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Non-militarization of the Final Frontier
Tracing the evolution of norms in outer space

Diplomová práce

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Abstrakt

Tato diplomová práce si klade za cíl kriticky zhodnotit tradiční pozitivistické interpretace zrodu čtyř klíčových norem tvořících základ současného mezinárodně-právního režimu upravujícího aktivity států v oblasti využívání vesmírného prostoru: a) nemilitarizace, b) mírové využití, c) zákaz přivlastnění, a d) volnost využívání všemi státy. Tradiční výklady zpravidla objasňují zrod těchto norem statickými vysvětleními, buďto jakožto výsledek vrozené aspirace lidstva využívat vesmírný prostor pro mírové účely či jakožto výstup snahy racionálních států hájit své národní zájmy. Analýza první dekády vesmírné éry lidstva za pomoci post-strukturalistické genealogické metody artikulované Richardem Pricem nabízí komplexnější vysvětlení. Aplikace kritického genealogického přístupu naznačuje, že zrod výše zmíněných norem byl přímo závislý na přítomnosti konkrétních historických okolností a kognitivních struktur studené války: a) strachu z jaderných zbraní, b) politiky zadržování komunismu, c) společenského trauma z druhé světové války, a d) vysoké míry politizace diskurzu obklopující vesmírný závod. Výsledky této práce rovněž naznačují, že bez přítomnosti specifických historických okolností a kognitivních struktur, které podmínily jejich vznik, tyto normy, alespoň v jejich současné podobě, pravděpodobně nemohou setrvat v platnosti i do budoucna.

Klíčová slova

Vesmírný prostor, diskurz, kritické teorie, nemilitarizace, evoluční analýza, mezinárodní právo

Abstract

This diploma thesis critically examines traditional positivist interpretations concerning the birth of four core norms of the current legal regime governing activities of states in Outer Space: a) non-militarization, b) peaceful use, c) non-appropriation, and d) freedom of access. Traditional interpretations often explicate the emergence of the aforementioned principles in static terms, either as a result of universal aspirations of mankind to peacefully explore the final frontier, or alternatively as a product of rational calculations of self-interested states. Analysis of the first decade of the space age through the lens of post-structural genealogical method proposed by Richard Price reveals a much more complex picture. Application of critical genealogical approach indicates that the emergence of the four norms in question was contingent on the presence of particular historical circumstances and cognitive structures of the Cold War: a) fear of nuclear weapons, b) policy of containment, c) trauma of the Second World War, and d) highly politicized outer space discourse due to the presence of the space race. The findings also indicate that without the presence of the particular historical circumstances and cognitive structures that necessitated their emergence, the four principles in question are unlikely to survive into the future, at least not in their current form.

Keywords

Outer Space, discourse, critical theory, non-militarization, evolutionary analysis, international law

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Prohlášení

1. Prohlašuji, že jsem předkládanou práci zpracoval samostatně a použil jen uvedené prameny a literaturu.
2. Prohlašuji, že práce nebyla využita k získání jiného titulu.
3. Souhlasím s tím, aby práce byla zpřístupněna pro studijní a výzkumné účely.

V Praze dne 30. 7. 2014

Pavel Mráz

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Content

Introduction - A Genealogical Approach	1
1 Touching the Final Frontier: from Wonder-weapons to Satellites	9
2 The ‘Bleep’ that Changed the World	17
3 Sanctuary or High Ground: from Satellites to Outer Space Principles.....	23
4 Magna Charta: From Freedom to Denial?.....	55
Conclusion	61
Summary	63
List of Sources	64
Project of the Master’s Thesis.....	73

List of Abbreviations

ASAT – Anti-Sattelite System

COPUOS – Committee on the Peaceful Uses of Outer Space

DPRK – Democratic People’s Republic of Korea

ICBM – Intercontinental Ballistic Missile

IGY – International Geophysical Year

LTBT – Limited Test Ban Treaty of 1963

NASA – National Aeronautics and Space Administration

UN – United Nations

US – United States of America

USSR – Union of Soviet Socialist Republics

Introduction - A Genealogical Approach

*"We have stepped into a new, high road from which there can be no turning back. As we probe farther into the area beyond our sensible atmosphere, man will learn more about his environment; he will understand better the order and beauty of creation. He may then come to realize that war, as we know it, will avail him nothing but catastrophe. He may grasp, the truth that there is something much bigger than his own little world. Before the majesty of what he will find out there, he must stand in reverential awe. This, then, is the acid test as man moves into the unknown"*¹

Wernher von Braun, father of German and U.S. rocket science

*"Technology is a social, cultural, and political construction."*²

Richard Price: in 'A Genealogy of chemical weapons taboo'

Ever since the first spark of reason in human mind, mankind has always gazed upon the sky with a mixture of fascination, wonder, sublimity, and reverential awe. Fascination with the unknown is indeed a powerful and indispensable part of the human psyche. It drives human discovery, it challenges us to search for answers beyond and above the convention of our time, and instills a feeling of something bigger than us. The outer space comfortably fits all these categories. From the earliest days of human history, the universe symbolized the divine and omnipresent sphere of the Heavens in the thinking of man, separating our profane existence here on Earth from all the sacral mysteries that are yet to be revealed and explained. Indeed, contemplation of celestial phenomena seems to be the earliest cultural achievement of our species with the oldest archeological artifacts being connected with some sort of consideration of the sky.³ From the very dawn of humanity, the majestic void of outer space, with the Moon and other celestial bodies were regarded as a value, rather than a place.

Man's conquest of Earth's gravity at the beginning of space age has done little to diminishing scientific community's fascination with the final frontier. On the contrary, it has fueled its appetite. As we ventured deeper into the magnanimous voids of our solar system, we began to understand that our quest for answers might be as infinite as the universe itself. Each explained mystery concerning celestial phenomena has

¹ Columba Peoples (2007) Haunted Dreams: Critical Theory and the Militarization of Space. Draft Paper prepared for International Studies Association Conference (Chicago : Swansea University), p. 3.

² Price R. (1995) A Genealogy of chemical weapons taboo. International Organization. 49(1), p. 89.

³ Brunner, C. and Soucek, A. (2011) Outer Space in Society, Politics, and Law. (Wien : Springer-Verlag), p. 8.

produced new questions about the nature of the Universe; an infinite regress stretching all the way to the ultimate question of “*meaning of life, the universe, and everything*”.⁴

Despite achieving a significant progress in exploring the far reaches of our solar system, or perhaps because of it, general public here on Earth has lost much of its original interest in the wonders of the Universe, turning its attention instead to the more profane, and perhaps more immediate challenges here on Earth. An interesting paradox can be observed here. While modern way of life has become critically dependent on our ability to use and access outer space, our interest in space activities declined to an all-time low, at least as far as the short history of human space exploration is concerned. Yet, contemporary apathy of general public regarding outer space activities should not blind us to the fact that in the first days of space age mankind looked up to the heavens with a mix of profound fascination and acute fear as the first artificial satellite bleeped its way across the sky.

In more ways than one, the first decade of space age was an intensely formative experience for individuals, states, and for the international system as a whole. Apart from the fact that people could finally see themselves as space-farers, the peculiar circumstances surrounding the dawn of space age set the world’s two Superpowers on a path towards the space race. This race to heavens would, in turn, give rise to a new competitive relationship between the US and the USSR – one based not only on previously existing cognitive structures of belligerency, nuclear deterrence, and military parity, but also on more positivist notions of scientific discovery, exploration and peaceful use of outer space. This newly emerging relationship between the two, would, in turn, transform some of the underlying dynamics of the Cold War, producing thus some extraordinary outcomes that would be unthinkable just a few years prior.

One such uniquely profound outcome of the space race would be the gradual emergence of four core principles guiding state activities enshrined in the so-called Magna Charta of outer space, the Outer Space Treaty of 1967:⁵ a) non-militarization of the Moon and other celestial bodies, b) use of outer space for exclusively peaceful purposes, c) non-appropriation of outer space by claims of national sovereignty, and finally d) freedom of

⁴ Adams, D. (1995) *Hitchhiker’s Guide to the Galaxy* (New York : Crown Publishers, Inc.), p. 128.

⁵ The full name of the Outer Space Treaty of 1967 is rarely used but reads as follows: Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (author’s note).

exploration and use by all States.⁶ Since their adoption at the climax of space race, these four guiding principles of national space activities have gone on to become deeply rooted customary norms of international space law. However, the reasons and the particular circumstances of the emergence of these principles are yet to be adequately explained.

Because of the aspirational, ethical, and moral character of the Outer Space Treaty, many traditional interpretations treat the aforementioned principles governing space activities as universal and static norms. This is particularly the case in many scholarly accounts hailing from the legal field of space law.⁷ Indeed, lawyers see these principles as an indispensable part of the legal regime that has been constructed around outer space; a set of absolute norms without which the entire system would crumble.⁸ This ‘universalist camp’ explains the emergence of outer space principles in terms of mankind’s commonly shared aspiration to preserve outer space as a sanctuary for peaceful use, exploration and scientific discovery; one that would remain unscarred by conflicts and implements of war.⁹ The underlying inclination of this school of thought is to conceive outer space as a special domain, one that should be governed by a higher set of moral and ethical principles.¹⁰ Such explanations largely echo the official rationale declared by states in the preamble of Outer Space Treaty. In other words, many legal experts seem inclined to uncritically accept most discursive justifications advanced by those who exercise power over the norm-generating discursive process. This should perhaps come as a no surprise since legal experts are mostly interested in why norms are created and what their existence implies for legal practice, rather than in the process of how norms emerge, evolve, and disappear over time.

Such explanations of the emergence of outer space principles are inadequate in several respects. First, the postulate of universal aspiration of mankind to peacefully venture

⁶ United Nations General Assembly (1966) Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies. Resolution 2222 (XXI) of 19 December 1966. UN Doc. A/RES/21/2222.

⁷ See for example: Su, J. (2010a) The ‘peaceful purposes principle’ in outer space and the Russia-China PPWT Proposal. *Space Policy*. 26(2), pp. 82-83.

⁸ Jakhu, R Lecture: Legal Status of Outer Space and Celestial Bodies. General Principles of Space Law ASPL637. McGill University, Institute of Air & Space Law. 7 Oct. 2013. Lecture.

⁹ Gromyko, A (1981) Letter dated 10 August 1981 from the Minister of Foreign Affairs of the Union of Soviet Socialist Republics addressed to the Secretary-General: Request for the Inclusion of a Supplementary Item in the Agenda of the Thirty-Sixth Session: Conclusion of a Treaty on the Prohibition of the Stationing of Weapons of Any Kind in Outer Space. UN Doc. A/36/192, p. 2.

¹⁰ Spring, B. (2005) Slipping the Surly Bond of the Real World: The Unworkable Effort to Prevent the Weaponization of Space. *Heritage Lecture Series Publications*. (42) No. 877, p. 2.

into outer space is somewhat inconsistent with the fact that most of the early space technology has descended directly from military research into ballistic missiles.¹¹ In a very real sense, the first ventures of man into space have been driven by man's desire to expand his ability to destroy, not to explore or create. Second, there is little evidence to suggest that states acted out of their shared desire to preserve space as a sanctuary free of weapons of any kind. In fact, the Outer Space Treaty only prescribes non-militarization of celestial bodies and prohibits the stationing of weapons of mass destruction in outer space¹². In consequence, conventional weapons of all kinds are not prohibited. Had states truly desired to 'sanctuarize' outer space, why enact a dual legal regime prescribing non-militarization for the Moon and other celestial bodies on one hand and only nuclear-free zone for the infinite void of outer space, on the other? Why simply not ban weapons of all kind? Why the singular focus on weapons of mass destruction? The answers to these questions are indeed elusive and cannot be adequately explained by arguments of moral or ethical character. Such static explanations miss a crucial part of the story: the presence of dynamic and ever-evolving cognitive structures produced at particular historical junctures. These structures likely had a profound influence not only on how decision-makers perceived threats and constructed appropriate responses, but also on how they chose to legitimize their practices discursively.

On the other side of the great divide, scholars hailing mostly from the field of international relations argue that the emergence of principles governing activities in outer space was a product of states' pursuit of rational strategic considerations and self-interest.¹³ The emergence of the principle of peaceful use as well as the ban on stationing nuclear weapons in outer space is explained in terms of Superpowers' interest in securing space-based assets that were playing an increasingly crucial role in maintaining strategic nuclear stability between the two.¹⁴ Some authors also point to the fact that the Outer Space Treaty was a mutually beneficial great-power agreement that

¹¹ Rodhan, N. (2012) *Meta-Geopolitics of Outer Space* (Hampshire : Palgrave MacMillan Ltd.), p. 141.

¹² United Nations General Assembly (1966) *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies*. Resolution 2222 (XXI) of 19 December 1966. UN Doc. A/RES/21/2222, Art. II.

¹³ Spring (2005), p. 2-3.

¹⁴ Din, A. (1983) *Stopping the Arms Race in Outer Space*. *Journal of Peace Research*. (20)3, pp. 221-222.

allowed both Superpowers to prevent the increasingly costly arms race from spilling over to outer space.¹⁵

These methodological approaches are far more likely to take into account the changing dynamics of power relations in the international system, although because of their preeminent positivist fascination with the realm of the objectively measurable, they tend to account for these changing dynamics in only in terms of military and economic power. Concerning the dynamic evolution of principles governing the conduct of states in outer space, the positivist international relations theories tend to focus almost exclusively on the emergence of new space technologies with potential military applications to explain rationale behind political decisions and outcomes.

However, these accounts cannot adequately explain what rational strategic consideration or self-interest guided states in their decision to exempt the totality of outer space – essentially a limitless spatial frontier – from their most precious discursive invention to date – the Westphalian concept of sovereignty. How did outer space become to be regarded as different from other spatial dimensions of human activity to warrant such a drastic incursion into states’ sovereign rights to be adopted? Why had not an alternative and perhaps a more intimately familiar conception given preference? Perhaps the principle of ‘terra nullius’ would suffice. After all, the right to appropriate land not belonging to any one civilized nation has for centuries stood as a legitimizing principle of states’ self-interested drive for territorial conquest and appropriation of resources. Had self-interested rational states not understood that the last frontier of mankind would offer not only unlimited source of natural resources but also a tremendous strategic and military advantage to whoever would achieve dominion over it? Why so drastically and so completely exempt all that the universe holds from states’ ability to grasp in pursuit of rational self-interested quest for power? The answers are again difficult to come by, and may lie beyond the narrow confines of methodological approaches of positivist international relations analysis.

That being said, it is suggested here that the emergence of principles governing states’ activities in outer space is a conundrum yet to be deciphered and adequately explicated, because the principles in question defy either purely rational or moral explanations.¹⁶

¹⁵ Hansel (2010) The USA and arms control in space: An IR Analysis. *Space Policy*. 26(1), pp.93-94.

¹⁶ Price (1995), p. 88.

Since the very idea of outer space lies at the intersection of the rational-scientific and spiritual-moral dimensions, the search for answers to the conundrum of how principles pertaining to outer space activities emerged should also start there. Such analytical focus at the crossroads of the rational and irrational calls for interpretative, critical and constructivist approaches such as the genealogical approach proposed by Richard Price in his scholarly work dedicated to the genealogy of chemical weapons taboo.¹⁷ In broad terms, the aim of the genealogical method is not only to decipher the meanings that have served to constitute and delegitimize certain activities, but also to cast light on “*the specific historical and genealogical tangles that produce the contingent structures we mistakenly consider given solid and extending without change into the future as well as the past.*”¹⁸ Perhaps the most significant benefit of the genealogical method is its ability to pinpoint the specific historical as well as cognitive conditions under which moral institutions are constructed or allowed to emerge.¹⁹ Such approach arguably provides scholars with a powerful analytical tool to predict whether any moral institution or principle in question is more likely to persist into the future or whether it is more likely to be confined to the dustbin of history.

That being said, the singular aim the analysis that follows is to explain how the four core principles governing space activities emerged at the beginning of space age by replicating the genealogical approach proposed by Price. The principal aim here is not only to identify the specific historical tangles that gave rise to the four key outer space principles, but also to analyze the “*meaning of the power behind these principles and why have they been allowed to flourish to such an extent*”.²⁰ The aim of this work is, to put it in Price’s words, “*to find history where it is not expected to be – within moral institutions and practices that are usually thought to be exempt from the contingencies of historical tangle.*”²¹ This post-structuralist account rooted in the history of critical approaches is aspiring to provide more than a simple explanation of what drove the conscious decisions of relevant decision-makers in the first formative years of the space age. Indeed, the author believes that the questions how and why principles emerge should not be treated separately. Instead, they need to be answered together if one is to

¹⁷ Price (1995), p. 88.

¹⁸ Price (1995), p. 85.

¹⁹ Price (1995), p. 85.

²⁰ Foucault, M. (1984) ‘uzsche, Genealogy, History,’ in Paul Rabinow, ed., *The Foucault Reader* (Pantheon Books : New York), p. 79.

²¹ Price (1995), p. 87.

produce a truly holistic account of how and why events transpired the way they did. This requires not only an extensive analysis of rhetorical as well as moral concepts invoked by relevant actors exercising power over discourse, but also an interpretative focus on the kind of politics produced by the subsequent construction of new moral systems. In other words, the primary methodological tools of the analysis presented on the pages below are those of discourse and power. The ‘how’ and ‘why’ explanations are thus intertwined in a one holistic framework.

