India Company which over the 17th and 18th centuries was afforded such rights as the right to make war and to coin money and the Hudson Bay Company which was granted "legislative and judicial powers over all the inhabitants of the lands ceded it", as well as the right to form an army and a navy. See Lindley, Mark Frank, *The Acquisition and Government of Backward Territory in International Law* (London: Longmans, Green and Company, 1926), at 94-96

neoliberal governmentality does this by producing the members of the global population as *homines oeconomici*, whose every sphere of life relates to solely economic concerns and whose betterment can subsequently be identified only as economic profit. This economization functions to turn individuals from "creatures of moral autonomy, freedom, or equality" who "choose [their] own ends or the means to them", to ones that only endeavour to accumulate wealth.[291] The *homo politicus*, Aristotle's political animal who, for millennia, along with his equals, has called the state into existence "for the sake of a good life" is being laid to rest.[292] His values and principles have become burdens that humanity is choosing not to carry as it ventures into the expanse of outer space. In his place stands the *homo oeconomicus*, he is the "new breed of the human species" that Neil Armstrong, the first human to stand in a *truly* new world, hypothesised would one day emerge with a "new view of the human purpose".[293] He is the fruit borne by "the tree of human destiny," and yet his production does not preserve or honor the human spirit of inquiry that millennia ago set humanity down the path that in 1969 lead us to the Moon instead, it vanquishes it.[294] In its absence the telos of international space law goes unfulfilled; humanity is not bettered, it is reduced.

[291] *Supra* note 227, at 42

[292] Aristotle *supra* note 242, at 28

[293] Armstrong, Neil, "Out of This World" (August 24, 1974) Saturday Review/World

[294] *Ibid*

Conclusion

This thesis began by pointing out a shift that occurred, seemingly recently, in the way humanity spoke of the celestial domain. Despite having been the subject of inquiries and the object of admiration and awe since time immemorial, outer space has only been at the center of discussions about private property and appropriation rights for the past few decades. As the first chapter went to show, this shift, especially as it manifests through space law scholarship, ought to be problematized for a number of reasons. Firstly, the need to problematize it arises from the juxtaposition, in terms of both content and methodology, between early and contemporary works in space law. Early space law works, meaning those written between the 1950s and 1970s, engaged heavily, not only with critical discussion that delved into the practicalities of existing and future legal instruments but also, with intricate questions of legal theory. In addition, while extensively scrutinised, the principles enshrined by the OST in 1967, especially those of non-appropriation and common interest, were largely accepted as binding parts of international law. However, starting in the late 1970s, the enforceability of these principles began to be contested while space law scholarship began to eschew works of critique, designating interdisciplinary research that delves into philosophy and critical theory instead of economics and politics, to the realm of "naive knowledges" that fall "beneath the required level of […] scientificity".[295] In other words, As a result of these developments, contemporary space law research on celestial private property rights differs greatly from its terran counterpart, as it only refers to narrow conceptions of power when discussing the potential effects of the establishment of such rights.

[295] Michel Foucault, "Two Lectures" in *supra* note 17, at 82

As was explained in the final sections of the first chapter, private property is generally accepted to be intricately linked with power, both economic and legal but also, "personal, political [and] social".[296] For that reason, the lacuna created in space law scholarship by the lack of critical works that examine this link is very troubling. While there are many methodologies and schools of thought that can aid in filling this lacuna, this work turned to the theoretical toolbox of Michel Foucault on the basis of the philosopher's extensive analysis of discourses, the truths they produce and the power they are produced by. More specifically, genealogy, the methodology that this thesis utilised, is able to analyse a body of knowledge, like that formed by the works on celestial private property rights, by reconnecting them to "the historical struggles and exercises of power that shaped their character".[297]

The presence of this lacuna is dismissed in contemporary space law scholarship through the promulgation of the "fact" that outer space is "a unique medium", the approach to which should *"not [be] burdened with the historical shackles of terran-based legal regimes*".[298] This widely held belief about the uniqueness of space is part of a narrative, as the second chapter explained, that posits that "it would be presumptuous to attempt to draw lessons" from the past "in the context of a space law text, regarding the future of humankind's expansion into outer space", in an effort to stop any substantive critiques of the proposed establishment of celestial property rights from emerging.[299] For that reason, the first tasks undertaken by genealogy in the second chapter were aimed at upsetting this narrative. Firstly, this was done through the exposition of the fact that despite having only been a distinct object of discourse for the past century, celestial private

[296] *Supra* note 11, at 52

[297] *Supra* note 15, at 373

[298] *Supra* note 13, at 281 [emphasis added]