In a significant departure from Price, the account of the early days of space race that follows is also striving to contrast the discourse with the reality of practice at every step of the way, thus exposing numerous hypocrisies, double-standards and Machiavellian intrigues in a manner that is inspired by the Nietzschean approach to critical deconstruction of moral phenomena. It is author’s hope that this methodological approach will provide not only a stimulating read, but also a novel perspective on already well-researched topic. Perhaps most importantly, by identifying the conditions under which the four guiding principles of activities in outer space emerged, the author hopes to also offer some analytical insights as to the sustainability of these principles in a contemporary period as well as into the future.

Here, it is also important to stress that the original aim of this research endeavor was far more ambitious, indeed, gargantuan so to say. The author was hoping to map not only the genealogy of fundamental principles in outer space, but also to trace their evolution all the way to the contemporary period. As the research progressed, this tasked proved to be well beyond the scope of master thesis requirement. It would take an entire volume and perhaps even more to achieve this objective. This realization has led the author to narrow down the research to the fundamental question of genealogy as proposed by Price, with the singular focus here being on the period from the development of first rocket weapons technology at the close of the Second World War all the way to the signature of the Outer Space Treaty in 1967, which contains legally binding codifications of the four analyzed principles.

The account of the historical events surrounding man’s foray into space in the early days of space race presents a dynamic, and hopefully fascinating story of evolving principles that emerged, evolved and were continuously reinterpreted to new ends with the changing flows historical currents, cognitive structures and shifting public opinion.

Interestingly, the findings on the pages below indicate that the outer space principles, which were originally designed by the Superpowers for strictly utilitarian purposes, later came into a life of their own, transforming again the normative structures that gave necessitated their birth, thus in turn narrowing down the choices and policies that the Superpowers would view as legitimate or appropriate.

In contrast to traditional interpretations, the chapters below present an alternative, critical, and hopefully a more balanced analysis of how the core principles of outer space conduct came into being. A critical genealogical approach examining the birth of these principles reveals that the decision to exempt outer space from Westphalian concept of sovereignty by partially banning military competition in this domain was not so much a result of universally valid human aspiration to preserve outer space as a peaceful sphere but a product of particular cognitive structures valid at a distinct historical juncture. None of this is to suggest that the preponderance of human mind to conceive of outer space as a value rather than a place had no role in the construction of norms governing the use of outer space. In fact, this conception of outer space provided a strong legitimizing discursive strategy employed in the process of enacting the principle in question. However the pages below demonstrate that, in and of itself, the value-based conception of outer space would have been insufficient as a discursive strategy legitimizing the birth of Magna Charta of the outer space. Arguably, had it not been for the conjunction of powerful historical trauma of the Second World War, the recent invention of nuclear weapons, and the context of intense Cold War rivalry of the two Superpowers, principles of non-militarization, peaceful use, non appropriation, and freedom of access to outer space might have never been even considered, let alone so carefully and deliberately constructed.

1 Touching the Final Frontier: from Wonder-weapons to Satellites

*“[Nazi leadership believed that] these would be wonder-weapons would reverse the course of the war and demonstrate that the German racial soul could compensate for quantitative (and in many cases qualitative) inferiorities. They were also a fitting culmination of the reactionary modernist tradition. However destructive they may have been, placing hopes in them at that date was indicative of the contempt for strategic thinking, that is, for relating means to ends, that had permeated the Nazi regime. Reactionary modernist views of technology must be given credit for this remarkable instance of nonutilitarian flight into ideological politics up to the very end.”*²²

Jeffrey Herf comments on Reich’s endeavors to develop rocket weaponry

The aspiration of mankind to reach for the stars dates back centuries, if not millennia. Some of the first attempts to rise above the mundane realm were rather ill-conceived and rudimentary in nature, although not entirely out-of-sync with the physics of space travel. According to one legend, a Ming dynasty emperor Wan Hu attempted to become the first Chinese traveler in outer space as early as 16th century A.C. Strapping himself to a chair while his servants lit gunpowder-packed bamboo tubes attached to his seat, he roared to the sky, but failed (by a long shot) to reach the velocity needed to break from the Earth’s uncompromising gravitational pull; a force ultimately responsible for his untimely demise.²³ However, Wan Hu deserves credit for the underlying idea behind his attempt, the thrust-producing combustion does after all represent the basis of contemporary rocket science.

Russian scientist Konstantin Tsiolkovsky mathematically demonstrated that a device launched at a certain velocity would achieve Earth’s orbit as early as 1903.²⁴ In terms of popular culture, science fiction genre was already commonplace in the mainstream American society at the beginning of the 20th century, with iconic writers such as A. C. Clarke publishing novels containing stories of bold space adventures. Spectacular

²² Herf, J. (1984) *Reactionary Modernism: Technology, Culture and Politics in Weimar and the Third Reich* (Cambridge : Cambridge University Press), p. 214.

²³ Whitehouse, D (2003) China’s long march into space. BBC; web: <http://news.bbc.co.uk/2/hi/science/nature/3161288.stm>, accessed on 18/7/2014.

²⁴ Harford, James J. (1997) ‘Korolev’s Triple Play: Sputniks 1, 2, and 3,’ adapted from James J. Harford, *Korolev: How One Man Masterminded the Soviet Drive to Beat America to the Moon* (John Wiley : New York); web: <http://history.nasa.gov/sputnik/harford.html>, accessed on 12/6/2014.

battles and weapons of all sorts were a given fact in many of these stories, with mankind growing increasingly use to the idea of weapons in space, at least on theoretical level.

The first serious research into rockets capable of reaching the upper levels of Earth's atmosphere can be traced to Germany in between the world wars. As early as 1923, Weimar rocket enthusiasts Hermann Oberth published "*The Rocket into Planetary Space*," arguing that the feat of escaping Earth's gravity was within the theoretical means of technology available at the time.²⁵ Given the restrictions on conventional weapons imposed on Germany by the Versailles Treaty, German military was looking rather favorably on the possibility of acquiring novel experimental weapons, and stepped in to fund research into rocket weaponry.²⁶ A bizarre marriage of convenience would thus be formed between Weimar scientists dreaming of man in space and those desiring to expand their capability to unleash havoc upon man. By the time of the Second World War, Third Reich assembled a sizable team of rocket experts led by Werner von Braun. The goal was to develop functional V-2 rocket as a weapon of war. By that stage, the higher echelons of German military were enthusiastically whispering about the introduction of a new "*Wunderwaffe*" (wonder-weapon) that would turn the tide of the war in Germany's favor.

The extent of irrational techno-mania pertaining to the deployment of this weapon among the Nazi leadership at the close of the war was palpable. In 1944, Hitler's chief 'architect' Albert Speer underlined this point by professing that the development of the V-2 rocket "*exerted a strange fascination upon me. It was like the planning of a miracle.*"²⁷ Upon completion in late 1944, the V-2 rockets were immediately deployed against Antwerp and later against London, but their military utility proved dubious at best, even though civilian casualties caused by these weapons numbered in thousands. At the end of the day, the frantic pursuit of V-2 rocket at the expense of other projects such as jet fighters and surface-to-air missiles all but hastened Reich's ultimate demise from the scene. It also signaled the extent to which the Nazi leadership retreated to the realm of reverence for new technology at the expense of strategic consideration.²⁸

²⁵ Columba Peoples (2007), p. 4,

²⁶ Herf (1984), pp. 219-220.

²⁷ Columba Peoples (2007), p. 5.

²⁸ Herf (1984), p. 214.

The realities surrounding research and development of these wonder-weapons are significant for two reasons. First, the V-2 rocket was the first missile to exit the atmosphere before hitting its target upon re-entry. As such, it is widely cited as not only the progenitor of modern missile and space rocket technology, but also as a significant turning point in the entire history of warfare.²⁹ In other words, the first ‘entry’ of man into space was motivated by military considerations rather than universal aspiration of humanity to reach the heavens. Second, and more importantly for the purposes of this genealogical analysis, the hastened research and deployment of the V-2 rockets by the Reich in its most desperate hour indicates that in the context of total war where the very survival of nation is at stake, decision-makers will show little restraint in developing and deploying new weapons of war, even if such action has little tactical utility. Had the war dragged on, would Reich restrain itself from militarizing outer space (assuming its possession of means to do so), solely on the basis of mankind’s universal aspiration to use outer space for peaceful purposes, as proclaimed by the Outer Space Treaty? Would the Allies feel moral calling to condemn such actions, or would they simply follow suit? Answers to these questions are indeed elusive; the fact that socio-political context to a large extent determines the birth, evolution as well as the ultimate demise of norms and principles is less so.

In May 1945 Third Reich finally crumbled beneath the weight of military realities, but the dreams of mankind’s ventures into space were live and well among the rubble of what was now a rapidly disintegrating vision of greater Germania. The Allies and the Soviets, being well aware of the opportunity to acquire new technology, engaged in a frantic race to seize German rocket experts. While the ultimate prize, von Braun himself, was snatched by the US, the Soviets also managed to ‘relocate’ a great number of Nazi rocket scientists to military research facilities in the East.³⁰ The initial successes achieved by the V-2 rocket team would later play a key role in the development of first ballistic missiles and orbiting satellites on both sides of the Iron Curtain, now slowly descending “*across the Continent*”.³¹

At that time, a narrow circle of space enthusiasts had already whispered of placing satellites into orbit. In February 1946, the US Army Air Corps commissioned major

²⁹ Baker, D. (1981) *The Shape of Wars to Come* (New York : Stein and Day Publishers), p. 21.

³⁰ Baker (1981), pp. 21-22.

³¹ Churchill, W. (1945) Iron Curtain Speech, delivered on March 5, 1945 in Fulton, Missouri; web: <http://www.fordham.edu/halsall/mod/churchill-iron.asp>, accessed on 13/6/2014.

aviation companies to submit classified proposals for the design of an “*earth orbiting satellite*”.³² After judging some of the initial proposals feasible, the Air Corps provided funds for a study undertaken by the newly formed Project RAND. Rand’s eventual report titled ‘*Preliminary Design of an Experimental World-Circling Spaceship*’ predicted that “*achievement of a satellite craft [...] would inflame the imagination of mankind.*” Alas, the study was met by indifference by the US military establishment that feared such projects would divert funds from development of ballistic missiles.

Now a naturalized US citizen and an employee of the US Army, von Braun quickly realized that to achieve his dream of space travel, he would have to demonstrate the military utility of his research endeavors. In late 1946 von Braun asserted to an audience of US military officials that the “*nation which first reaches the goal of placing nuclear weapons in outer space will possess an overwhelming military superiority,*”³³ while pointing to the possibility of using such orbiting platforms as means for launching preemptive nuclear strikes on the USSR. Despite his best efforts to secure funding, US military officials remained skeptical, nourishing instead their own dreams of weapons that could target anyone, anywhere, anytime – intercontinental ballistic missiles (ICBMs).

The head of Soviet rocket research, Sergei Korolev found himself in a similar predicament. His 1948 presentation concerning the placement of artificial satellite into orbit met with scorn and skepticism by the Soviet Academy of Artillery Sciences.³⁴ While working on development of R-7 rocket that could carry heavier payloads, Korolev tried a second strategy by proposing Sputnik launch as test phase of the Soviet ICBM programme to the Soviet Academy of Science toward the end of 1953. However, his ideas of “*spaceflight*” or “*placing a live organism in the satellite*”³⁵ raised eyebrows even among the most seasoned Soviet scientists. For their part, Soviet generals feared that a satellite project would slow down the development of the R-7 ICBM that has failed in its five previous testing rounds.³⁶ Growing increasingly frustrated, Korolev tried one last ploy. He challenged his superiors by proposing to put the following

³² Harford (1997), n.p.

³³ Crowley I. and Trudeau, J. (2011) Wernher von Braun: An Ethical Analysis, *Worcester Polytechnic Institute Publications*, p. 15; available at: http://www.wpi.edu/Pubs/E-project/Available/E-project-121811-161339/unrestricted/von_Braun_IQP_12_20_2011_bw_final.pdf, accessed on 25/6/2014.

³⁴ Harford (1997), n.p.

³⁵ Avduyevsky V. (1988) *Keldysh Selected Works on Rocket Technology and Cosmonautics* (Moscow : Nauka), p. 235.

³⁶ Baker (1981), pp. 40-41.

question to the Presidium of the Central Committee of the Communist Party: “*Should the USSR try to be the first country in the world to launch a satellite?*”³⁷ The authorizing commission finally relented. Nobody wanted to risk potential displeasure of uncompromising political masters in Kremlin. And so the project proceeded.

However, Korelov could not rejoice for long. Instead of internal Soviet bureaucracy, he was now facing a far more daunting challenge from his American counterparts. In July 1955, the Eisenhower Administration announced that the US would launch an artificial satellite during the 1957-58 International Geophysical Year (IGY); an international scientific endeavor designed to ease some of the growing tensions of the Cold War. Owing to his well-documented disdain for the American military-industrial complex,³⁸ Eisenhower decided to keep the Army out of the IGY by placing responsibility for the satellite launch under the auspices of the US Vanguard Project to the Naval Research Observatory. This decision was made over vocal objections of von Braun and his team, who had had some initial success with testing Redstone and Jupiter intermediate ballistic missiles.³⁹ Arguing against Vanguard, von Braun proposed a joint Army-Navy-Air Force endeavor called Project Orbiter that would use an already developed Army Ordnance weapons technology to place a small satellite into orbit.⁴⁰ However, “*Eisenhower was concerned about the US global image should America employ military missiles to achieve such a prominently scientific goal*” within the framework of the IGY.⁴¹

Indeed, the Eisenhower Administration went to great lengths to project a benign and peaceful image of its space endeavors to quell the growing fears of increasingly agitated American public. As early as 1952, space-flight issue of Collier’s magazine titled “*Man will Conquer Space Soon,*” printed images of future space stations and nuclear bomb platforms, warning that satellites placed in orbit could be used to fire “*small winged rocket missiles with atomic warheads which could be accurately quaked to any spot on*

³⁷ Harford (1997), n.p.

³⁸ Eisenhower, D. (1961) Military-Industrial Complex Speech, delivered on January 17, 1961 in Washington, D.C.; web: <http://coursesa.matrix.msu.edu/~hst306/documents/indust.html>, accessed on 9/7/2014.

³⁹ Baker (1981), p. 30.

⁴⁰ Harford (1997), n.p.

⁴¹ Baker (1981), p. 30.

Earth".⁴² In a similar fashion, military enthusiasts spoke freely of the military value of bases in orbit, on the Moon and even Mars. For generals educated in the tradition of Napoleon, space presented the ultimate high ground.⁴³ In contrast, for American public that was just beginning to come to terms with having to live under a constant threat of possible nuclear holocaust accentuated by frequent duck and cover drills the idea of space-based nuclear weapons constantly hovering above their heads was rather hard to swallow.⁴⁴

Ironically, firm commitment of American political leadership to put a civilian face on the first satellite launch may have deprived the United States of opportunity to be the first country in space. At one grotesque occasion during a scheduled rocket test, von Braun was directed to put sand in the nose cone of his Jupiter C missile to prevent it from accidentally reaching orbit and depriving civilian Vanguard Project of its rightful place in history books.⁴⁵ Some scholarly accounts also suggest that the passing of opportunity to launch the first satellite may have been a deliberate policy choice. By allowing the Soviet Union to launch first, the US could assert that the USSR effectively established a precedent for satellite over-flight. This would later allow the United States to claim right of innocent passage for its future spy satellites.⁴⁶

Ostensibly peaceful and scientific nature of the US Vanguard Project during the IGY was not the only way in which the US Government sought to reduce public anxiety concerning nascent American plans for outer space. In 1955, Eisenhower Administration asked von Braun to appear on a series of Walt Disney TV shows dedicated to the possibilities for space travel.⁴⁷ The image of von Braun, dreamer and the renaissance man patiently explaining American children the exciting prospects opening up before mankind in space stands in sharp contrast with his actual task at the

⁴² Whipple, F. (1952) 'The Heavens Open' in Collier's Magazine: Man Will Conquer Space Soon (March 22, 1952); web: <http://dreamsofspace.blogspot.com/2012/03/colliers-march-22-1952-man-will-conquer.html>, accessed on 5/4/2014.

⁴³ Steinberg, G. (1982) The Militarization of Space: From passive support to active weapons systems. *Futures*. October 1982, p. 374.

⁴⁴ For an excellent illustration of American anxieties concerning the prospect of a nuclear war in the 1950s, see the Bert The Turtle Civil Defense Film depicting proper Duck and Cover techniques in a child-friendly manner, available at: <https://www.youtube.com/watch?v=IKqXu-5jw60>, accessed on 23/7/2014 (author's note).

⁴⁵ Johnson-Freese, J. (2007) *Space as a Strategic Asset* (New York : Columbia University Press), pp. 44.

⁴⁶ Jakhu, R Lecture: Introduction to Technical and Commercial Aspects: Relationship between Space Policy and Space Law. General Principles of Space Law ASPL637. McGill University, Institute of Air & Space Law. 12 Sept. 2013. Lecture.

⁴⁷ Von Braun, W. (1955) *Trip Around the Moon* (Disney Inc : Los Angeles); web: <https://www.youtube.com/watch?v=Zjs3nBfyIwM>, accessed on 4/3/2014

time, i.e. bringing nuclear-tipped intercontinental ballistic missiles into reality. More challenging still is to reconcile this benign depiction of von Braun as a noble scientist with the man he was just a couple of years prior; an indifferent SS officer responsible for fueling Nazi war-machine, a man who would not shy away from using SS-supplied slave labor supplied from concentration camps in V-2 factory under his supervision.⁴⁸

While von Braun dreams of spaceflight were frustrated by Eisenhower's decision to focus on civilian Vanguard, Korolev efforts to make history met with indifference from Soviet leadership. As frantic pre-launch Sputnik preparations at the Baikonur Cosmodrome approached their final hour, Soviet Premier Nikita Khrushchev expressed his apathy in no uncertain terms, describing mankind's first successful attempt to reach for the stars as a "*just another Korolev's launch.*"⁴⁹ However, not even Khrushchev's lack of clairvoyance could slow down the uncompromising march of progress: the Space Age of mankind was about to begin, whether he chose to give it significance or not. There would be no turning back.

The rocky journey from German wonder-weapons to satellites, as full of twists and improbable turns as it was, is illustrative of several trends that seem to be inconsistent with the notion of humanity being guided by its universal aspiration to peacefully explore the final frontier from the very inception of spaceflight. First, the account presented above reveals that the earliest efforts of mankind to reach for the stars were heavily imbued with military considerations rather than notions of scientific discovery, progress, and desire to peacefully ascend to the heavens. From V-2 rockets to first satellites, both Korolev and von Braun had to time and again justify their proposals in terms of military utility.

Second, had it not been for the passionate and steadfast advocacy on the part of Korolev and his team, Soviet military leadership might have entirely passed up on the opportunity to launch the first man-made object into space. Despite continuing secrecy surrounding many aspects of Soviet space programme, a sizable body of evidence indicates that Soviet leadership was primarily interested in acquisition of ICBMs to make up for the existing inferiority of the soviet bomber fleet, which was largely incapable of delivering nuclear payloads to US territory.⁵⁰ The launch of Sputnik was a

⁴⁸ Columba Peoples (2007), p. 8.

⁴⁹ Harford (1997), n.p.

⁵⁰ Baker (1981), p. 48.

mere afterthought; Korolev's pet project that had to be proposed within the context of ICBM testing just to warrant serious consideration from Soviet generals.

And finally, Eisenhower's decision to pursue civilian satellite launch for scientific purposes despite immense pressure from US military was by no means guided by a lofty principle of humanity's natural inclination to use space for peaceful purposes. Rather, the US decision to pursue benign entry into space seems to be the result of particular historical context characterized by a conjunction of the following factors: a) growing fear among American public of nuclear weapons and the theoretical prospect of such weapons being stationed in outer space,⁵¹ b) deliberate efforts of the US Government to project a strictly scientific face of its programme in response to those public fears, c) Eisenhower's personal disdain of the American military-industrial complex, and d) the unique collaborative scientific atmosphere created by the International Geophysical Year.

As next chapters strive to demonstrate, had any of those factors been absent, or alternatively, had any of the events described above unfolded differently (with the US perhaps reaching outer space first), mankind's conquest of the final frontier might have taken a completely different, and perhaps a much more militarized direction.

⁵¹ Spring, B. (2005) Slipping the Surly Bond of the Real World: The Unworkable Effort to Prevent the Weaponization of Space. *Heritage Lecture Series Publications*. (42) No. 877, p. 2.

2 The ‘Bleep’ that Changed the World

*“There was absolute silence. All that could be heard was the breathing of the people and the quiet static in the loudspeaker... And then from a very far off there it appeared, at first very quietly and then louder and louder, those “bleep-bleeps” which confirmed that it was in orbit and in operation.”*⁵²

Sergei Korolev recalls the first moments of Space Age

*“SOVIET FIRES EARTH SATELLITE INTO SPACE;
IT IS CIRCLING THE GLOBE AT 18,000 M.P.H.
SPHERE TRACKED IN 4 CROSSINGS OVER U.S.”*⁵³

The New York Times announces the launch of Sputnik in a rare three-line headline

From Berlin TV Tower, a bombastic tribute to scientific achievements of the socialist society on Alexanderplatz,⁵⁴ all the way to the shape of American furniture in the 1960s, Sputnik influences continue to resonate through time and space. It was only Korolev’s sense for aesthetics that had led him to insist on the shape of Sputnik 1 being an *“elegant ball... with an antenna thrown back like a galloping horse,”*⁵⁵ rather than a more bellicose cone-shaped structure resembling a nuclear warhead.

Nevertheless, Sputnik’s benign design along with strictly rudimentary scientific instruments on board did little to prevent hysteria of American public that followed its launch.⁵⁶ Intriguingly, the launch of the first man-made object into space on October 4, 1957 received at first rather casual and detached treatment in Soviet media. On October 5, 1957, Pravda published a tersely phrased article modestly positioned in a right hand column titled *“Tass Report,”* which did not even mention the satellite in its head.⁵⁷ The three-paragraph article itself contained some basic information about the satellite’s size, weight and orbital parameters. With a minimum of gloating, the article described the launch as an *“important contribution to the treasure house of world science,”*⁵⁸

⁵² Harford (1997), n.p.

⁵³ Jorden, W. (1957) Soviet Fires Satellite into Space: It is Circling the Globe at 18,000 m.p.h; Sphere Tracked in 4 Crossings over U.S., The New York Times, October 5, 1957; web: <http://nytimes.com/learning/general/onthisday/big/1004.html>, accessed on 8/5/2014.

⁵⁴ <http://www.worldsiteguides.com/europe/germany/berlin/fernsehturm/>, accessed on 24/7/2014.

⁵⁵ Harford (1997), n.p.

⁵⁶ Barnett, T (2001) United States National Space Policy, 2006 & 2010. Florida Review of International Law. (23)1 2, p. 278.

⁵⁷ Krieger, F. (1958) Behind the Sputniks (Washington, D.C. : Public Affairs Press), pp. 310-311

⁵⁸ Pravda (1957) ‘Tass Report - Announcement of the First Artificial Satellite,’ October 5, 1957, translated in: F. J. Krieger (1958) Behind the Sputniks (Washington, D.C. : Public Affairs Press), pp. 311-312.

while emphasizing satellites utility *“for learning the properties of cosmic space and for studying the earth as a planet of our solar system.”*⁵⁹

Half-way across the globe, Sputnik’s taunting bleeps as it blazed across the US skies less than every two hours at an inconceivable speed of some 18,000 mph were simply too hard to digest for American public that was, up to that point, still basking in perceived glory of America’s technological superiority and dominance.⁶⁰ Perhaps still recalling Khrushchev’s famous *“We will bury you”* promise,⁶¹ delivered less than a year ago and frequently replayed with an image of the Soviet Premier banging his shoe at the UN General Assembly, US media went into a frenzied state of panic in response to Sputnik’s launch. Little would it matter that Khrushchev’s quote, which was intended to express his belief in the higher efficiency of centrally planned economy vis-à-vis capitalism, was severely misrepresented. Frightened Americans would recall his bellicose words as the bleeping Sputnik soared the heavens above their heads.

On October 6, 1957, the New York Times published a rare-three headline article (reserved for events such as the Pearl Harbor Attack or the 9/11) encompassing most of the front page, warning that the satellite is *“8 times heavier than one planned by the US,”*⁶² inaccurately suggesting that the Soviet press did not *“pass up the opportunity to use the launching for propaganda purposes,”*⁶³ and ominously noting that such satellites *“might be applied to flight studies for intercontinental ballistic missiles.”*⁶⁴ French reaction was equally filled with awe and fascination but less ominous in its analysis, with Le Figaro’s headline announcing that *“Myth has become reality: Earth’s gravity conquered.”*⁶⁵ The French did not pass up the opportunity to note the *“disillusion and bitter reflections of Americans who have had little experience with humiliation in the technical domain.”*⁶⁶

⁵⁹ Pravda (1957) ‘Tass Report - Announcement of the First Artificial Satellite,’ October 5, 1957, translated in: F. J. Krieger (1958) *Behind the Sputniks* (Washington, D.C. : Public Affairs Press), pp. 311-312.

⁶⁰ Hall, A. (1997) *The Beep Heard Round The World*. Scientific American, October 6 1997, web: <http://www.scientificamerican.com/article/the-beep-heard-round-the/>, accessed on 9/7/2014.

⁶¹ Komsomolskaya Pravda (2013) ‘Viktor Suchodrjev, personal interpreted of Khrushchev and Brezhnev died’ (originally in Russian). Komsomolskaya Pravda, March 13, 2013, web: <http://www.kp.ru/online/news/1737040/>, accessed on 13/7/2014.

⁶² Jordan (1957), n.p.

⁶³ Jordan (1957), n.p.

⁶⁴ Jordan (1957), n.p.

⁶⁵ Harford (1997), n.p.

⁶⁶ Harford (1997), n.p.

Television coverage in the US media was almost instantly flooded with political analyses and speculations of all sorts and had perhaps an even more profound impact on American public perception of Sputnik than the printed media. On October 6, 1957, CBS Special News Report broadcasted the characteristic beeping signal transmitted by Sputnik and had a scientist demonstrate on a small globe how astonishingly fast it moved all over the world. The report went on to highlight that Sputnik “comes over here [US territory] twice a day or even more”.⁶⁷ The visibly concerned commentator goes on to ask whether the beeping signal from Sputnik could be more than just that, perhaps a “military code for radio listening,” with his scientific counterpart replying: “it is possible” but “we don’t realize what the code is.”⁶⁸ In the evening of the very same day, CBS aired Report with Howard Smith who spoke of the current political earthquake caused by Sputnik in Washington and beyond in the following fashion:

“There is a very profound concern about the world opinion. The dominant conflict of our time, the Cold War is present, and the state of balance between Russia and the West, and between are those people who are called uncommitted, who may determine who wins – the peoples of Asia, Middle-East and Africa. Russia already enjoyed one great traction with these people – their ambition to pull themselves up from primitive agrarian countries to become modern industrialized nations. They tend to admire Russia as a nation who was once as backward as themselves, but which did brought herself up. And now that backward Russia has beaten the West most advanced nation into the fringes of outer space, their admiration for Russia may be expected to increase. Russia has in recent months been threatening nations who lend bases to America. Those threats have not been taken very seriously. But now the world knows it took a far more powerful projectile than America possesses to push that satellite into its orbit in space. In view of that, Russia’s threat may be more effective from now on. The United States policies with competition with Russia have been severely shaken.”

Even though Soviet leaders failed to foresee the scope of frenzied and awed response of the West to Korolev’s success, remaining oblivious to the political vibrations it sent all across the world was clearly no longer an option. The next day issue of Pravda, published on October 7, carrying a headline “*WORLD’S FIRST ARTIFICIAL SATELLITE ON EARTH CREATED IN SOVIET NATION*”, was bannered with a picture of broadcasting Sputnik ‘moon’ orbiting a smiling and eagerly listening Earth.⁶⁹ The issue was devoted almost entirely to the achievement, with congratulations from

⁶⁷ CBS News (1957) Sputnik 1 CBS News Special Report. CBS News, TV Report broadcasted on October 6, 1957, footage: 1:27-1:32 available at: <https://www.youtube.com/watch?v=KMFvr1VwSSo>, accessed on 7/5/2014.

⁶⁸ CBS News (1957), footage: 6:12-6:58.

⁶⁹ Pravda (1957) ‘*WORLD’S FIRST ARTIFICIAL SATELLITE ON EARTH CREATED IN SOVIET NATION*,’ October 7, 1957, translated in: F. J. Krieger (1958) Behind the Sputniks (Washington, D.C. : Public Affairs Press), pp. 318-322.

governments all over the world stretching down the length of the page and beyond. Off course, the most prominent place was reserved for generous words of praise from Joseph Kaplan, chairman of the US National Committee for the IGY. Times when Sputnik would be visible over Soviet cities “*were printed like a train timetables.*”⁷⁰ Soviet poems such as “*Leap into the Future*” emerged to record the moment for posterity in the annals of Soviet literature.

For the length of the entire next week, the shock of the century refused to leave front-pages around the globe. While Soviets gloated of “*big victory*” of new socialist society, Western media kept soberly fuelling the darkest fears of their readers. An October 7 Guardian editorial titled “*Nex Stop Mars?*” read: “*The achievement is immense. It demands a psychological adjustment on our part towards Soviet Society, and Soviet military capabilities.*”⁷¹ While it accurately predicted that the USSR could now build ICBMs capable of hitting any chosen target, it ominously and somewhat inaccurately asserted that the Soviets have now “*clearly established a great lead in missile technology.*”⁷² This would, in fact, be one of the earliest inaccurate predictions of the so-called missile gap that would add fuel into the fire of ongoing arms race.

For its part, the US Government struggled to downplay significance of the event, albeit to no avail. When NBC reporter Hazel Market asked the President about implications of the satellite launch for national security, Eisenhower replied that Sputnik did “*not raise my apprehension, not one iota.*”⁷³ Instead, he described the event as one of “*mere scientific interest.*”⁷⁴ His position was echoed by Admiral Rawson Bennett, who dismissed the satellite to the New York Times as a “*hunk of iron almost anybody could launch.*”⁷⁵ Alas, no words of comfort could silence the clear ‘bleep-bleeps’ signals broadcasted from the heavens by Sputnik – a little elegant ball that plunged Americans into a deep crisis of self-confidence by elevating their darkest dreams of orbiting

⁷⁰ Harford (1997), n.p.

⁷¹ CBS News (2010) Gallery: Sputnik and the Space Race, CBS News, October 4, 2010; web: <http://www.cbsnews.com/news/gallery-sputnik-and-the-space-race/>, accessed on 22/7/2014.

⁷² CBS NEWS (2010), n.p.

⁷³ Ambrose, S. (2003) Eisenhower: Soldier and President (New York : Simon & Schuster Paperbacks), p. 451.

⁷⁴ Steinberg (1982), p. 377.

⁷⁵ Wilford, J. (1968) Men Walk on the Moon, Astronauts Land on Plain: Collect Rocks, Plant Flag, The New York Times, July 21, 1968; web: <http://partners.nytimes.com/library/national/science/nasa/072169sci-nasa.html>, accessed on 3/5/2014.

nuclear weapons from the realm of mere theoretical possibility to the crushing weight of scientific reality.

There were those who reacted with caution and incredulity to the increasing calls of American public to match and surpass newly demonstrated Soviet capabilities. As former US Ambassador in Moscow, George Kennan, put it in his memoirs, “*Sputnik caused Western alarmists [...] to demand the immediate subordination of all other national interests to the launching of immensely expensive crash programs to outdo the Russians in this competition. It gave effective arguments to the various enthusiasts for nuclear armament in the American military-industrial complex.*”⁷⁶ However, such calls were few and far between. Criticism mounted on Eisenhower’s administration for President’s seeming detachment from reality. Almost overnight, space had become a symbol of power and vulnerability, knowledge and impotence, prestige as well as humiliation.⁷⁷ The Space Age of mankind had just begun. But so too, within the course of the same week, the two Superpowers found themselves in a Space Race with one another. Ironically, and this is perhaps a bold statement to make, but there seems to be some plausible evidence to support it, the Space Race was not initiated by the Soviets, rather, it was started by the New York Times.

Dynamics surrounding Sputnik ascent into space offer several notable insights. First, neither Soviet nor US political leaders showed an a priori understanding of the enormity of international political repercussions that would be generated by the launch of a first artificial satellite. Second, Soviet appreciation for the immense political symbolism of their own achievement fully developed only in response to how the world, and especially the US, perceived and interpreted the launch. Third, analysis of Sputnik launch coverage in US media suggests that American apprehensions concerning Soviet ascent into outer space were directly linked to public fears of the Soviet ability to deliver nuclear weapons on US soil by whatever means, and therefore, not linked to the idea of space weapons per se. And finally, in contrast to what could be expected in a case of universally valid principle, the ascent of humanity into space did not generate immediate calls for non-militarization of the final frontier among Americans. In fact, and despite Eisenhower’s personal preferences, American public was now calling on its government to match and surpass Soviet capabilities in the quest to reclaim its status as

⁷⁶ Kennan, G. (1972) *Memoirs 1950-1973* (New York : Pantheon Books), p. 140.

⁷⁷ Rodhan, N. (2012) *Meta-Geopolitics of Outer Space* (Hampshire : Palgrave MacMillan Ltd.), p. 141.

the world's preeminent technological Superpower. Indeed, owing to the particular historical context of the early years of the Cold War, Space Age and Space Race began virtually on the same day.