[299] *Supra* note 14, at 10

property rights are but the latest stage of a far older conversation or, as Foucault would put it, a discursive practice. This practice has its "own regularity and consistency" and forms the "group of elements" that in time became "indispensable to the constitution" of celestial private property rights as a distinct and autonomous object of discourse.[300] As explained, this group of elements refers to the discussions around the relationship between private property, sovereignty and the commons which have been waged in the West since the time of Saint Thomas Aquinas. An exposition of what was presented as "true" in regards to these relationships in four distinct time periods, the Pre-Classical, Classical, Modern and Contemporary eras, showed that when contemporary space law discourse presents the adoption of celestial private property rights as a need and an inevitability, it does so of its own accord, not because this is the only reasonable course of action when one considers these three elements. Finally, this narrative was further challenged by an exposition of the similarities between the treatments of the expansion into the American West and into outer space that point to a problem with a "contingent and historical", rather than unique, character; the problem of the Frontier.[301]

The third chapter then exposed the connection between the "truths" uncovered and power, in order to finally answer the question posed in the first pages of this thesis: 'why are we speaking of owning and appropriating celestial bodies now, millennia after commencing the conversation around them?' By showing through the exposition of the "specific historical conditions" and events that in the Pre-Classical, Classical and Modern periods the "truth" and knowledge about the discursive practice at hand was produced *by* and *for* the purposes of power, this chapter made the case that the contemporary "truth" about the necessity and inevitability of the establishment of

[300] *Supra* note 72, at 179, 182

[301] *Supra* note 19

exclusive rights on celestial bodies, is similarly produced. It went on to show how the contemporary "truth" is produced by a governmentality that operates through the ensemble of U.N, state and private institutions, has as its target the global population and is underscored by a neoliberal political rationality that disseminates "the formal principles of a market economy" into all spheres of human life.[302] This at last answered the question at the heart of this thesis by concluding that we only began to speak of these rights, hesitantly at first and loudly in the present, because power demands it of us.

Thus we began to speak of and advocate for owning celestial bodies and their resources over the past few decades, not because there have only been a few decades since our technology advanced enough to allow us to dream but rather, because it has only been recently that the modality of power that is exercised over the international community that makes space law and policy, changed into one that demands the total enterprisation and economisation of the celestial domain. We have not grown to see the undeniable, natural merits of establishing celestial private property rights, we are merely caught in the midst of "the current episode in a series of subjugations".[303] Celestial private property, like penal punishment in *Discipline*, is not merely an institution, it's "an instrument and vector of power".[304]

However, this thesis goes further than just introducing to space law scholarship a new critical approach or a hypothesis as to the reason behind the shift in the way we speak of property rights in celestial bodies. Its biggest insight lay at the end of the third chapter, in the explanation provided as to why the influence of this neoliberal governmentality should be rejected even by those who

[302] *Supra* note 23, at 131

[303] *Supra* note 20

[304] Foucault *supra* note 78, at 30

are solely concerned with legal doctrine. In part, it argued that this rejection ought to come because the concerns for peace and environmental protection that are at the heart of the international space law regime are reduced to afterthoughts by the "truth" that the current governmentality produces about the need for celestial private property rights and the actions states take guided by it. However, this governmentality not only produces "truth" and bodies of knowledge; most importantly and as Foucault shows us, like all power, it produces the very subjects that it regulates. In this case its targets, meaning the individual members of the global population, are produced as *homines oeconomici*, meaning beings whose every sphere of life is economized. In other words, through this governmentality human beings are not bettered in accordance with the ultimate telos of international space law but rather, reduced to their economic concerns and incentives.

A Cause for Resistance

Quite often, Foucault was criticized for not offering any solutions to the problems he uncovered. Surely, after reading this thesis one could have reasonable cause to raise similar concerns that ought to be addressed. According to Foucault, power relations resemble Newtonian dynamics, meaning that where there is power, there is resistance. Resistance in turn, manifests through what Foucault referred to as counter-conduct, meaning specific practices and rationalities that can "undermin[e] and challeng[e] dominant forms of global governance".[305] Foucauldian scholars have identified a number of such practices and they range from protesting, to the creation of and

[305] Death, Carl, "Counter-conducts: A Foucauldian Analytics of Protest" (2010) 9:3 Social Movement Studies 235, at 236

participation in movements, to boycotting and even academic works such as this. Any action that has the ability to "reveal how dominant discourses (re)produce certain "political fields of vision"", has the potential to be a solution to the problem identified.[306]

By showing the dangers of this production of the global population as a community of *homines oeconomici*, this thesis hopes to be one of the many acts of such counter-conduct that are bound to occur. It hopes to have acted as testimony to the fact that celestial private property is bound to have an adverse effect on terran power relations if established, because the discourse *around* its potential establishment already *has*. This thesis hopes to have acted as a reminder of what critical property scholar Morris Cohen once said: that "dominion over things", including land, "is also imperium over […] human beings".[307] That is why, until we take the time to conduct research that allows us to identify the exact effects this establishment will have on the *whole* of humanity, countries like the U.S and Luxembourg should be prevented from taking actions that will establish patterns for the usage of celestial bodies and their resources that could one day give rise to *jus cogens*. If we are not careful and patient, the reduction of humanity that is currently induced by a neoliberal governmentality and the disregard for peace and environmental protection that seem to accompany it, might one day bring the parts of humanity raised away from earth to lament, like Rousseau once did, the opportunity to rise against those who were foolish enough to forget that "the fruits of the earth belong to all and that the Earth belongs to no one".[308]