3 Sanctuary or High Ground: from Satellites to Outer Space Principles

*“The General Assembly,
Recognizing the common interest of mankind in outer space and recognizing that it is the common aim
that outer space should be used for peaceful purposes only,
Wishing to avoid the extension of present national rivalries into this field,
I. Establishes an ad hoc Committee on the Peaceful Uses of Outer Space”*⁷⁸

*UN General Assembly Resolution 1348 (XIII) on Question of the peaceful use of outer space
792nd plenary meeting, 13 December 1958*

*“Control of space will be decided in the next century. If the Soviets control space, they can control Earth,
as in the past... the nations that controlled the seas dominated the continents.”*⁷⁹

Presidential Hopeful John F. Kennedy assails Eisenhower’s benign approach to space in 1960

Sputnik was still bleeping its way across the sky when Korolev received summons from previously detached Khrushchev. In contrast, the Soviet Premier was ecstatic now. Finally realizing that ostensibly benign ventures of Soviets into outer space could be turned into tremendous tool of political propaganda for domestic as well as international purposes, Khrushchev had a new mission for his chief rocket scientist. *“Do something bold, Sergei Pavlovich, to celebrate the upcoming 40th anniversary of the Revolution! It’s only a month away”*.⁸⁰ Korolev hurried to prepare a second launch; one that would challenge world’s imagination further still. Sputnik 2 was launched less than month later on November 3, 1957 with the world’s first space-farer onboard – the mongrel dog Laika – and although the dog did not survive the mission due to capsule overheating, the USSR presented her as a harbinger of man’s spacefaring; one that died for a noble cause.⁸¹ Ultimately, Sputnik 2 did not fail to fulfill its purpose of gaining even more attention and international prestige for the Soviets.

On November 6, 1957, the Soviet Union jubilee was two-fold. Not only was it celebrating the 40th anniversary of the Revolution, but the entire world now marveled at the magnificent achievements of communist science that would elevate man into a

⁷⁸ United Nations General Assembly Resolution 1348 (XIII) of 13 December 1958. Question of the peaceful use of outer space, UN Doc. A/RES/8/1348.

⁷⁹ Maogoto, J. (2005) The Military Ascent Into Space: From Playground to battleground: The New Uncertain game in the Heavens. *Netherlands International Law Review*. 52(3), p. 461.

⁸⁰ Hardford (1997), n.p.

⁸¹ LePage, A. (1997) Sputnik 2: The First Animal in Orbit. SpaceViews, 20 November 1997, web: http://www.drewexmachina.com/download-pdf/SV_1997_11.pdf, accessed on 15/6/2014.

brighter, more promising future – themes fitting so well with the ideological underpinnings of international communism. In his speech at the event, Khrushchev delivered a coup de grace to Americans still reeling from their loss of perceived technological supremacy:

*“It appears that the name Vanguard reflected the confidence of the Americans that their satellite would be the first in the world. But... it was the Soviet satellites which proved to be ahead, to be in the vanguard... In orbiting our earth, the Soviet sputniks proclaim the heights of the development of science and technology and of the entire economy of the Soviet Union, whose people are building a new life under the banner of Marxism-Leninism.”*⁸²

From Sputnik on, the USSR would learn to time its major scientific space missions with important political events.⁸³ More importantly still, because of the lessons learned from international reactions following Sputniks’ ventures beyond Earth’s gravity, the USSR understood that it would not have to make a choice between its military and scientific undertakings in outer space. In fact, it could effectively engage in both activities at the same time by pursuing the acquisition of new technologies with far-reaching military applications under the guise of peaceful use and exploration of outer space, all that while scoring international political points on “*the grand chessboard*” of the Cold War game of geopolitics.⁸⁴

But the world’s reaction to Sputnik did far more than simply changing how Soviet leaders perceived the utility of their scientific endeavors in space. Indeed, it produced a genuine international political earthquake whose ripples would transform the underlying dynamic of the Cold War. In his “*History of the Space Age*,” Dr. McDouhall notes that Sputnik transformed the previously “*military and political struggle in which the US need only lend aid and comfort to its allies in the front lines into a competition for the loyalty and trust of all people fought out in all arenas of social achievement in which science textbooks and racial harmony were as much tools of foreign policy as missiles and spies.*”⁸⁵ This dynamic change in the basic rules of the Cold War competition would prompt both Superpowers to pursue further demonstrations of their technological

⁸² Harford (1997), n.p.

⁸³ Rodhan (2012), p. 145.

⁸⁴ Brzezinsky, Z. (1997) *The Grand Chessboard* (New York: Basic Books), p. 13-14.

⁸⁵ Wilford, J. (2007) *With Fear and Wonder in Its Wake, Sputnik Lifted Us Into the Future*, the New York Times, September 25, 2007; web: http://www.nytimes.com/2007/09/25/science/space/25sput.html?pagewanted=all&_r=0, accessed on 8/9/2014.

advancement by venturing deeper still into the final frontier, impressing the world's peoples in the process.

The immensity of change in the essential dynamics of the Cold War was not lost on political leaders in Washington. Where the Eisenhower Administration gave only tacit support to the Vanguard Project before series of successful Soviet launches, now the US government was under severe public pressure to quickly emulate the same feat and perhaps even more. However, the American political leadership knew that the US would not be able to ameliorate simmering public anxieties through a Vanguard launch for at least another month. In the meantime, Eisenhower would embark on a diplomatic offensive through the UN General Assembly to regain some of the international momentum the US lost to the Soviets.

To quell public fears pertaining to Soviet nuclear weapons traveling through or being placed in space, the United States rallied support of its allies to push through a UN General Assembly resolution 1148 (XII) dedicated to disarmament issues.⁸⁶ This resolution was finalized within eight days of Sputnik-2 launch⁸⁷ and contained a declaration that *“the sending of objects through outer space shall be exclusively for peaceful and scientific purposes.”*⁸⁸ Two points are of major significance here. First, the USSR was skillfully outmaneuvered and put into a rather uncomfortable position by this US diplomatic ploy. Indeed, Soviet leaders were in no position to vote against this particular resolution since USSR propaganda previously went to great length to cast Soviet space endeavors in strictly peaceful and scientific terms. The West would likely publicize a Soviet negative vote, which in turn would present a blow to Soviet international image and slow down the political momentum it had accrued from its space-related achievements thus far.⁸⁹

⁸⁶ Maogoto (2005), p. 462.

⁸⁷ Less than eight days of time from a drafting stage to adoption is a speed of light for UN General Assembly (author's note).

⁸⁸ United Nations General Assembly Resolution 1148 (XII) of 14 November 1957. Regulation, Limitation and Balanced Reduction of All Armed Forces and All Armaments; Conclusion of an International Convention (Treaty) on the Reduction of Armaments and the Prohibition of Atomic, Hydrogen and other Weapons of Mass Destruction, UN Doc. A/RES/1148 (XII), 12 UN GAOR Supp. No. 10-18 (1956-1957).

⁸⁹ A reader may gain the impression that the author is assigning too much weight and prestige on the outcomes produced by the UN General Assembly. Such concerns would be indeed in order in the present period, where the General Assembly activities neither attract significant media coverage, nor are held in particularly high esteem. However, in the 1950s the UN General Assembly enjoyed much wider respect and relatively more media coverage than today (author's note).

Second, and perhaps even more importantly, the wording of the resolution, while condemning the use of rockets as a means of nuclear weapons delivery or placement of such weapons in orbit, did nothing to impair the international legitimacy of US strategic deterrent, which was, at the time, based on a combination of a sizable fleet of B-2 bombers and PMG-11 Jupiter short-range ballistic missiles stationed in Europe.⁹⁰ In other words, the diplomatic track pursued by Eisenhower Administration at the UN achieved its objective; it projected an image of active President acting upon the American public fears generated by increasingly bold Soviet activities in outer space. With US leading the charge now, the international community was sending a clear message to people everywhere: the ascent of Soviet Union into outer space should not lead to nuclear weapons being stationed in or traveling through space. The link between nuclear weapons and space rocketry was clearly established in the declaratory part of resolution 1148, where the General Assembly noted with alarm “*that the armaments race, owing to advance of nuclear science and other modern form of technology, creates means whereby unprecedented devastation might be inflicted upon the entire world.*”⁹¹

It should also be noted that both USSR and US were actively pursuing ICBM research and development at the time of the adoption of resolution 1148.⁹² However, this fact did not prevent either of the Superpowers from publicly embracing the rhetoric of non-military use of outer space, even though the underlying motivations for their affirmative votes at the UN differed. At the end of the day, UN General Assembly resolutions are non-binding upon its members, and can easily be ignored or replaced by a new set of principles. Thus the international community took its first steps in generating rhetoric of non-militarization and peaceful of outer space. The genesis of the lofty ideas of space being a peaceful domain of science and exploration, indeed the province of all mankind, can be traced not so much to universal aspirations of the world’s peoples but to US Government’s frantic struggle to address increasing public fears of nuclear weapons precipitated by Soviet achievements in space.

⁹⁰ The cruising altitude of PMG-11 Jupiter short-range ballistic missiles is between 45.7 and 94.5 kilometers, with the peak maximum being just below the threshold of outer space (author’s note). Source: http://en.wikipedia.org/wiki/PGM-11_Redstone, accessed on 24/7/2014.

⁹¹ UN Doc. A/RES/1148 (XII).

⁹² Kingwell (1990), p. 107.

Just as the US scored some initial successes at the UN, the Vanguard Project was being accelerated on direct orders from the White House. The launch was readied under intense political pressure exactly one month after Nikita Khrushchev gave his taunting speech in which he mocked the Vanguard's name. However, what was supposed to showcase America as the vanguard of scientific space endeavors ended up exposing the Eisenhower Administration as the vanguard of a colossal international embarrassment recorded by the world's television cameras. On December 6, the Test Vehicle 3 carrying a satellite payload of mere 1.47 kilograms was readied in a frantic fashion. However, the launch vehicle plunged back to the ground after less than 3 seconds of 'flight,' immediately disintegrating in what would become a painfully humiliating and internationally broadcasted fiery inferno.⁹³

The next day, Vanguard's publicly documented explosion unleashed an inferno of a different sort on Capitol Hill. With media coverage all over the world reporting on Vanguard's (now dubbed rather uncharitably as Flopnik, Kaputnik, Stayputnik or Oopsnik) conflagration as "*another setback for the United States in the race into outer space*,"⁹⁴ mounting public concerns prompted Eisenhower's vocal critic, Senator Lyndon B. Johnson, to take the lead in congressional investigations into organizational failures of the executive branch.⁹⁵ At a public part of Senate hearings into Vanguard's failures, Johnson time and again electrified the audience, warning that "*whoever control space controls the world*";⁹⁶ a reference to Meckinder's famous declaration concerning the importance of controlling the heartland to attain world domination.

More than ever before, Eisenhower was now under a combined pressure from the Main Street as well as the Hill to launch something, anything, to elevate America back to its rightful place at the forefront of world's science. Previous concerns about US global image should America use military missile for its ascend to heavens were quickly forgotten. Operated under the auspices of US Army Ballistic Missile Agency, von

⁹³ Baker (1981), p. 41.

⁹⁴ Universal-International News (1957) Satellite a Bust: Rocket Blows Up In Frist U.S. Try. Universal-International News, Report from December 6, 1957; available at: <https://www.youtube.com/watch?v=JK6a6Hkp94o>, accessed on 23/7/2014.

⁹⁵ Galloway, E. (1997) Organizing the United States Government for Outer Space: 1957-1958. Symposium Working Paper: ,Reconsidering Sputnik: Forty Years Since The Soviet Sputnik' sponsored by the NASA Office of Policy & Plans; *National Air & Space Museum*; *George Washington University Space Policy Institute and Kenan Institute for Advanced Russian Studies* (Washington D.C. : Smithsonian Institution); available at: <http://gos.sbc.edu/g/galloway2.html>, accessed on 15/6/2014.

⁹⁶ Rodhan (2012), p. 6.

Braun's Project Orbiter, put on hold over a year ago by decision from the White House, was now the Administration's only hope for redemption. Had von Braun experienced 'I-told-you-so moment' when beseeched by government officials asking him to succeed where Vanguard so spectacularly failed? Perhaps. Nevertheless, von Braun finally had the chance to fulfill his lifelong dream within grasps. On February 1, 1958, a modified Redstone missile RS-29 dubbed JUNO at last lifted Americans into the space age, carrying with it Explorer 1, a tiny missile-shaped satellite credited for the discovery of Van Allen radiation belts; a small, but cheerfully over-reported consolation prize for a nation plunged into a deep crisis of self-confidence.⁹⁷

This time, no press was allowed to witness the launch. Instead, the United States Army released official television report titled "*The Big Picture*," a carefully scripted six-minute video depicting the heroic efforts of von Braun and his team as they struggled to reach the heavens on a deadline of mere 90 days.⁹⁸ Notably, the video itself contains no reference to the Army Ballistic Missile Agency, the chief operator of Project Orbiter, and instead highlights the role played by the Jet Propulsion Laboratory, a civilian research institution affiliated with the California Institute of Technology.⁹⁹ Nevertheless, the bellicose missile-like shape of Explorer 1, standing in sharp contrast with the elegant design of Sputnik's metallic sphere, was a painful reminder that in a very real sense "*space exploration in its early days was a by-product of the Cold War, with much of the technology used in the early days derived directly from military missiles.*"¹⁰⁰

However, both superpowers were well aware that the road from missiles to satellites would not be a one-way street. In fact, their early experimentations with launching satellites into orbit served dual purpose. On the surface, ostensibly peaceful voyages beyond the mundane realm inspired by mankind's drive for scientific discovery and yearning to leap into the unknown were designed to inflame imagination of peoples everywhere, thus giving both Superpowers the means to convert hearts and minds of the uncommitted to the cause of freedom or international socialism. But beneath the rhetorical platitudes invoking lofty ideas of mankind's common aspiration for peace and

⁹⁷ Columba Peples (2007), p. 3.

⁹⁸ United States Army (1958) *The Big Picture*, United States Army Information Agency, Report from February 8, 1958; available at: <https://www.youtube.com/watch?v=QhTJ0dYLYKc>, accessed on 14/5/2014.

⁹⁹ Idem, footage: 2:28 – 2:45.

¹⁰⁰ Kingwell (1990), p. 107.

scientific discovery laid an underlining reality: with each passing launch, the USSR and the US were moving closer to mastering the art of delivering harbingers of death to all corners of the world.

On May 15, 1958 USSR successfully launched Sputnik 3 carrying an astonishing satellite payload of 1.5 ton, and while scientists noted that “*the impressive list of instruments is a telling demonstration of the fact that the latest Russian sputnik has been launched for strictly scientific purposes,*”¹⁰¹ US analysts solemnly concluded that Soviets would now have the capacity to not only send ICBMs to US soil, but also to place nuclear warheads in orbit around Earth.¹⁰² The American public went ballistic. Knowing that the United States was once more far behind the Soviet Union in terms of ICBMs development, Senator Johnson and President Eisenhower agreed that the time was ripe to unleash another public diplomacy offensive against the Soviets.

In late May 1958, President Eisenhower proposed formation of an executive space agency, one that would be strictly civilian in nature and dedicated to peaceful and scientific purposes. By doing so, the White House sought to draw a clear line between the US and the Soviets through sending a message to domestic as well as international audience: “*regardless of the level of involvement by the military in the Soviet space programme, the US would project an open, non-threatening, civilian-led space programme to the world, based upon development of useful technologies for universal benefit.*”¹⁰³ Senator Johnson, who previously chaired a senate investigation that just concluded the failures of US space programme to be the result of organizational failures and institutional myopia, lend enthusiastic support to President’s proposal.¹⁰⁴ In a showcase of bipartisan cooperation, US Congress promptly passed Public Law 85-568, signed by the President on July 29 1958, thus laying down the foundation for the establishment of National Aeronautics and Space Administration (NASA).¹⁰⁵ This was quite a turnabout for a president who once professed not to be bothered by Soviet satellites “*one iota*”.¹⁰⁶ Despite vocal opposition from the US military, there would be

¹⁰¹ Hardford (1997), n.p.

¹⁰² Hardford (1997), n.p.

¹⁰³ Kingwell (1990), p. 107.

¹⁰⁴ Galloway (1997), n.p.

¹⁰⁵ United States Congress. (1958) National Aeronautics and Space Act of 1958, United States Congress. Public Law #85-568, 72 Stat., 426, Signed into law July 29, 1958; available at: <http://history.nasa.gov/spaceact.html>, accessed on 12/7/2014.

¹⁰⁶ Ambrose (2003), p. 451.

no turning back. NASA was now being born out of the ashes of Vanguard's conflagration.

The founding of NASA was primarily designed to soothe domestic audience. Its establishment not only signaled that the Administration had taken to heart some of the conclusions from Johnson's congressional investigation, but also projected the image of the United States as a benign explorer of the heavens; one whose activities in space would be guided by considerations of humanity, noble cause of science, and the betterment of all mankind.¹⁰⁷ However, further action was required to ensure that the message would resonate with the world's uncommitted peoples.

On November 17, President Eisenhower and Senator Johnson staged a joint appearance at the UN General Assembly; a powerful symbolic gesture of two former rivals setting aside their differences and coming together, now united in a common cause for all mankind. In a historic speech at the UN, Senator Johnson, the same man who previously equated outer space to the ultimate high ground,¹⁰⁸ delivered a passionate plea in support of US proposal to the establish an Ad hoc Committee on the Peaceful Uses of Outer Space:

"If nations proceed unilaterally, then their penetrations into space become only extensions of their national policies on Earth. What their policies on Earth inspire – whether trust or fear – so their accomplishment in outer space will inspire also... Today outer space is free. It is unscarred by conflict. No nation holds a concession there. It must remain this way... We know the gains of cooperation. We know the losses of failure to cooperate. If we fail now to apply the lessons we have learned or even if we delay their application, we now that the advances into space may only mean adding a new dimension to warfare. If, however, we proceed along the orderly course of full cooperation, we shall by the very fact of cooperation make the most substantial contribution yet made toward perfecting peace..."¹⁰⁹

This speech was of particular significance as it introduced several previously non-existent discursive strategies used to establish the rationale for non-militarization and peaceful use of outer space. First, Johnson's statement strives to construct outer space as a value,¹¹⁰ rather than a physical place, thus drawing on deeply-rooted, and perhaps almost intransigent tendency of man to perceive a dualistic distinction between his profane existence here on Earth and the intangible sacral sphere of the heavens. Such a

¹⁰⁷ Baker (1981), p. 43.