[306] Guerra-Baron *supra* note 223, at 14

[307] Cohen, Morris, "Property and Sovereignty" (1927) 13 Cornell Law Quarterly 8, 13

[308] Gourevitch *supra* note 55

Bibliography

Primary Sources

International Instruments

Agreement on the Rescue of Astronauts, the Return of Astronauts and Return of Objects Launched into Outer Space, 19 December 1967, 672 UNTS 119

Agreement Governing the Activities of States on the Moon and other Celestial Bodies, 5 December 1979, 1363 UNTS 3

Charter of the United Nations, 26 June 1945, Can TS 1957 No 7

Constitution and Convention of the International Telecommunications Union (as amended in 2014), 22 December 1992, UNTS 1825, No 31251.

Convention for the Protection of Cultural Property in the Event of Armed Conflict with Regulations for the Execution of the Convention 1954, May 14, 1954, 249 UNTS 216

Convention on International Liability for Damage Caused by Space Objects, 29 March 1972, 961 UNTS 187

Convention on Registration of Objects Launched into Outer Space, 12 November 1974, 1023 UNTS 15

Statute of the International Court of Justice, 18th April 1946, 33 UNTS 993

Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, 27 January 1967, 610 UNTS 205

National Instruments

Loi du 20 juillet 2017 sur l'exploration et l'utilisation des ressources de l'espace, *Journal Officiel du Grand-Duche de Luxembourg*, No. 674 du 28 Juillet 2017

Law of the Russian Federation on Space Activity (June 20 1993)

U.S. Commercial Space Launch Competitiveness Act 2015, H.R. 2262

U.S. American Space Commerce Free Enterprise Act of 2017, H.R. 2809

United Nations Documents

U.N. Doc. A/6695, 17th August 1967

U.N. Doc. A/AC.105/PV.173

U.N Doc. A/AC.105/C.2/SR.75

U.N. Doc. A/AC.105/196

General Assembly of the U.N. Resolution 68/74, "Recommendations on National Legislation Relevant to the Peaceful Exploration and Use of Outer Space", 11 December 2013

Governmental Documents

United States Government, "Presidential Directive on National Space Policy", July 11th 1988, at 2, at https://www.hq.nasa.gov/office/pao/History/policy88.html [accessed 10/08/2018]

United States House of Representatives, "Space Resource Exploration and Utilization Act of 2015: Report 114-153" *114th Congress 1st Session*

United States House of Representatives, "Report on the Space Resource Exploration and Utilization Act of 2015", June 15th 2015, at https://www.congress.gov/congressional-report/114th-congress/house-report/153/1 [accessed 14/09/2018]

United State Senate, "Treaty on Outer Space: Hearings Before the Senate Committee on Foreign Relations" *90th Congress 1st Session*

United States Senate, "Hearings on the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, Before the Subcommittee on Science, Technology and Space of the Senate Committee on Commerse, Science and Transportation" *95th Congress 2nd Session*

Jurisprudence

North Sea Continental Shelf Cases [1969] ICJ Rep. 3

Secondary Sources

Books

Andersen, Niels, A. *Discursive Analytical Strategies* (Bristol: The Policy Press, 2003)

Agamben, Giorgio, What is an Apparatus? And Other Essays (Stanford: Stanford University Press, 2009)

Aristotle, *The Politics* (Oxford, Clarendon Press, 1905),

Asimov, Isaac; Stamatakis, Nikiforos (trans.), *To Xroniko tou Kosmou* (Iraklio: Crete University Press, 2006)

Bakan, Joel, *The Corporation: The Pathological Pursuit of Profit and Power* (New York: Free Press 2004)

Beekes, Robert, *Etymological dictionary of Greek* (Leiden: Brill, 2010)

Benaroya, Haym, *Turning Dust to Gold: Building a Future on the Moon and Mars* (Chichester, UK: Praxis Publishing, 2010)

Benjamin, Marina, *Rocket dreams: how the space age shaped our vision of a world beyond* (London: Free Press, 2003)

Besley, Tina, *Counseling youth: Foucault, power, and the ethics of subjectivity* (Westport: Praeger, 2002)

Billington, Ray Allen, *America's Frontier Heritage* (Albuquerque: University of New Mexico Press, 1993

Brown, Wendy, *Undoing the Demos: Neoliberalism's Stealth Revolution* (New York: Zone Books, 2015)

Burchell, Graham; Gordon, Colin; Miller, Peter (eds.), *The Foucault Effect: Studies in Governmentality* (Chicago: The University of Chicago Press, 1991)

Burton, Robin; Peterson; Alan (eds.), *Foucault, Health and Medicine* (London: Routledge, 1997),

Cassese, Antonio, *International law (2nd edition)* (Oxford: Oxford University Press, 2005)

Christol, Carl Q. *The Modern International Law of Outer Space*, (Pergamon: New York, 1982)

Couzens Hoy, David (ed.) *Foucault: A Critical Reader* (Oxford: Basil Blackwell, 1986)

Davies, Margaret *Property: Meanings, Histories, Theories* (New York: Routledge-Cavendish, 2007)

de Sousa Santos, Boaventura, *Rise of the Global Left: The World Social Forum and Beyond* (London and New York: Zed Books, 2006)

Dean, Mitchell, *Governmentality Power and Rule in Modern Society* (London: Sage, 1999)

Dickens, Peter; Ormrod, James (eds.), *The Pelgrave Handbook of Society, Culture and Outer Space* (Basingstoke: Palgrave Macmillian, 2016)

Dreyfus, Hubert; Rabinow, Paul (eds.), *Michel Foucault: Beyond Structuralism and Hermeneutics* (Chicago: University of Chicago Press, 1982)

Earle, T.F; Lowe, K. J, *Black Africans in Renaissance Europe* (Cambridge: Cambridge University Press, 2010),

Elden, Stuart *The Birth of Territory* (Chicago – London: The University of Chicago Press, 2013)

Etzioni, Amitai *The New Golden Rule: Community and Morality in a Democratic Society* (London: Profile, 1997)

Farrell, Claire O', *Michel Foucault* (London: Sage Publications, 2005)

Faubion, J.D. (ed.) *Michel Foucault: Power Vol. 3* (New York: The New Press, 1980)

Foucault, Michel *The Order of Things: An Archeology of the Human Sciences* (London: Tavistock, 1970)

Foucault, Michel, *The Archeology of Knowledge & The Discourse on Language* (New York: Pantheon Books, 1972)

Foucault, Michel, *The History of Sexuality, Vol. I, An Introduction* (New York: Random House, 1978)

Foucault, Michel, *The Use of Pleasure* (New York: Random House, 1985)

Foucault, Michel *Discipline and Punish: The Birth of the Prison* (New York: Random House, 1995)

Foucault, Michel *The Order of Things: An Archeology of the Human Sciences* (London and New York: Routledge, 2002)

Foucault, Michel, *Society Must be Defended: Lectures at the College de France 1975–76* (New York: Picador, 2003)

Foucault, Michel, *The Birth of Biopolitics: Lectures at the College de France 1978-1979* (Basingstoke: Palgrave Mcmillan, 2008)

Foucault, Michel, *Security, Territory, Population: Lectures at the College de France, 1977-1978* (Basingstoke: Palgrave Mcmillan, 2009)

Foucault, Michel, *On the Government of the Living: Lectures at the College de France 1979-1980* (Basingstoke: Palgrave Mcmillian, 2014)

Gangle, Thomas, *The Development of Outer Space: Sovereignty and Property Rights in International Space Law* (Santa Barbara, California: Praeger, 2009)

Gardiner, Samuel Rawson, *The Constitutional Documents of the Puritan Revolution 1625–1660 (Third ed.)* (Oxford: Clarendon Press, 1906)

Garfinkel, Harold *Studies in Ethnomethodology* (Englewood Cliffs: Prentice-Hall, 1967)

Goldman, Nathan C., *American Space Law: International and Domestic* (Iowa City: Iowa State University Press, 1988)

Goodwin, Nova; Harris, Jonathan M.; Nelson, Julie A.; Roach, Brian; Torras, Mariano, *Principles of Economics in Contex*t (London and New York: Routledge, 2015)

Gordon, Colin (ed.), *Power/Knowledge: Selected Interviews and Other Writings 1972-77: Michel Foucault* (Brighton: The Harvester Press, 1980)

Gourevitch, Victor (ed.), *Jean-Jacques Rousseau, The Discourses and Other Early Political Writings* (Cambridge: Cambridge University Press, 1997)

Gutting, Gary (ed.), *The Cambridge Companion to Foucault* (New York: Cambridge University Press, 2005)

Hadas, Moses *The Stoic Philosophy of Seneca* (New York: Norton and Company, 1968)

Haley, Andrew G. *Space Law and Government* (New York: Appleton Century Crofts, 1963)

Halliday, Michael, A. K, *Explorations in the Functions of Language* (London: Arnold, 1973)

Herbermann, Charles (ed.) *Catholic Encyclopedia* (New York: Robert Appleton Company, 1913)

Higgs, Henry, *The Physiocrats* (New York: The Langland Press, 1952)

Hobbes, Thomas, *Leviathan* (Oxford: Oxford University Press, 1988)

Hobe, Stephan (ed.), *Pioneers of Space Law* (Leiden – Boston: Martinus Nijhoff Publishers, 2013)