¹⁰⁸ Wasser, A. (2005) LBJ's Space Race: what we didn't know then. The Space Review, Published on June 20, 2005; available at: <http://www.thespacereview.com/article/396/1>, accessed on: 7/6/2014.

¹⁰⁹ Galloway (1997), np.

¹¹⁰ Spring (2005), p. 2.

value-based construction of outer space stands in sharp contrast with some earlier depictions of the final frontier as a physical place to be “*conquered by man*”¹¹¹ or a “*strategic asset*” to be seized to one’s advantage;¹¹² rhetoric so commonly used by the US military or even by Johnson himself during his previous attempts to raise apprehension of American public regarding Soviet space activities.

Second noticeable aspect of Johnson’s depiction of space, one that reinforces his construction of space as a value, is the emphasis he places on the need to maintain final frontier “*unscarred by conflict.*” As such, the outer space was being redefined as a ‘sanctuary’ rather than a high ground; one that has a tremendous value for mankind precisely because it remains undefiled by man’s lower tendencies and darker deeds. This reference must have held a powerful sway in the aftermath of the civilizational trauma dispensed upon humanity over the course of the Second World War. More so than it is the case today, general public conviction clung to a greater degree to the notion of the “*very institution of warfare being immoral and uncivilized.*”¹¹³ This discursive strategy would held a great sway in the years to come, with some opponents of weapons in space suggesting that such acts of “*arming the heaven*” would constitute both a defiant act of abomination against God and a challenge to the aspiration of post-war society to build a more hopeful and peaceful future.¹¹⁴ The ultimate power of the two aforementioned speech acts, especially when employed in unison, lies in their ability to appeal equally to mankind’s scientific reasoning as well as to its intransient spirituality.

And finally, Johnson speech was revolutionary for its allusion to the non-appropriation principle in outer space, the Moon and other celestial bodies. Indeed, his remark concerning the fact that “*no nation holds a concession there...*”¹¹⁵ and his insistence on preserving the existing status quo would soon become the backbone of US approach towards constructing norms in outer space.¹¹⁶ While again presented as a universal principle invoking essential moral values, the call for non-appropriation was very much a product of prevailing cognitive structure of US officials at the time –policy of

¹¹¹ Whipple (1952), np.

¹¹² Johnson-Freese (2007), p. 140.

¹¹³ Price (1995), p. 95.

¹¹⁴ Pierre, <http://www.foreignaffairs.com/articles/38562/andrew-j-pierre/arming-the-heavens-the-hidden-military-agenda-for-space-1945-199>

¹¹⁵ Galloway (1997), np.

¹¹⁶ Jakhu, R. (2013c) Lecture: International Politics and the Law-making Process. General Principles of Space Law ASPL637. McGill University, Institute of Air & Space Law. 30 Sept. 2013. Lecture.

containment. The basic assumption behind US policy of containment was that the Soviet Union was inherently aggressive, expansionist, and revisionist by its nature. As early as July 1947, George Kennan argued that “*the main element of any United States policy toward the Soviet Union must be that of a long-term, patient but firm and vigilant containment of Russian expansive tendencies*”.¹¹⁷ Now that the USSR held a significant technological edge in space launch capabilities, US officials feared – to put it in Johnson’s words – that Soviet “*penetrations into space*” would become “*only extensions of their national policies on Earth*”.¹¹⁸ Therefore, it appears more likely that the call for outer space to remain free from “*holds of national concessions*” was a calculated attempt to deny USSR the opportunity to contaminate heavens with its ideology, rather than a genuine effort to preserve outer space as “*res communis omnium*” or the common heritage of all mankind.¹¹⁹

The underlining motivations notwithstanding, Johnson’s performance at the UN was carefully calibrated to appeal on a raw nerve of many world leaders who feared that escalating competition of the two Superpowers in outer space might trigger a nuclear war.¹²⁰ The UN General Assembly accepted US proposal for the establishment of an Ad hoc Committee and embarked upon arduous diplomatic negotiations to hammer out the final details of Committee’s mandate, composition, and rules of procedures. These developments were met with praise and relief by international media, with the US now skillfully positioning itself at the forefront of international efforts to prevent the arms race from spilling over to the heavens.¹²¹

In an effort to undermine America’s attempt to appoint itself as the vanguard of international peace movement, the Soviets submitted a proposal to the First Committee of General Assembly in mid 1958. The draft resolution called for a complete ban on any military uses of outer space, but also included a request for the disbandment of any military bases with nuclear weapons located in third countries.¹²² This proposal was naturally rejected by the United States, as it would seriously impair its nuclear

¹¹⁷ ARTICLE X, <http://www.foreignaffairs.com/articles/23331/x/the-sources-of-soviet-conduct>

¹¹⁸ Galloway (1997), np.

¹¹⁹ Cassese, A. (2005) International Law 2nd edition. (New York : Oxford University Press), pp. 95-96.

¹²⁰ Legendre, B. (2013) Lecture: Role of the UN COPUOS in Space Law-making process. Canadian Space Agency Presentation. Canadian Space Agency, Division of Public Affairs. 5 Sept. 2013. Lecture.

¹²¹ Manno, J. (1984) Arming the Heavens: The Hidden Military Agenda for Space, 1945-1995 (New York : Dodd, Mead and Company Publishers), pp. 4-6.

¹²² Mrázek, J. (1990) Právo mezinárodní bezpečnosti a odzbrojení (Praha : Academia), p. 155.

deterrence strategy relying on short-range Jupiter missiles stationed in Europe.¹²³ For its part, the United States replied by submitting a draft resolution suggesting a ban on intercontinental ballistic missiles. The USSR, which was now in a possession of workable R-7 missile capable of delivering nuclear warheads to US mainland, vehemently refused the draft.¹²⁴

It would not become public until 1982 that some two months before Johnson's heartfelt plea for the preservation of outer space as "*unscarred*" sanctuary,¹²⁵ the United States took it upon itself to display to the heavens mankind's greatest accomplishment thus far; the ability to tame and unleash the same power responsible for generating the glow of the sun itself. On September 6, 1958, the US launched a modified X-17A missile armed with 1.7-kiloton nuclear warhead, detonating it some 540 kilometers above the Earth's surface, well past the threshold of outer space.¹²⁶ In a strange irony that was perhaps not completely lost on the top-secret US Navy Task Force 88 planners who oversaw the implementation of the test, the highest known man-made nuclear explosion in the heavens received a code-name Operation Argus. So it was that Argus, son of Greek god Zeus himself, was tasked with carrying abomination all the way to the heavens.

Semantics aside, the motivation behind the test was by no means benign. The Argus Operation Report declassified in 1982 states that the purpose of the operation was to "*prove the validity of the Christo-filos theory*",¹²⁷ which postulated "*the possibility of creating an artificial radiation belt in the upper regions of the Earth's atmosphere with nuclear detonation at an extremely high altitude.*"¹²⁸ The report goes on to note that such artificially created "*radiation belts have potential tactical utility*" as a means of disrupting space-based defense systems, damaging or destroying "*the arming and fuzzing mechanism of an intercontinental ballistic missile passing through it*",¹²⁹ or endangering "*crews of orbiting space vehicles*" entering the belt (i.e. space access

¹²³ Mrázek, (1990), p. 154.

¹²⁴ Mrázek, (1990), p. 156.

¹²⁵ Galloway (1997), np.

¹²⁶ Argus Operation Factsheet, available at: <http://www.dtra.mil/documents/ntpr/factsheets/Argus.pdf>, accessed on 5/4/2014.

¹²⁷ United States Department of Defense (1962) Operation Argus 1958. US Defense Nuclear Agency, Technical Report from April 30, 1962 (declassified April 1982), p. 1; available at: <http://www.dtra.mil/documents/ntpr/historical/1958%20-%20DNA%206039F%20-%20Operation%20ARGUS%20-%201958.pdf>, accessed on 23/6/2014.

¹²⁸ United States Department of Defense (1962), p. 1.

¹²⁹ United States Department of Defense (1962), p. 16.

denial).¹³⁰ In order to measure the effects of exospheric nuclear explosions¹³¹ the US also launched Explorer 4 satellite in conjunction with the Argus Operation. The satellite's ostensible scientific purpose of exploring the Van Allen radiation belts (a natural phenomenon) is difficult to reconcile with its actual mission of measuring artificially created radiation belt with potential military utility. Nevertheless, Explorer 4 succeeded in its mission. The data it transmitted to the Department of Defense validated not only the general postulations of Christo-filos theory but also their possible military applications.¹³²

The purpose and the nature of the Argus Operation provide some valuable insights into the US national policy regarding the non-militarization of outer space 'principle' in the late 1950s. First, the evidence presented above indicates that once it acquired the necessary technology to launch objects into outer space, the US government showed little regard for its previous call to send "*objects through outer space for exclusively peaceful and scientific purpose*", to echo the wording of General Assembly resolution 1148 (XII) sponsored by the US less than a year ago. In fact, this particular wording prohibiting weapons in outer space in a broader sense would never again find its way to any international legal instrument, UN-negotiated or otherwise. While it could be claimed that exospheric nuclear detonations yielded some valuable scientific insights, the 1982 report on Argus reveals considerations of military utility to be the primary motivators behind the tests.¹³³

Second, declared rationale of pure scientific purpose preceding the launch of Explorer 4 is a yet another indication of emerging practice of both Superpowers to conduct military experimentations with new technology under the guise of peaceful and scientific aspirations. This strongly suggests that the construction of norms relating to the non-militarization and peaceful use of outer space was in fact a deliberate policy choice made by the United States government, one that would allow America to increase its international influence and prestige while doing nothing to restrict its ability to pursue policies to advance its aspirations for attaining military superiority and technological dominance.

¹³⁰ United States Department of Defense (1962), p. 16.

¹³¹ Three tests were conducted in total from August to September 1958 (author's note).

¹³² Argus Operation Factsheet, available at: <http://www.dtra.mil/documents/nptr/factsheets/Argus.pdf>, accessed on 5/4/2014.

¹³³ United States Department of Defense (1962), p. 1.

And finally, Argus Operation puts Johnson's passionate plea for preserving the space as a sanctuary into a completely different perspective. Was Johnson deliberately turning the so-called 'parliament of nations' into a temple of hypocrisy by suggesting that outer space was "*unscarred*" or was he unaware of the US nuclear detonations that took place less than two months prior? Since the operation was classified and known only to the highest members of the executive at the time, it is likely that Johnson was unaware. Perhaps this is what led President Eisenhower in his decision to have a member of the legislative branch to deliver the plea.

At the end of the day, what mattered was that the speech captivated world's attention. For its part, the Soviet Union publicly endorsed US proposals in general terms, but felt increasingly frustrated by US attempts to cast its activities in outer space as destabilizing and fear generating escapades. It remains unclear whether Soviets knew about US nuclear weapons testing in outer space, but in response to US public calls to preserve space as a sanctuary, the USSR announced unilateral moratorium on its atmospheric nuclear weapons tests along with a unilateral pledge not to test nuclear weapons in outer space (at this point the USSR was yet to test nuclear weapon in space, even though it certainly had the technical capabilities to do so).¹³⁴ Public pressure naturally grew on the United States to take similar action. Step by step, in a game of Cold War quid pro quo recriminations and diplomacy stunts, the Superpowers were laying down the rhetorical foundations of what would later become the Magna Charta of outer space.

On December 13, 1958, nineteen other nations joined the United States in sponsoring United Nations General Assembly resolution 1348 (XIII) establishing an Ad hoc Committee on the Peaceful Uses of Outer Space (COPUOS hereinafter) proposed by Johnson less than a month ago. The speed with which the Committee was established – unprecedented in the UN history – was a clear testament to US unflinching determination to introduce at least some constraints on Soviet activities in space.¹³⁵ The USSR did not block the passage of the resolution, but along with Czechoslovakia, Poland, India and the United Arab Republic, refused to participate in COPUOS deliberations because of its opposition to majority voting.¹³⁶ While the resolution

¹³⁴ Rodhan (2012), p. 194.

¹³⁵ Legendre (2013), n.p.

¹³⁶ Galloway (1997), n.p.

professed desire to ensure “*the fullest exploration and exploitation of outer space for the benefit of all mankind*”,¹³⁷ the 18-seat membership of the Committee was determined by the countries level of technological advancement, leaving the COPUOS dominated heavily dominated by Western nations. Thus, the most advanced countries were now expected to become custodians of outer space aspirations of the technological have-nots. Alas, little would ever be done in COPUOS or outside of it to ensure that the opportunities of space explorations would trickle down to those left on the margins of technological progress.¹³⁸

Contrary to what its name would suggest, the Committee on the Peaceful Uses of Outer Space would have no mandate to discuss issues related to military uses of space, nor would it have the authority to call its members into compliance with the emerging principle of peaceful use. Its mandate was strictly restricted to issues related to scientific research, exploration, monitoring Earth’s health, communications and navigations.¹³⁹ The mandate also alludes to the UN COPUOS authority to give “*effect to programmes in the peaceful uses of outer space which could appropriately be undertaken under United Nations auspices.*”¹⁴⁰ Two points are in order here. First, this reference was included as a concession to non-spacefaring nations because at the time, the General Assembly was encouraged by the rhetoric of international cooperation generated by the US and USSR to such a degree that it harbored a vision of establishing a world space agency under UN auspices; one that would eventually assume responsibility for most outer space activities from member states.¹⁴¹ Second, no space endeavor has ever been undertaken under the UN flag, and the idea of world space agency has never again been seriously entertained by any space-faring nation.¹⁴² Nevertheless, many developing countries still continue to nourish the idea of UN activities in space.

Apart from soothing, yet legally inoperative calls for international cooperating, the COPUOS resolution recycled many other discursive strategies originally advanced by Johnson at the UN. It reiterated the need for outer space to remain a sanctuary free of conflict by recognizing “*the common aim that outer space should be used for peaceful*

¹³⁷ UN Doc. A/RES/8/1348.

¹³⁸ Jasentuliyana, N. (1994) Ensuring equal access to the benefits of space technologies to all countries. Space Policy (10)1, pp. 7-8.

¹³⁹ Brunner and Soucek (2011), p. 179.

¹⁴⁰ UN Doc. A/RES/14/1472.

¹⁴¹ Legendre (2013), n.p.

¹⁴² Legendre (2013), n.p.

purposes only” and by stressing the need to “*avoid the extension of present national rivalries into this new field;*”¹⁴³ a direct reference to the peculiar dynamics of the Cold War and perhaps an allusion to countries’ fear of nuclear weapons proliferation to Earth’s orbit and beyond.

Resolution 1348 (XIII) is widely credited for having first articulated the principle of peaceful use of outer space.¹⁴⁴ However, this interpretation is rather inaccurate since the first resolution to have insisted on the principle of peaceful use of outer space was in fact resolution 1148 (XII) of 1957.¹⁴⁵ As emphasized elsewhere, the wording of this resolution went much farther in its intent to prevent militarization of space by declaring that the passage of any object in outer space should be motivated by exclusively peaceful and scientific purposes. It should be noted further that this resolution is rarely mentioned in any scholarly works pertaining to the issue of outer space. In fact, to author’s knowledge, only one scholarly account, that of Nyamuya Maogoto and titled ‘*The Military Ascent Into Space: From Playground to Battleground: The New Uncertain Game in the Heavens,*’ mentions the existence of this resolution, although only in passing.¹⁴⁶ This rapid shift from emphasis on non-militarization of outer space to the insistence on its peaceful uses is indeed remarkable, especially since it took place over a course of less than a year.

Indeed, the original US proposal to maintain outer space as an arena free of weapons of any kind was now being deliberately reshaped into a vague principle of peaceful uses of outer space, thus paving a way for possible ‘non-aggressive’ military activities in space, whatever that may mean. With rapid advancements in space-related technologies, and even more rapid expansion of human understanding of their possible military applications, the so-called universal principle was undergoing its first transformation to meet the changing needs of its masters and ultimate creators. Indeed, as Nietzsche put it: “*The cause of the origin of a thing and its eventual utility, its actual employment and place in a system of purpose, lie worlds apart; whatever exists, having somehow come into being, is again and again reinterpreted to new ends.*”¹⁴⁷

¹⁴³ UN Doc. A/RES/8/1348.

¹⁴⁴ Jakhu (2013c), n.p.

¹⁴⁵ Jakhu (2013c), n.p.

¹⁴⁶ Maogoto (2005), p. 462.

¹⁴⁷ Nietzsche, F. (1999) *On the Genealogy of Morals* [translated by D. Smith] (Oxford: Oxford University Press) section 2.12.