Jorgenson, Corrine M. (ed.) *Proceedings of the International Institute of Space Law 2013* (Netherlands: Eleven International Publishing, 2014)

Kant, Immanuel *Practical Philosophy* (Cambridge, Cambridge University Press, 1996)

Kritzman, Lawrence D., (ed.), *Michel Foucault: Politics, Philosophy, Culture: Interviews and Other Writings, 1977–1984* (New York: Routledge, 1988)

Lloyd, Moya; Thacker, Andrew (eds.), *The Impact of Michel Foucault on the Social Sciences and the Humanities* (London: Macmillian Press LTD, 1997)

Lindley, Mark Frank, *The Acquisition and Government of Backward Territory in International Law* (London: Longmans, Green and Company, 1926)

Martin, Luther H.; Gutman, Huck; Hutton, Patrick, H., *Technologies of the Self: A Seminar with Michel Foucault* (London: Tavistock Publications, 1988)

Maximoff, G.P, *The Political Philosophy of Bakunin: Scientific Anarchism* (New York: Free Press, 1953)

McDougall, Andrew, *The Heavens and the Earth – A Political History of the Space Age*, (New York: Basic Books, 1985)

McDougal, Myres S.; Lasswell, Harold D.; Vlasic, Ivan A. *Law and Public Order in Space* (New Haven – London: Yale University Press, 1963)

McHoul, Alec; Grace, Wendy *A Foucault Primer: Discourse, Power and the Subject* (New York: New York University Press, 1997)

McLean, Janet, (ed.) *Property and the Constitution* (Oxford: Hart, 1999)

McNay, Lois, *Foucault: A Critical Introduction* (Cambridge: Polity Press, 1996),

Merquior, José Guilherme, *Foucault (2nd edn.)* (London: Fontana, 1991)

Murphy, Gretchen, *Shadowing the White Man's Burden*: *U.S. Imperialism and the Problem of the Color Line* (New York and London: New York University Press, 2010)

Nietzsche, Friedrich *On the Genealogy of Morality* (Indianapolis: Hackett Publishing, 1998)

Oduntan, Gbenga, *Sovereignty and Jurisdiction in Airspace and Outer Space: Legal Criteria for Spatial Delimination* (Routledge: New York, 2012)

Rabinow, Paul (ed.), *The Foucault Reader* (New York: Pantheon Books, 1984)

Ransom, John S., *Foucault's Discipline: The Politics of Subjectivity* (Durham and London: Duke University Press, 1997)

Reynolds, Glenn; Merges, Robert, *Outer Space: Problems of Law and Policy* (Boulder: Westview Press, 1989)

Rivera, Luis N. *A Violent Evangelism: the Political and Religious Conquest of the Americas* (Louisville, Kentucky: John Knox Press, 1992)

Salter, Michael; Mason, Julie, *Writing Law Dissertations: An Introduction and Guide to the Conduct of Legal Research* (Harlow, England: Pearson, 2007)

Slotkin, Richard, *Regeneration Through Violence: The Mythology of the American Frontier, 1600-1860* (Middleton: Wesleyan University Press, 1973)

Slotkin, Richard, *The Fatal Environment: The Myth of the Frontier in the Age of Industrialization, 1800-1890* (New York: Antheneum, 1985)

Taylor, Prue, *An Ecological Approach to International Law* (London and New York: Routledge, 1998)

Wassenbergh, Henri A., *Principles of Outer Space Law in Hindsight* (Dordrecht: Kluwer Academic Publishers, 1991)

West, E.W (trans.), *Pahlavi Texts of Zoroastrianism, Part 2 of 5: The Dadistan-i Dinik and the Epistles of Manuskihar", Thomas Firminger Thiselton-Dyer (1843–1928), Forgotten Books* (Clarendon: Oxford University Press, 2008)

Journal Articles

Agius, Emmanuel, "The Concept of the Common Heritage of Mankind in the Catholic Social Tradition" (1991) XLII:1 Melita Theologica 1

Bacchi, Carol; Bonham, Jennifer, "Reclaiming discursive practices as an analytic focus: Political implications" (2014) 17 Foucault Studies 173

Baker, Lynn A, "Pastoral Power, Governmentality and Cultures of Order in Nineteenth-Century British Columbia" (1999) 24:1 Transactions of the Institute of British Geographers 79

Billings, Linda, "To the Moon, Mars and Beyond: Culture, Law and Ethics in Space-Faring Societies" (2006) 26:5 Bulletin of Science, Technology & Society 430

Brantlinger, Patrick, "Victorians and Africans: The Genealogy of the Myth of the Dark Continent" (1985) 12:1 Critical Inquiry 166

Buckley, Ross, "The Rich Borrow and the Poor Repay: The Fatal Flaw in International Finance" 2002 19:4 World Policy Journal 59

Buxton, Carol, B., “Property in Outer Space: The Common Heritage of Mankind Principle vs. the “First in Time, First in Right” Rule of Property Law” (2004) 69 Journal of Air Law and Commerce 689