What might have spurred this rather rapid change of hearts on the part of US decision-makers? At the end of 1958, the US war expeditiously approaching the point of acquiring operational intercontinental ballistic missiles. In fact, US first successful test of Atlas ICBM took place on 28 November 1958, some two weeks before the adoption of resolution 1348 (XIII).¹⁴⁸ However, this explains the policy shift in question only partially as the US could have simply modified two words in the original text of resolution 1148 to read something like this: *the placement and use (originally: sending) of objects in (originally: through) outer space shall be exclusively for peaceful and scientific purposes.*

Far more importantly, in late 1958 the United States placed in orbit its first military reconnaissance satellite tasked with gathering photographic intelligence on the disposition of Soviet strategic nuclear forces.¹⁴⁹ Due to the precedent established by Sputnik, satellite over-flight over Soviet 'territory' could no longer be construed as a violation of Soviet Union's sovereign airspace.¹⁵⁰ This would allow the US to gradually phase out risky photographic reconnaissance missions conducted by high-altitude American-made U-2 spy planes flown by British pilots from the Pakistani city of Peshawar.

From remote sensing, and navigation, all the way to early warning against incoming ballistic missiles and treaty verification, satellites were now being employed in increasing numbers to confer powerful technological and military advantage on whoever would master the ability of space launch. In other words, American military strategists were only beginning to comprehend that the advent of military satellites would spark a revolution in modern warfare, although they were far from being able to foresee the immensity of that change, the degree to which this change would produce US military dependency on space-based assets, or indeed, predict the exact shape of wars to come.¹⁵¹ That being said, the ambiguous principle of peaceful use would serve US military needs far better than a more strictly defined principle of non-militarization. It would allow America to construct a legal regime that would protect its space-based

¹⁴⁸ <http://www.century-of-flight.net/Aviation%20history/space/Atlas.htm>, accessed on 4/6/2014.

¹⁴⁹ Mrázek, J. (1990) *Právo mezinárodní bezpečnosti a odzbrojení* (Praha : Academia), p. 157.

¹⁵⁰ Rodhan (2012), p. 192.

¹⁵¹ Baker (1981), p. 5.

assets from harmful interference while doing nothing to prevent the US from extensively utilizing outer space for military purposes.

For its part, the USSR indulged the US adopting the view that ‘peaceful’ in relation to outer space activities would be interpreted to mean ‘non-aggressive’ rather than ‘non-military’.¹⁵² But Soviet leaders would soon find a way to exploit the US position to their advantage by taking the view “*that ‘peaceful’ in fact meant ‘non-military’ and that in consequence all military activities in outer space were ‘non-peaceful’ and possibly illegal.*”¹⁵³ In distancing itself from softer US view, the USSR was now positioning itself to replace the United States as the world’s champion of non-militarization of the final frontier. This Soviet posture would be officially maintained until 1982, despite their own military uses of space.¹⁵⁴

In more ways than one, mankind’s ventures into outer space were now engendering transformation in the basic dynamics of Cold War. In the international political arena, both Superpowers competed for seizing the prize of the world’s ultimate guardian of peace on Earth as well as in the heavens, generating new discursive strategies and normative frameworks in the process. In the military arena, the gradual introduction of military reconnaissance satellites into the play was slowly producing stabilizing effects on nuclear deterrence through various ways. “*Harbingers of danger*” (i.e. early warning satellites) would diminish first-strike incentives by increasing the length of time decision-makers would have to respond to incoming ICBMs,¹⁵⁵ communication satellites would strengthen the ability to execute nuclear second-strikes by increasing effectiveness of command and control processes,¹⁵⁶ and reconnaissance satellites would facilitate means to verify international arms control agreements.¹⁵⁷ Despite the forming international sentiment championing non-militarization of space, militarization of the final frontier looming on the horizon would have powerful patrons indeed.

¹⁵² Vlastic, I. (1991) The Legal Aspects of Peaceful and Non-peaceful Uses of Outer Space, in: B. Jasani, ed., *Peaceful and Non-Peaceful Uses of Space: Problems of Definition for the Prevention of an Arms Race*, New York, Taylor & Francies Publishers, 1991, p. 39.

¹⁵³ Vlastic (1991), p. 39.

¹⁵⁴ Myers, D. (1986) *Soviet Proposals on the militarization of space* (London: Butterworth & Co Publishers), pp 240-241.

¹⁵⁵ Din, A. (1983) Stopping the Arms Race in Outer Space. *Journal of Peace Research*. (20)3, pp. 221-222.

¹⁵⁶ Abeyratne, R. (2011) *Space Security Law* (Heidelberg : Springer-Verlag Publishers), p. 16.

¹⁵⁷ Boutros Boutros, G. (1994) United Nations Secretary General Report on Confidence Building Measures in Outer Space. United Nations Secretariat. Report from January 1994. UN. Doc. A/48/304, p. 26.

Not long after President John F. Kennedy took office in January 1961, the Soviet Union scored another defining triumph that would inflame passions of people everywhere. On April 2, 1961 Soviet pilot Yuri Gagarin, the first “*envoy of all mankind*” in space,¹⁵⁸ ascended to heavens on board of Vostok 1 propelled by a modified R-7 ballistic missile designed by Korolev.¹⁵⁹ And although Gagarin spent just little over an hour in orbit before returning to Earth’s gravity uncompromising embrace, his journey to the heavens would be recorded for posterity in the annals of human history as a pinnacle of civilizational achievement.

Soviet public was overwhelmed by the immensity of the accomplishment. Gagarin, now holding the title of the ‘Hero of the Soviet Union’ – the highest distinction the Soviet Union could bestow – was turned into a powerful tool of communist propaganda.¹⁶⁰ He would embark on a carefully staged tour de force around Soviet cities and beyond. On the east side of the Iron Curtain, children would be excused from schools to greet their latest hero, flowers would descend from the sky like raindrops, and large crowds would line main boulevards in capitals across Eastern Europe just to get a glimpse of the first man who peaked into heavens – all in the name of the new cult of Gagarin.¹⁶¹ At the plenum of the Central Committee of the Communist Party of the Soviet Union, Khrushchev would highlight the triumph of international communism over ancient superstition, boasting that “*Gagarin flew into space, but didn’t see any God there.*”¹⁶²

The US sent an official letter of congratulation to the gloating Soviet Premier, yet the mood in American media was far for jubilatory. The New York Times carried an article titled “*Moscow: Flight is taken as another sign that communism is the conquering wave,*” reporting that because of the Soviet “*deadly rearmament, an achievement by one [i.e. the USSR] which carries a clear and direct potential of military supremacy*

¹⁵⁸ United Nations General Assembly (1967) The Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space. Resolution 2345 (XXII) of December 19 1967. UN Doc. A/RES/22/2345.

¹⁵⁹ Wilford (2007), n.p.

¹⁶⁰ <http://soviet-awards.com/titles1.htm>, accessed on 22/7/2014.

¹⁶¹ Vaughan, D. (2011) Yuri Gagarin: to Prague via the stratosphere. Český rozhlas News Report from December 10, 2011; available at: <http://www.radio.cz/en/section/archives/yuri-gagarin-to-prague-via-the-stratosphere-1>, accessed on 24/6/2014.

¹⁶² The Independent (2011) The Day the Earth Stood Still, The Independent, April 12, 2011; available at: <http://www.independent.co.uk/life-style/history/space-the-day-the-earth-stood-still-2266391.html>, accessed on 27/7/2014.

engenders fear of its use.”¹⁶³ Echoing similar sentiments, the Detroit Free Press noted with alarm that people in the West “*might have been dancing in the streets*” if it were not for “*doubts and suspicions about Soviet intentions.*”¹⁶⁴ Again, the reference to deadly rearmament seems to be an allusion to Soviet pursuits of nuclear weapons and new methods of their delivery.

The American public was once again appalled by the boldness of Soviet endeavors in space. First Sputnik, then Laika, and now the ‘expansionist’ Soviets demonstrated the capability to colonize the heavens and infect it with their poisoning ideology. To ameliorate public disbelief and to restore America’s international prestige, NASA hastened its preparations for a test flight of Mercury-Redstone 3 in order to launch its first astronaut into ‘space’. On May 15, 1961, Alan Shepherd soared the skies on board of Mercury (now renamed to Freedom 7) but fell short of completing one orbital revolution around the Earth, although technically, he was in outer space for a few precious minutes.¹⁶⁵ That was all that was needed for the US media to bring galvanizing reports of first American envoy in space. However, simply matching Soviet feats would not quell America’s appetite for total victory in the space race. Much more would have to be done to beat the Soviets.

The newly inaugurated American president, who warned repeatedly in his campaign that the “*control of space [would] be decided in the next century,*”¹⁶⁶ had little choice but to act with the utmost determination. On May 25, 1961, less than two months after Gagarin’s conquest of the final frontier, Kennedy took floor before a joint session of Congress and declared that “*if we are to win the battle that is now going on around the world between freedom and tyranny*” America would have to commit itself “*to achieving the goal, before this decade is out, of landing a man on the moon and returning him safely to Earth*”.¹⁶⁷ The game was on. The ultimate prize arousing humanity’s fascination and curiosity for millennia, the Moon, was now up for grasp.

¹⁶³ Schwartz, H. (1961) Moscow: Flight is taken as another sign that Communism is the conquering wave. The New York Times, April 16, 1961.

¹⁶⁴ The New York Times Editorial Team (1961) At Home and Abroad: quotes of reactions from many US and international sources: in: The New York Times, April 16, 1961.

¹⁶⁵ CNN (2003) China Claims its place in space. CNN News, October 15, 2003; available at: <http://edition.cnn.com/2003/TECH/space/10/14/china.launch/>, accessed on 28/7/2014.

¹⁶⁶ Maogoto (2005), p. 461.

¹⁶⁷ Kennedy, J. (1961) Special Message to the Congress on Urgent National Needs, delivered on May 25, 1961 in Washington, D.C.; available at: http://www.nasa.gov/vision/space/features/jfk_speech_text.html#.U9U8ERYk_1o, accessed on 6/7/2014.

Frightened by the escalating rhetoric of man's plans for conquest of the heavens, the international community was now seeking to introduce safeguards that would prevent the arms race on Earth from spilling over to the final frontier. On December 20, 1961, the UN General Assembly passed a landmark resolution 1721 (XVI) on "*International co-operation in the peaceful uses of outer space*,"¹⁶⁸ affirming both the principle of peaceful use through explicitly providing for the applicability of the UN Charter to all activities in "*outer space and celestial bodies*,"¹⁶⁹ as well as the principle of non-appropriation of outer space.

It should be noted that the declaratory part of resolution 1721 (XVI) also introduced a novel suggestion that "*the exploration and use of outer space should be only for the betterment of mankind and to the benefit of States irrespective of the stage of their economic or scientific development*".¹⁷⁰ This late add-on to the draft was a concession to developing countries, which were increasingly worried of being left out from reaping the benefits derived from outer space uses. However, as history would show, this wording, being as inoperative in legal terms as it is, would do little to ensure the province of mankind for the betterment of all peoples.¹⁷¹

The final text of the resolution was very much a product of its time. A delicate compromise between the US and other Western countries on the one hand, and the USSR and developing countries on the other had to be stricken. With its reliance on military reconnaissance satellites growing, the US was now eager to not only protect its space-based assets by placing them explicitly under the regime of Article 2.4 of the UN Charter,¹⁷² but was also determined to address public fears (however irrational they may have been) of Soviet colonization of outer space, which were being generated by the cognitive structure of US containment policy.

For its part, the USSR was also growing increasingly dependent on the use of military satellites, albeit to a lesser extent than the US. Nevertheless, just as the United States, the Soviet Union appreciated the fact that Cold War nuclear deterrence relied heavily on

¹⁶⁸ United Nations General Assembly Resolution 1721 (XVI) of 20 December 1961. International co-operation in the peaceful uses of outer space. UN Doc. A/RES/16/1721.

¹⁶⁹ UN Doc. A/RES/16/1721.

¹⁷⁰ UN Doc. A/RES/16/1721.

¹⁷¹ Jasentuliyana (1994), p. 9.

¹⁷² Article 2, Section 4 of the UN Charter calls on all members to "*refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the Purposes of the United Nations*" (author's note).

satellites for early warning, communications and even targeting information.¹⁷³ That being said, any possible interference with satellites would automatically trigger fears of imminent nuclear strike, with deliberate attacks on satellites being likely interpreted as precursors to attack on strategic nuclear forces.¹⁷⁴ The applicability of the UN Charter in outer space was a principle that the Soviet Union could agree to.

Now being at the forefront of international calls for non-militarization of outer space, the USSR could not afford to reject a proposal for non-appropriation of space and other celestial bodies. By doing so, the Soviets would only add further fuel to the fiery speculations of international media as to the Soviet intentions in the final frontier in the aftermath of Gagarin launch. In fact, and unbeknownst to the Americans, the USSR was at that time technologically far from the goal of being able to land anywhere in outer space, let alone colonize the Moon or any other celestial body.¹⁷⁵

From today's perspective, the principle of non-appropriation of outer space, the Moon and other celestial bodies "*by claim of sovereignty, by means of use or occupation, or by any other means*",¹⁷⁶ may seem an inalienable aspect of the present legal regime governing the conduct of states in outer space. In fact, many contemporary lawyers as well as non-militarization advocates often see it as a crucial building stone of the entire outer space law, indeed a moral as well as legal necessity if man is to preserve outer space as a province of all mankind.¹⁷⁷ But the province of all mankind to what end? To boldly go... But where? And perhaps more importantly: Why?

From a purely strategic and practical point of view, the adoption of the non-appropriation principle makes very little sense. The reasons are at least two-fold. First, the principle effectively prevents any state from being able to reap the benefits derived from exploitation of natural resources located anywhere in outer space. What operator would ever conduct a mining operation on the Moon, other celestial body, or on an asteroid without any legal assurance of entitlement to property rights, that is, without

¹⁷³ Abeyratne, (2011), pp. 15-16.

¹⁷⁴ Rodhan (2012), p. 36.

¹⁷⁵ Harford (1997), n.p.

¹⁷⁶ United Nations General Assembly (1966) Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies. Resolution 2222 (XXI) of 19 December 1966. UN Doc. A/RES/21/2222, Art. II.

¹⁷⁷ Jakhu (2013a), n.p.

any certainty of being able to reap the fruits of one's labor?¹⁷⁸ In the absence of appropriate regime that would allow legal exploitation of natural resources in outer space, what good can be derived from the fact that rhetorically, the space is the province of mankind that cannot be effectively used for purposes of exploitation by any one party?

Second, the use of outer space, for military purposes or otherwise, confers upon its user tremendous and far-reaching benefits. For example, a shipyard and a launching pad on the moon would offer significant practical benefits for future exploration and exploitation of our Solar System. Since Moon's gravity is roughly six times less than that of the Earth,¹⁷⁹ launching deep-space exploration or mining missions from the Moon would be less challenging and far more cost-efficient because any rocket launched from the Moon would have to use less fuel to achieve the necessary velocity to break from the Moon's gravitational pull. This would not only allow humanity to reach farther into space but would also have the added benefit of saving Earth's atmosphere from added pollution. Alas, the principle of non-appropriation prevents such a scenario from materializing in not one, but several respects.

First, establishment of permanent shipyard on the moon would in itself be illegal, as it would require appropriation of specific land on the Moon. Even if this legal obstacle could be somehow solved, perhaps by claiming the base to be non-permanent in nature, a second obstacle would quickly arise, because the shipyard could not use natural resources present on the Moon to either build or launch ships. And finally, even if all the necessary resources could be supplied from Earth, any mission sent from Moon to the far reaches of our solar system would have to be strictly scientific in nature and could not engage in any exploitative activities, as such activities would again constitute a violation of the non-appropriation principle. In effect, such mission would not be able to pay for itself and would likely not be undertaken in the first place.

Given the nonsensical nature of the non-appropriation principle, humanity is likely to find itself one day in a predicament similar to the one hypothesis by A.C. Clarke in his iconic novel, *The Space Odyssey*. Here, a highly advanced extra-terrestrial form of intelligence bestows upon humanity not ten, but only one commandment: "*All these*

¹⁷⁸ Jakhu, R. (2013d) Lecture: The Sources of International Space Law. General Principles of Space Law ASPL637. McGill University, Institute of Air & Space Law. 30 Sept. 2013. Lecture.

¹⁷⁹ http://www.moonconnection.com/moon_gravity.phtml, accessed on: 25/7/2014.

worlds are yours, except Europa. Attempt no landings there.”¹⁸⁰ Except this time, it is humanity imposing restrictions that defy rational explanations upon itself by prescribing something along the lines of this: “*All these worlds are yours, land at will but touch nothing.*”

There are other such examples of possible uses of outer space hampered by the non-appropriation principle that the author is aware of that could be entertained at this point, but far more important is the plethora of possible uses of outer space that the author cannot think off, but would still be prohibited by the non-appropriation principle. Therefore, it is safe to assume that given the rate at which humanity is depleting finite reserves of natural resources here on Earth, the principle of non-appropriation in outer space is unlikely to survive in the 21st century, let alone in the 22nd century. That being said, the inauguration of non-appropriation principle cannot be adequately and fully explained by claims of universality of specific normative aspirations or even rational strategic considerations on the part of the superpowers, as positivist IR theorists would suggest. Instead, it has to be seen for what it is, a product of Cold War cognitive structures connected to policy of containment and considerations of international prestige arising from discursive strategies related to non-militarization and peaceful use of the final frontier.

Here, some critics might suggest that the enactment of non-appropriation principle was in fact a product of rational strategic considerations of USSR and US, who shared a common aspiration to reinforce the precedent of satellite over-flight in order to protect space-based assets crucial to reinforcing strategic stability and nuclear deterrence policies. However, this would only partially explain why states insisted on non-appropriation of Low and Medium Earth Orbits around the Earth. Such explanation cannot provide an adequate answer for why the states decided to include the Moon, other celestial bodies, or indeed the infinite void of the entire final frontier within the scope of the non-appropriation principle.

Arguably, the increasing momentum of international debate pertaining to the peaceful use of outer space was now taking a life of its own, generating outcomes that would be inconceivable just a few years prior. In mid-1962, in response to the USSR’s unilateral moratorium on high altitude nuclear testing as well as its increasingly vocal insistence

¹⁸⁰ Clarke, A. (1982) *Space Odyssey* (Electronic Version : New Science Publishers), p. 472.

on strictly non-military uses of outer space, the United States unilaterally pledged not to be the first to place nuclear weapons in the heavens.¹⁸¹ Convergence of views between the Superpowers on the issue of nuclear testing was now such that a bilateral treaty prohibiting certain types of nuclear explosions could be conceived. The dramatic events of late 1962 would only serve to provide further impetus for action in this respect.

In October 1962 the United States and the Soviet Union came to a brink of mutual destruction, or so it would appear at the time.¹⁸² On October 16, the CIA presented President Kennedy with photographic evidence of the presence of Soviet missiles in Cuba. In response, US announced a naval blockade of Cuba on October 22, raising the possibility of direct naval confrontation between US naval vessels and Soviet military convoys. Two days later, President Kennedy received an ominously phrased letter from premier Khrushchev, in which the Soviet Premier described equated the US blockade in international waters to “*an act of aggression propelling human kind into the abyss of a world nuclear-missile war.*”¹⁸³ Humanity watched their TV sets in horror. The doomsday threat was being invoked for the first time in mankind’s history.

The UN Security Council would soon meet for a televised, and perhaps its most tense session yet. US Ambassador to the UN, Adlai Stevenson, delivered US public response to Khrushchev’s letter. In a significant departure from customary diplomatic protocols, Stevenson bombarded Soviet Ambassador Gromyko with one direct question after another as the world gazed in trepidation upon the Security Council Chamber oil canvas mural depicting a phoenix rising from the ashes of the Second World War. Gromyko would not yield the answers Stevenson demanded, urging patience instead. Adlai Stevenson would retort in exasperation that he was “*prepared to wait for [his] answer until hell freezes over*”,¹⁸⁴ presenting instead “*clear and incontrovertible*” evidence of Soviet activities in Cuba,¹⁸⁵ some of which was obtained by US military reconnaissance

¹⁸¹ Rodhan (2012), p. 37.

¹⁸² Brecher, M. (2008) *International Political Earthquakes* (Ann Arbor : University of Michigan), p. 47-49.

¹⁸³ Soviet Premier Nikita Khrushchev Letter to President Kennedy from 18 October, 1962, available at: <http://www.loc.gov/exhibits/archives/x2jfk.html>, accessed on 14/5/2014.

¹⁸⁴ Stevenson, A. (1962) Address to the United Nations Security Council from 25, October, 1962 available at: http://www.speeches-usa.com/Transcripts/adlai_stevenson-cuban.html, accessed on 25/6/2014.

¹⁸⁵ Stevenson (1962), n.p.

satellites.¹⁸⁶ The courtroom of world opinion was in session. The US investments into satellites were beginning to pay their dividends. It was a rare diplomatic checkmate for the Soviets that day.

Unbeknownst to the public, a secret backchannel between the Kennedy and Khrushchev was also open, in which various proposals to resolve the crisis would be floated. Nevertheless, the world peoples would hold their collective breaths for the next four days as one Soviet ship after another tried to run the US naval blockade. And although the crisis ended on October 28 with the US pledging not to invade Cuba in exchange for Soviet withdrawal of missiles, the world would long remember the day the Earth stood still in anticipation of a possible nuclear holocaust.

The Cuban Missile Crisis marked the pinnacle of Cold War escalation. And while there is little evidence to suggest that any of the two Superpowers seriously considered the use of nuclear weapons over the course of the crisis,¹⁸⁷ the tense international atmosphere it produced would create a far-reaching normative pressure that would resonate in many subsequent political decisions. Just as the world grew use to the idea of living with nuclear weapons, the Cuban Missile Crisis would rekindle mankind's darkest fears.

Such was the atmosphere in which the two world's greatest rivals embarked on a series of confidence building measures to de-escalate Cold War tensions and reduce future prospects of another nuclear standoff. On August 5, 1963 the representatives of United States, United Kingdom, and Soviet Union signed a 'Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space, and Under Water,' also known as the Limited Test Ban Treaty (LTBT hereinafter). Even though the High Contracting parties proclaimed their desire to "*put an end to the armaments race and eliminate the incentive to the production and testing of all kinds of weapons*" in the LTBT preamble, the focus of the operative part of the treaty was strictly on nuclear weapons. Specifically, Article 1 of the LTBT treaty provides:

1. *"Each of the Parties to this Treaty undertakes to prohibit, to prevent, and not to carry out any nuclear weapon test explosion, or any other nuclear explosion, at any place under its jurisdiction or control:*

¹⁸⁶ Images available at: http://www.ourdocuments.gov/document_data/document_images/doc_094b_big.jpg, accessed on 26/6/2014.

¹⁸⁷ Brecher (2008), p. 48.

- (a) *in the atmosphere; beyond its limits, including outer space; or under water, including territorial waters or high seas; or*
- (b) *in any other environment if such explosion causes radioactive debris to be present outside the territorial limits of the State under whose jurisdiction or control such explosion is conducted.*¹⁸⁸

Several points should be highlighted with regard to the text in question. First, the treaty does not prohibit detonations of non-nuclear character conducted in outer space. Second, the treaty prohibits use of nuclear explosions for non-testing purposes as well. Therefore if taken literally, the LTBT may restrict states from being able to use nuclear fission as a means of space propulsion once this technology becomes feasible.¹⁸⁹

The Limited Test Ban Treaty is often invoked by advocates of non-militarization of outer space as the first important legally binding step toward securing the outer space as sanctuary free of weapons of any kind.¹⁹⁰ However, the provisions of Article 1, with their singular focus on nuclear weapons testing and harmful radioactive fallout that might follow such tests, suggest that *“little thought and attention seems to have been put into ensuring”* that the treaty would effectively prevent space *“from being turned from a sanctuary of science into a battleground that may one day offer opportunities for offensive and defensive non-nuclear weapons”*.¹⁹¹ More accurately, some provisions of the treaty may in reality restrict mankind’s ability to venture deeper into space, peacefully or otherwise.

A more balanced review of facts would suggest that the superpowers were taking a common approach to nuclear testing out of their shared desire to showcase political will to act upon public fears of nuclear war in the aftermath of Cuban Missiles Crisis. Second motivation was to avoid harmful radioactive fallout.

With regard to the specific provision banning exospheric nuclear detonations, the rationale at the time was twofold. First, the LTBT was a reaction to Soviet pleas that exospheric nuclear testing constituted a danger to the safety of its astronauts.¹⁹² Second,

¹⁸⁸ Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water, Signed in Moscow August 5, 1963, Art. I.

¹⁸⁹ The fission-fragment rocket concept has already been entertained by several scientists who claim it to be within the abilities of current technologies. See for example:

<http://www.rbsp.info/rbs/RbS/PDF/aiaa05.pdf>

¹⁹⁰ Su, J. (2010b) Use of Outer Space for Peaceful Purposes: Non-Militarization, Non-aggression and Prevention of Weaponization. *Journal of Space Law*. (36)1, pp. 256-257.

¹⁹¹ Maogoto (2005), p. 475.

¹⁹² Maogoto (2005), p. 475.

and perhaps more importantly, radiation produced by extensive exospheric tests undertaken by both Superpowers in early 1960s was posing an increasing threat to the safety of Soviet and American military assets in space.¹⁹³ Therefore, it would seem that rather than being motivated by a shared noble desire to “*eliminate the incentive to the production and testing of all kinds of weapons*”,¹⁹⁴ the Superpowers were acting in unison to protect their precious military possessions in space, especially given the crucial role these assets were beginning to play in maintaining strategic stability between the two. Off course, the signature of the LTBT provided the Superpowers with the added benefit of being able to point to a legally binding achievement that would strengthen their professed desire to keep outer space as a peaceful sanctuary. In short, the LTBT’s exclusive focus on nuclear weapons testing, possible radioactive fallout and safety of space-based military assets, was very much a product of prevailing cognitive frameworks of its time – i.e. powerful public fear of nuclear weapons and the rationale of maintaining strategic stability.

Despite their public calls for preserving the space sanctuary, both Superpowers were actively pursuing military research, thereby increasing the prospects of turning the heavens into a battleground for control over the ultimate high ground. In late 1950s and early 1960s both superpowers began testing various anti-satellite systems (ASATs) designed to attack enemy satellites in Low Earth Orbit.¹⁹⁵ While Soviets pursued Co-Orbital ASAT systems “*consisting of a missile interceptor that would explode its conventional payload into shrapnel-sized bits once it had rendezvoused with the target*”,¹⁹⁶ the US focused on exploring the ways in which exospheric detonations of nuclear weapons could be used to destroy, disable, or degrade enemy’s space-based assets.

On July 9, 1962, the United States conducted the largest exospheric nuclear weapons test in history – the Starfish Prime Operation. In much of the Pacific, from Hawaii Islands all the way to New Zealand and eastern coast of Australia, people would turn

¹⁹³ Brown, W. (2012) 50 Years Ago, Communications Became Global. Interview with Walter Brown of Bell Labs". *NPR*. July 14, 2012; available at: <http://www.npr.org/2012/07/14/156772236/50-years-ago-communications-became-global> , accessed on 11/6/2014.

¹⁹⁴ Hitchens, T. (2009) Saving Space: Threat Proliferation and Mitigation. Research Paper for International Commission on Nuclear Non-proliferation and Disarmament. Geneva 2009, p. 5.

¹⁹⁵ Rodhan (2012), p. 78.

¹⁹⁶ Grego, L. (2003) A History of Anti-satellite (ASAT) Programs. Union of Concerned Scientists. January 2003; available at: http://www.ucsusa.org/assets/documents/nwgs/a-history-of-ASAT-programs_lo-res.pdf, accessed on 4/5/2014.

their sights to the heavens to gaze upon the bright nuclear explosion-induced auroras of energetic beta particles illuminating the night skies.¹⁹⁷ In the immediate aftermath of the explosion, three US military satellites went deft due to the electromagnetic pulse generated by the explosion.¹⁹⁸ Seven more satellites would fail over the next few months following the test as a result of damage sustained from passing through the artificially created radiation belt left behind by the Starfish Prime majestic glow. In total, these man-made radiation belts would eventually cripple one-third of all satellites in Low Earth Orbit.¹⁹⁹ The results of Starfish Prime were, therefore, rather ambiguous. While the operation demonstrated that nuclear weapons could be used as a means of attacking satellites, the resulting EMP pulse and radiation belts would threaten the safety of all space-based assets indiscriminately.

On the other side of the Iron Curtain, in November 1963, the USSR launched its first spacecraft capable of maneuvering in orbit, the Polet 1. This spacecraft was announced as a new type of manned vehicle that could be used for rendezvous flights, possibly paving way for first handshakes in outer space. Mstislav V. Keldysh, president of the Soviet Academy of Sciences spoke of the benign utility of the aircraft in the following fashion:

*“Maneuverable spacecraft will permit us to execute a landing from any orbit to a given ‘kosmodrom’; carry out a meeting in space of ships which are flying in different orbits; and also allow astronauts to select the most advantageous landing area. The ability of a ship to maneuver will make it possible for us to create heavy orbital scientific research stations in space so that we can exchange crews, replace scientific equipment and maintain a continuous supply of all that is necessary.”*²⁰⁰

The US Department of Defense interpreted the same facts very differently indeed. American strategists now feared that the Soviet newly acquired ability to maneuver in orbit would allow them to disable, seize, or tamper with US military assets in space. The mere introduction of maneuverability in orbit was now *“paving way for the entire concept of the ‘hunter-killers satellite’*.”²⁰¹ The rationale of nuclear deterrence as well as

¹⁹⁷ United States Department of Defense (1962) Quick Look at the technical results of Starfish Prime. United States Department of Defense Report: ADA955411, August 1962, p. 19; available at: <http://www.dtic.mil/dtic/tr/fulltext/u2/a955411.pdf>, accessed on 13/7/2014.

¹⁹⁸ United States Department of Defense (1962), p. A1-12.

¹⁹⁹ Brown (2012), footage 3:22-3:45.

²⁰⁰ <http://claudelafleur.qc.ca/Spacecrafts-1963.html>, accessed on 27/7/2014,

²⁰¹ Burzyowska, A. (2009) Smaller States and the new balance of power in space. *Space Policy*. (25)1, p. 188.

the strategic stability between the Superpowers was perceived to be under threat once more.

By early 1960s, fears of destabilizing ASAT tests were so prominent among decision-makers that they were overshadowing many other strategic considerations and prompting increasing calls for stronger regulation in the field on both sides of the Cold War divide. US feared that advancements in space-related and missile technologies would make its satellites vulnerable to Soviet attack. Each side worried that the other would soon outfit new satellites with nuclear weapons.²⁰² Time was ripe to embark upon treaty negotiations “*designed to protect US and USSR assets, to curtail the space race*” as well as to “*ease political tensions associated with man’s foray into space*”.²⁰³ The emerging principles of peaceful use of and non-appropriation in outer space, gradually enacted in a Machiavellian fashion by the Superpowers over the last few years, would provide the basis for a legally binding agreement that would solidify the existing status quo on the final frontier.

This growing understanding of the need for a legally binding regime in outer space was affirmed in a passage of two landmark General Assembly resolutions in late 1963. Building upon political will and international momentum accrued from the signature of the Limited Test Ban Treaty just a few months earlier, General Assembly unanimously adopted resolution 1884 (XVIII) on October 17, 1963. And although the resolution jointly sponsored by the US and the USSR carried the title “*Question of general and complete disarmament,*” the text itself “*solemnly*” called upon all States only to “*refrain from placing in orbit around the earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction, installing such weapons on celestial bodies, or stationing such weapons in outer space in any other manner*”.²⁰⁴ Given the resolution’s singular preoccupation with nuclear weapons, the international community once again missed (or deliberately passed upon) a great opportunity to take further steps to effectively ‘sanctuarize’ outer space. However, the text of resolution 1884 (XVIII) is a yet another indication that states were not guided by a universal desire to keep the final frontier free of weapons of any kind.

²⁰²Barnet (2001), p. 280.

²⁰³Barnet (2001), p. 280.

²⁰⁴United Nations General Assembly Resolution 1884 (XVIII) of 17 October, 1963. Question of general and complete disarmament, UN Doc. A/RES/18/1884.

Less than two months later, General Assembly passed a second, and perhaps even more important text, the Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space,²⁰⁵ or the so-called Principles Declaration. Adopted unanimously on December 13, 1963, the Principles Declaration reaffirmed three of the four core principles regarding states' conduct in outer space activities: peaceful use, freedom of access, and non-appropriation. It should be noted at this point that the principle of freedom of access was for the first time articulated in a legally operative manner as a concession to the non-space-faring nations, whose support was crucial to ensure not only a simple passage of the resolution but a unanimous passage through the General Assembly that would project a more powerful image international unity and legitimacy. Whereas previous UN resolutions included only vague pronouncements concerning the "*common interest of mankind*"²⁰⁶ to further the use of outer space "*for the betterment of all states*"²⁰⁷ in their declaratory preambles, the Principles Declaration introduced a novel notion in its operative part, solemnly declaring now that "*outer space and celestial bodies are free for exploration and use by all States on a basis of equality and in accordance with international law*".²⁰⁸

Notably, the reference to non-militarization principle was conveniently left out as the USSR and the US could not agree on the exact wording of the principle as well as on whether to include it at all.²⁰⁹ As mentioned previously, the US was of the view that principle of peaceful uses would suffice, whereas the USSR made it a signature of its international advocacy that all activities in outer space should be strictly scientific, peaceful and non-military in nature. The resolution of the issue was therefore left to be resolved within the context of starting negotiations in the Legal Subcommittee of the UN COPUOUS that was now tasked to embark upon the quest of producing a legally binding treaty that would combine all of the principles hitherto proclaimed. The age of Magna Charta of outer space was rapidly approaching at this point.

²⁰⁵ United Nations General Assembly Resolution 1962 (XVIII) of 13 December, 1963. Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space, UN Doc. A/RES/18/1862.

²⁰⁶ United Nations General Assembly Resolution 1472 (XIV) of 12 December 1959. International cooperation in the peaceful uses of outer space, UN Doc. A/RES/14/1472.

²⁰⁷ United Nations General Assembly Resolution 1802 (XVII) of 14 December 1962. International cooperation in the peaceful uses of outer space, UN Doc. A/RES/17/1802.