Clancy, Erin, “The Tragedy of the Global Commons” (1998) 5:2 Indiana Journal of Global Legal Studies 601

Cohen, Morris, "Property and Sovereignty" (1927) 13 Cornell Law Quarterly 8

Collis, Christy; Delaney, D., “Running with the land: legal-historical imagination and the spaces of modernity” (2001) 27:4 Journal of Historical Geography 493

Collis, Christy, “The Geostationary Orbit: a Critical Legal Geography of Space’s Most Valuable Real Estate” (2012) 57:1 The Sociological Review 47

Collis, Christy, “Territories beyond possession? Antarctica and Outer Space” (2017) 7:2 The Polar Journal 287

Cooper, Lawrence A., “Encouraging Space Exploration Through a New Application of Space Property Rights” (2003) 19 Space Policy 111

Danilenko, Gennady M., “Outer Space and the Multilateral Treaty Making Process”, (1989) 4:2 Berkeley Technology Law Journal 217

Dayal, Shiv, “Reviewed Work: Law and Public Order in Space by Myres S. McDougal, Harold D. Lasswell, Ivan A. Vlasic” (1968) 10:1 Journal of the Indian Law Institute 173

Death, Carl, “Counter-conducts: A Foucauldian Analytics of Protest” (2010) 9:3 Social Movement Studies 235

Dickinson, Laura A., “Government for Hire: Privatizing Foreign Affairs and the Problem of Accountability Under International Law” (2005) 47 William & Mary Law Review 135

Elliott, John E., “Adam Smith's Conceptualization of Power, Markets, and Politics” (2000) 58:4 Review of Social Economy 429

Ferguson, James; Gupta, Akhil, “Spatializing states: toward an ethnography of neoliberal governmentality”, (2002) 29:4 American Ethnologist 981

Foucault, Michel “Politics and the Study of Discourse” (1978) 3 Ideology and Consciousness 7

Foucault, Michel, “The subject and power” (1982) 8:4 Critical Inquiry 777

Foucault, Michel "Structuralism and poststructuralism: An interview with Gerard Raulet" (1983) 55 Telos: A Quarterly Journal of Critical Thoughts 195

Fountain, Lynn M., “Creating Momentum in Space: Ending the Paralysis Produced by the “Common Heritage of Mankind” Doctrine” (2003) 35 Connecticut Law Review 1753

Garren, Allison D., “The Corporation as Sovereign” (2008) 60:1 Maine Law Review 130

Garland, David, “What is a “history of the present”? On Foucault’s Genealogies and their Critical Preconditions” (2014) 16:4 Punishment & Society 365

Gates, Charles M., “The West in American Diplomacy, 1812-1815” (1940) 26:4 Mississippi Valley Historical Review 499

Goedhuis, Daniel, “Some Recent Trends in the Interpretation and the Implementation of the Rules of International Space Law” (1981) 19 Columbia Journal of Transnational Law 213

Haley, Andrew G. “Space Law and Metalaw – A Synoptic View” (1956) Harvard Law Record

Haley, Andrew G. “Recent Developments in Space Law and Metalaw” (1957) 24: 2 Harvard Law Record

Hallebeek, Jan, “Thomas Aquinas’ Theory of Property” (1987) 22 Irish Jurist 99

Halligan, Patrick, "The Environmental Policy of Saint Thomas Aquinas" (1989) 19:4 Environmental Law 767

Harris, Philip, “Book Review: The development of Outer Space: Sovereignty and Property Rights in International Space Law, Thomas Gangle” (2010) 26 Space Policy 129

Harris, Zellig S. “Discourse Analysis” (1952) 28 Language 1

Hutchinson, Terry, “The Doctrinal Method: Incorporating Interdisciplinary Methods in Reforming the Law” (2005) 3 Erasmus Law Review 130

Jaeger, Hans-Martin, “UN Reform, Biopolitics, and Global Governmentality” (2010) 2:1 International Theory 50

Kennedy, David, “Challenging expert rule: The politics of global governance” (2005) 27:5 Sydney Law Review 1

Lilja, Mona; Vinthagen, Stellan, “Sovereign Power, Disciplinary Power and Biopower: Resisting What Power With What Resistance?” (2014) 7:1 Journal of Political Power 107

Lopata, Benjamin B., “Property Theory in Hobbes” (1973) 1:2 Political Theory 203

Lorenzini, Daniele, “What is a ‘Regime of Truth’?” (2015) 1:1 Le Foucaldien

MacDonald, Fraser, “Anti-Astropolitik: outer space and the orbit of geography” (2007) 31:5 Progress in Human Geography 592

McDougal, Myres S.; Lipson, Leon, “Perspectives for a Law of Outer Space” (1958) 52:3 The American Journal of International Law 407

Miquel, Paul-Antoine, “From Power to Biopower” (2011) 15:6 Journal of the Studies of Humanities 259

Nigam, Aditya, “Marxism and Power” (1996) 24: 4/6 Social Scientist 3

Rasmusse, Kim Su, “Foucault’s Genealogy of Racism” (2011) 28:5 Theory, Culture & Society 34

Redfield, Peter, “The half-life of Empire in outer space” (2002) 32 Social Studies of Science 791

Reyna, Stephen R; Schiller, Nina Glick, “The Pursuit of Knowledge and Regimes of Truth” (1998) 4:3-4 Identities 333

Roberts, Lawrence D., “Ensuring the Best of All Possible Worlds: Environmental regulation of the Solar System” (1997) 6 New York University Environmental Law Journal 126

Rose, Nikolas “Community, Citizenship and the Third Way” (2000) 43:9 American Behavioral Scientist 1395

Rose, Nikolas, “Government and Control”, (2000) 40 British Journal of Criminology 321

Sacks, Harvey; Schegloff, Emanuel; Jefferson, Gail “A simplest Systemics for the Organization of Turn-taking for Conversation” (1974) 50 Language 696

Samuelson, Paul A.; Solow, Robert M, "Analytical Aspects of Anti-Inflation Policy" (1960) American Economic Review 177

Shackelford, Scott J., “The Tragedy of the Common Heritage of Mankind” (2009) 28:1 Stanford Environmental Law Journal 109

Singer, Brian C.J.; Weir, Lorna, “Politics and Sovereign Power: Considerations on Foucault” (2006) 9:4 European Journal of Social Theory 443

Sussman, Robert, W., “The Myth of Man the Hunter, Man the Killer and the Evolution of Human Morality” (1999) 34:3 Zygon 453

Taylor, Jared, “Tragedy of the Space Commons: A Market Mechanism Solution to the Space Debris Problem” (2011) 50:1 Columbia Journal of Transnational Law 253

Tennen, Leslie I., “Enterprise Rights and the Legal Regime for Exploitation of Outer Space Resources” (2016) 47 The University of the Pacific Law Review 281

Valters, Erik N, “Perspectives in the Emerging Law of Satellite Communications” (1970) 5 Stanford Journal of International Studies 53

Vick, Douglas, “Interdisciplinarity and the Discipline of Law” (2004) 31:2 Journal of Law and Society 163

Williams, Sylvia Maureen, "The Law of Outer Space and Natural Resources" (1987) 36 ICLQ

Zamora, Daniel, "Can we Criticize Foucault?" *Jacobin* (12 October 2014) at https://www.jacobinmag.com/2014/12/foucault-interview/ [accessed 25/06/2018]

Zullo, Kelly M., “The Need to Clarify the Status of Property Rights in International Space law” (2002) 90 The Georgetown Law Journal 2413

Miscellaneous

Armstrong, Neil, "Out of This World" (August 24, 1974) Saturday Review/World

Becker, Gary, "What Latin America Owes to the Chicago Boys" *Hoover Digest* (30 October 1997) at https://www.hoover.org/research/what-latin-america-owes-chicago-boys [accessed 22/11/2018]

Brill, Kenneth, "Statement of Ambassador Kenneth Brill, Permanent Representative of the United States of America to the United Nations in Vienna", 41st Session of the Legal Subcommittee of the United Nations 2002

Chaddha, Shane, "A Tragedy of the Space Commons?" (2010), at https://ssrn.com/abstract=1586643

Covaleski, J. "Power goes to school: Teachers, students and discipline", (1993) Philosophy of Education Society Yearbook, at https://web.archive.org/web/20060426005011/http://www.ed.uiuc.edu:80/EPS/PES-Yearbook/93_docs/COVALESK.HTM [accessed 05/11/2018]

de Condorcet, Marquis, Outline of an Historical View of the Progress of the Human Mind (London: J. Johnson, 1795), at 324, at https://archive.org/details/outlinesofhistor00cond/page/n11 [accessed 02/10/2018]

Dekanozo. R.V., "Juridical nature of outer space, including the Moon and other celestial bodies" (1974) Proceedings of the Twenty-Ninth Colloquium on the Law of Outer Space

Dinkin, Sam, "Don't Wait for Property Rights" (July 12 2004) Space Review, at http://www.thespacereview.com/article/179/1 [accessed 20/08/2018]

Foust, Jeff, "Luxembourg adopts space resources law", *Space News* (17 July 2017) at http://spacenews.com/luxembourg-adopts-space-resources-law/ [accessed 06/05/2018]

Gabrynowicz, J.I, "The "Province" and "Heritage" of Mankind Reconsidered: A New Beginning", (1992) 2 The Second Conference on Lunar Bases and Space Activities of the 21st Century 691

Graham, Linda J., "Discourse analysis and the critical use of Foucault" (2005) Paper presented at Australian Association for Research in Education, Sydney, Australia; 27 Nov. – 1 Dec. 2005

Greenwood, Daniel J.H, "The Semi-Sovereign Corporation" (2005) Legal Studies Research Paper Series, at http://ssrn.com/abstracts=757315 [accessed 01/10/2019]

Grotius, Hugo, *The Freedom of the Seas* (1609), at Chapter I, at http://oll.libertyfund.org/titles/grotius-the-freedom-of-the-seas-latin-and-english-version-magoffin-trans [accessed 17/10/2018]

Guerra-Baron, Angelica, "Biopower and International Relations" (2017) Oxford Encyclopedia of International Studies

Hardwood, Valerie, "Truth, power and the self: A Foucaultian analysis of the truth of Conduct Disorder and the construction of young people's mentally disordered subjectivity" Unpublished Doctor of Philosophy Thesis, University of South Australia, Adelaide

Hodgkins, Kenneth, "Statement of Kenneth Hodgkins, US Adviser to the Fifty-Seventh Session of the UN General Assembly, Statement in the Fourth Committee", October 9th 2002

International Institute of Space Law, "Draft Resolution of the International Institute of Space Law Concerning the Legal Status of Celestial Bodies" (1965) Proceedings of the 40th Colloquium on the Law of Outer Space, American Institute of Aeronautics and Astronautics 351

Jakhu, Ram S.; Freeland, Steven, "The Relationship Between the Outer Space Treaty and Customary International Law" (2016) *Proceedings of the 67th International Astronautical Congress (IAC 2016): Making Space Accessible and Affordable to all Countries, 26-30 September 2016, Guadalajara, Mexico*

Kramer, Katie "Neil deGrasse Tyson Says Space Ventures Will Spawn the First Trillionaire" (3rd May 2015) *NBCNEWS*, at https://www.nbcnews.com/science/space/neil-degrasse-tyson-says-space-ventures-will-spawn-first-trillionaire-n352271,[accessed 22/07/2018]

Locke, John, *The Second Treatise on Civil Government,* at https://earlymoderntexts.com/assets/pdfs/locke1689a.pdf [accessed 05/09/2018]

Malorsky, B. "A few reflections on the meaning and the interrelation of "province of all mankind" and "common heritage of mankind" notions" (1986) Proceedings of the Twenty Ninth Colloquium on the Law of Outer Space

Markoff, Marco G., "Space Resources and the Scope of the Prohibition in Article II of the 1967 Treaty" (1970) Proceedings of the 13th Colloquium on the Law of Outer Space, American Institute of Aeuronautics and Astronautics

Markoff, Marco G., "A Further Answer Regarding the Non-Appropriation Principle" (1970) Proceedings of the 13th Colloquium on the Law of Outer Space, American Institute of Aeronautics and Astronautics

Muller, Benjamin J., "Governmentality and Biopolitics" (2011) Oxford Research Encyclopedia of International Studies

Planetary Resources, "Planetary Resources Applaus U.S Congress in Recognising Asteroid Resource Property Rights" (10 November 2015), at https://www.planetaryresources.com/2015/11/planetary-resources-applaus-u-s-congress-in-recognizing-asteroid-resource-property-rights/ [accessed 09/07/2018]

Pope Boniface VII, *Unam Sanctam - Papal Bull of Pope Boniface VIII* (18 November 1302), at http://catholicism.org/unam-sanctam.html [accessed 20/11/2018]

Sciolino, Elaine, "Reagan, in Switch, Says U.S. Will Pay Some Old U.N. Dues" *The New York Times* (14 September 1988) at https://www.nytimes.com/1988/09/14/world/reagan-in-switch-says-us-will-pay-some-old-un-dues.html [accessed 11/11/2018]

Tennen, Leslie, "Commentary on Emerging System of Property Rights in Outer Space" (2003) United Nations – Republic of Korea Workshop on Space Law

Unknown, "Moon Rocks Collected by Soviets Expected to Fetch up to $1 Million at Auction", Radio Free Europe Radio Liberty (31st October 2018) at https://www.rferl.org/a/moon-rocks-collected-soviet-unmanned-space-mission-luna-16-expected-fetch-1-million-dollars-at-auction-sothebys-new-york/29574237.html [accessed 01/11/2018].

Williams, Ian, "Why the Right Loves the U.N" (1992) 254:14 The Nation

White House Office of the Press Secretary, "Remarks by the President in the State of the Union Address" (12 February 2013) at https://obamawhitehouse.archives.gov/the-press-office/2013/02/12/remarks-president-state-union-address [accessed 08/12/2018]

White, Wayne N., "Real Property Rights in Outer Space" (1965) Proceedings of the 40th Colloquium on the Law of Outer Space, American Institute of Aeronautics and Astronautics 370

White, Wayne N., “Interpreting Article II of the Outer Space Treaty” (2003) Proceedings of the 46th Colloquium on the Law of Outer Space 171

Wolfe, Tom, "The "Me" Decade and the Third Great Awakening" *New York Magazine* (23 August 1976) at http://nymag.com/news/features/45938/ [accessed 10/10/2018]