²⁰⁸ United Nations General Assembly Resolution 1962 (XVIII) of 13 December, 1963. Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space, UN Doc. A/RES/18/1862.

²⁰⁹ Jakhu (2013d), n.p.

The story of humanity's historical voyage from the first satellites to the emergence of principles of non-militarization, non-appropriation, freedom of access and peaceful use of outer space offer several important insights that are often overlooked by traditional interpretations pertaining to the emergence of norms in outer space. First finding relates to the emergence of the space race itself. The evidence presented above further confirms that much of the space race rationale was in fact driven by US public perception of what America should stand for. Soviet bold ventures behind the threshold of Earth's gravity, pursued so aggressively in part because of the US initial reaction to Sputnik, were interpreted by US citizens as a challenge to a fundamental part of American national identity – the deeply-rooted belief of being the world's leading technological superpower. In Sputnik's aftermath, US decision-makers felt compelled to act to reclaim America's rightful place in the eyes of its citizens and that of the world. Arguably, had America gone to space first, Soviets would be: a) more likely to simply suppress or downplay the American achievement in Soviet media, and b) less likely to follow America so vigorously to outer space under the guise of scientific motivations, preferring to focus instead on development of missile and space-related technology. The overall result would likely be a much lower degree of international politization of activities in outer space, and perhaps even a complete absence of the space race. Since Price notes that a high degree of politization is a necessary condition for any principle to emerge,²¹⁰ the so-called universal principles applicable to outer space might not have emerged in the first place without the context of the space race.

A second insight pertains to the ostensibly peaceful nature of the space race. The evidence presented in this chapter suggests that because of considerations related to the intransigent Cold War competition for international prestige, both Superpowers went to great length to present their activities in space as motivated by higher set of scientific and peaceful aspirations, even though that was not always the case owing of the dual-purpose of many space-related technologies. This cognitive structure of the Cold War in turn generated some of the normative underpinnings of many emerging principles governing the use of outer space.

A third insight relates to the assumed universality of outer space principles. In contrast to claims of many lawyers and other advocates of non-militarization and non-

²¹⁰ Price (1995), p. 95.

weaponization of outer space, the evidence presented above depicts a dynamic emergence of fluid principles, whose ultimate construction was conditioned upon the presence of cognitive structures and changing dynamics of the Cold War competition, military, political, or otherwise. The appearance of a general non-militarization principle, which was quickly substituted and overshadowed by a more ambiguous principle of peaceful use after the introduction of military satellites, is a case in point.

And finally, the last insight concerns the key role of doctrinal influences of strategic stability theory as well as widespread societal fear of nuclear weapons in construction of the principles governing states activities in outer space. Opponents of weapons in space often describe the birth of Magna Charta as a first step of the international community toward non-militarization or non-weaponization of the final frontier.²¹¹ In contrast, the chapter above demonstrates that space weapons in themselves were not an important consideration when the principle of peaceful use of outer space had been constructed. The focus was overwhelmingly centered on strategic stability and nuclear weapons. Even the doctrine of space sanctuary was justified on the basis of preventing space from being polluted by weapons of mass destruction.²¹²

The findings explicated above in turn suggest the following with regard to the principle of non-militarization, peaceful use, and non-appropriation of outer space: a) these principles might have never emerged outside of the Cold War context, b) these principles were an expression of its time and are not as universally applicable or valid as its proponents suggest, and finally c) these principles are less likely to survive outside of the Cold War context because of the decreasing relevance of cognitive structures that legitimized their emergence. A potential survival of these principles can only be envisioned under conditions of high degree of politicization surrounding space activities and either return to the original cognitive structures that produced these principles, or alternatively, an emergence of a new set of equally powerful and galvanizing discursive strategies and cognitive structures.

²¹¹ Loshchinin, V. and Jingye, C. (2007) Compilation of Comments and Suggestions to the CD Working Paper on PAROS [revised and amended version as of 12 February 2007]. UN Doc. CD/1818, pp. 13-14.

²¹² Johnson, L. (1966) Statement by the President Announcing the Reaching of An Agreement on an Outer Space Treaty, delivered on December 8, 1966 in Washington, D.C.; available at: <http://www.presidency.ucsb.edu/ws/?pid=28064>, retrieved on 28/7/2014.

4 Magna Charta: From Freedom to Denial?

*“Outer space, including the Moon and other celestial bodies, shall be free for exploration and use by all States without discrimination of any kind, on a basis of equality and in accordance with international law, and there shall be free access to all areas of celestial bodies.”*²¹³

Article I definition on freedom of access to outer space, Outer Space Treaty

*“The United States will: preserve its rights, capabilities and freedom of action in space, dissuade or deter other from either impeding those rights or developing capabilities intended to do so; take those actions necessary to protect its space capabilities; respond to interference; and deny, if necessary, adversaries the use of space capabilities hostile to U.S. national interests”*²¹⁴

Bush Administration articulates U.S. right of space access denial, U.S. National Space Policy of 2006

It would take four years of arduous negotiations in the Legal Subcommittee of the COPUOS before Magna Charta of space would be ready for signature and ratification by the UN Member States. On December 8, 1966, President Lyndon B. Johnson delivered a passionate statement at what must have been an inspiring moment in the history of human race: *“We are taking the first firm step toward keeping outer space free forever from the implements of war. [...] We have never succeeded in freeing our planet from implements of war. But if we cannot yet achieve this goal here on Earth, we can at least keep the virus from spreading.”*²¹⁵ These words, as inspirational as they may be, are often invoked by the advocates of non-militarization of outer space to construct the argument that the signature of Outer Space Treaty was in fact guided by the rationale of gradual ‘sanctuarization’ of the final frontier.²¹⁶ These interpretations often conveniently leave out the sentence that directly followed president’s call for keeping the *“virus from spreading.”*²¹⁷ In fact, Johnson’s reference to the spreading virus was further explained in the following sentence: *“We can keep the ugly and wasteful weapons of mass destruction from contaminating space. And that is exactly what this treaty does.”*²¹⁸ Again, the link between nuclear weapons and the signature of the Outer Space Treaty was very much present in the discourse at the time; an

²¹³ UN. Doc. A/RES/21/2222, Art. I.

²¹⁴ United States Department of Defense (2006) United States National Space Policy. Strategic Document of the Department of Defense, pp. 1-2.

²¹⁵ Johnson, L. (1967) Remarks at the Signing of the Treaty on Outer Space, delivered on January 27, 1967; available at: <http://www.atomicarchive.com/Docs/Missile/RemarksOSTreaty.shtml>, retrieved on 29/7/2014.

²¹⁶ Writers’ Group (2008) The Militarization and Weaponization of Space: Towards a European Space Deterrent. Space Policy. (24)1, p. 62.

²¹⁷ Johnson (1967), n.p.

²¹⁸ Johnson (1967), n.p.

inconvenient fact that proponents of ‘sanctuarization’ are yet to take adequately into account. Indeed, there seems to be a lot of confusion and misunderstanding concerning what the so-called Magna Charta of space actually does.

Arguably, it is the aspirational and ethical character of the wording of the Outer Space Treaty declaratory part that makes it so difficult to decipher what the treaty actually provides for in operable legal terms.²¹⁹ Due to its emphasis on outer space being “*the province of all mankind*”,²²⁰ insistence on activities in space being conducted for the “*well-being of all countries*” and the “*betterment of all humankind*”,²²¹ its call for outer space to be “*used exclusively for peaceful purposes*”,²²² recognition of “*common interest of all mankind in the progress of the exploration and use of outer space*”,²²³ the Outer Space treaty is often seen as a far-reaching constitution that lays down universal norms, which will ensure peaceful activities in outer space for centuries to come.²²⁴

The opposite is in fact the truth. In practical terms the Outer Space Treaty introduces only few operable legally binding obligations upon its signatories. First, the treaty prohibits the stationing of weapons of mass destruction in outer space, on the Moon, and other celestial bodies.²²⁵ By implication, ICBM or spacecraft armed with nuclear weapons passing through space is, strictly speaking, legal. Additionally, the treaty remains completely silent on the issue of stationing conventional weapons in outer space. In the absence of clear proscription of these weapons, such weapons are again legal.

Second, the treaty prohibits “*the establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military maneuvers on celestial bodies*”.²²⁶ In consequence, militarization of the infinite outer space void is, by definition, legal, otherwise the signatories would not have bothered include an operable legal prohibition on the militarization of celestial bodies in a specific manner. What is often overlooked by proponents of sanctuarization is the fact that Outer Space Treaty establishes a de facto dual-regime; one that introduces strict non-militarization of

²¹⁹ Jakhu (2013d), n.p.

²²⁰ UN. Doc. A/RES/21/2222, Preamble.

²²¹ UN. Doc. A/RES/21/2222, Preamble.

²²² UN. Doc. A/RES/21/2222, Preamble.

²²³ UN. Doc. A/RES/21/2222, Preamble.

²²⁴ Su (2010b), pp. 254-256.

²²⁵ UN. Doc. A/RES/21/2222, Art. IV.

²²⁶ UN. Doc. A/RES/21/2222, Art. IV.

the Moon and celestial bodies on the one hand, but allows for militarization of the outer space void on the other. Why would such double standard be introduced?

Again, the answer lies in the historical circumstances and the prevalent cognitive structures that held sway at the time of the treaty's adoption. While military uses of outer space were crucial for maintaining strategic stability between the Superpowers, the Moon or other celestial bodies held no such value military value at the time. However, this can only sufficiently explain why military uses of outer space void were permitted. Arguably, the non-militarization of the Moon and other Celestial bodies was necessitated by the Superpowers' race to the Moon, first officially announced by Kennedy in 1961. The perceived need to race to the Moon is in itself a cognitive structure par excellence, one that was clearly contingent on the presence of the Cold War dynamics of space race, which were already explained in detail in previous chapters. It is, therefore, plausible to suggest that had these factors been absent during the negotiations of the Magna Charta, the principle of non-militarization would likely not even appear in any form in the final draft.

Third, the treaty does recognize "*the common interest of all mankind in the progress of the exploration and use of outer space for peaceful purpose*".²²⁷ This is frequently pointed to by the advocates of space sanctuary as a clear testament to countries' will to maintain outer space free of conflict.²²⁸ However, what is often overlooked is that the call for peaceful use appears in the declaratory part, not the operative part of the treaty. More important still is the fact that the treaty does not in any way establish legally binding obligations upon its signatories in this respect. In other words, the principle of peaceful use is recognized as an aspiration the mankind should strive for, not as a contractual obligation to be observed. But even if the notion of peaceful use principle as a legally binding norm is entertained, its value for assuring sanctuarization of space would still be limited, if non-existent.

For example, could stationing of conventional weapons (for defensive purposes off course) be interpreted as a violation of this principle? Probably not, since Outer Space treaty explicitly establishes a dual-regime that only prohibits stationing of conventional weapons on celestial bodies. Alternatively, could an act of firing a space-based missile

²²⁷ UN. Doc. A/RES/21/2222, Preamble.

²²⁸ Kingwell (1990), pp. 108-109.

interceptor against an incoming ballistic missile carrying nuclear payload be interpreted as an affront to this principle, especially in the light of jus cogens right to self-defense enshrined in Article 51 of the UN Charter? Most likely not, since no treaty can establish obligations that violate peremptory norms of international law. Further still, would a preventive strike relying partly or completely on the use of offensive space-based assets against an imminent aggressor be construed as a violation of the Magna Charta? Such construction would be again improbable, given the tacit acceptance of the legality of preventive war in the face of imminent threat. All of this is to demonstrate that the principle of peaceful use does not add or detract in any way to the body of established norms of international law, especially those enshrined in the UN Charter. At the end of the day, the principle of peaceful use must be seen for what it really is: a legally inoperable rhetorical platitude that was a product of historical fears pertaining to the possibility of Superpower competition on Earth – generated by the tense atmosphere of the Cold War – spilling all the way to the Heavens.

These same historically rooted fears also help explain why the principle of non-appropriation in outer space was so strictly and unequivocally enshrined in the Magna Charta. Article II. of the Outer Space Treaty clearly provides that: “*Outer space, including the moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means*”.²²⁹ Indeed, the irrational fears of space race spilling over the Moon and other celestial bodies, despite mankind’s lack of technical means to colonize anything at the time, prompted states to expand on the original wording of many previous General Assembly resolutions that simply stated that celestial bodies would “*not be subject to national appropriation by claim fo sovereignty*”. In order to secure double, and perhaps triple certainty, the phrases “*by means of use or occupation*” and “*or by any other means*” were added to the final draft. It is these two additions that effectively prohibit even private property in outer space and the use of natural resources in outer space, respectively.

Arguably, the biggest invention of the Space Constitution that may outlive what is now becoming a rapidly aging relic of the Cold War is the freedom of access principle enshrined in Article I. of the treaty. This principle provides that “*Outer space, including*

²²⁹ UN. Doc. A/RES/21/2222, Preamble.

the moon and other celestial bodies, shall be free for exploration and use by all States without discrimination of any kind, on a basis of equality and in accordance with international law, and there shall be free access to all areas of celestial bodies”.²³⁰ This is perhaps the only norm out of the four principles that were considered here that has a potential of reaching some semblance of universality. But even the freedom of access to outer space can be challenged, ignored, twisted, or simply discarded – perhaps far too easily.

On December 12, 2012, Democratic People’s Republic of Korea (DPRK) succeeded in placing its first artificial satellite in Earth orbit. The UN Register of space objects states the purpose of the satellite as follows: *“Earth observation satellite for surveying crops, forest resources and natural disasters”*.²³¹ However, the launch immediately drew vehement condemnations from the United States and other Western Nations. Soon after the launch, the Union of Credible Scientists issued a statement, declaring that *“all evidence points to a satellite launch, despite headlines”* suggesting that the launch was in fact an ICBM test.²³² Little over a month later, the UN Security Council passed a resolution 2087 condemning *“the DPRK’s launch of 12 December 2012, which used ballistic missile technology and was in violation of resolutions 1718 (2006) and 1847 (2009)”* and further demanding *“that the DPRK not proceed with any further launches using ballistic missile technology”*.²³³ Given the fact that the only difference between a ballistic missile launch and a space launch is the trajectory of the vehicle, not the technology employed, is the UN Security Council essentially saying that the final frontier is not for North Koreans? What kind of an alternative launch vehicle should the DPRK use in order to exercise its legal right to reach for the stars?

That being said, one clear and significant distinction between rockets, boosters and missiles emerges, but the distinction is purely political, social and cultural, not one of objective scientific determination. Alas, the same nations that once extensively used the dual-nature of space-related technologies to cast their activities in strictly scientific and benign light are now exploiting the very same duality to deny technology access to

²³⁰ UN Doc. A/RES/21/2222, Art. I.

²³¹ Information furnished in conformity with the Convention on Registration of Objects Launched into Outer Space. Registration data on a space object launched by the Democratic People’s Republic of Korea, contained in Annex 1, supplied on 24 January 2013. UN Doc. ST/SG/SER.E/662.

²³² Weeden, B. (2012) Almost Everything You’ve Heard About the North Korean Space Launch Is Wrong. Wired, December 18, 2012; available at: <http://www.wired.com/2012/12/launch/>, accessed on 29/7/2014.

²³³ United Nations Security Council Resolution 2087 of 22 January 2013. UN Doc. S/RES/2087 (2013).

others. The discourse has changed profoundly since the early days of the space race. But so too are changing the so-called universal and enduring principles provided for in the Magna Charta.

Indeed, even the well-defined principle of free access to outer space “*without discrimination of any kind*” can be subverted, re-interpreted or even reshaped to new ends.²³⁴ In 2006, the Bush Administration demonstrated a supreme ability to do just that by publishing strategic document titled ‘US National Space Policy’ in which it asserted its right to “*deny, if necessary, adversaries the use of space capabilities hostile to U.S. national interests.*”²³⁵ Given the secrecy surrounding the US space programme in recent years, it is rather difficult to postulate with certainty how such ‘denial’ of access might look like. But as in Goya’s painting, the sleep of reason produces monsters. The US aspiration to achieve space control may reshape the legal structure governing the use of outer space once more. Clearly, the “*success of history belongs to those who are capable of seizing rules,*”²³⁶ to replace them, to disguise themselves as to pervert them, invert their meaning and redirect them against enemies.²³⁷ Whatever the future of space age holds for mankind, the ‘core’ principles inaugurated by humanity at the advent of space era are unlikely to survive long enough to see man boldly venture between celestial bodies, let alone among the stars.

²³⁴ UN Doc. A/RES/21/2222, Art. I.

²³⁵ United States Department of Defense (2006), p. 2.

²³⁶ Foucault (1984), pp. 85-86.

²³⁷ Foucault (1984), pp. 85-86.

Conclusion

“Our Age is in many ways unique, full of events and phenomena that never occurred before and can never happen again. They distort our thinking, making us believe that what is true now will be true forever.”²³⁸

Arthur C. Clarke, scientist and science fiction writer

The aim of this diploma thesis was to challenge some of the prevailing traditional interpretations surrounding the emergence of the four key principles governing conduct of states in space activities: a) non-militarization, b) peaceful use, c) non-appropriation, and d) freedom of access. In contrast to traditional interpretations that describe the emergence of these aforementioned principles in mostly static ways, the application of genealogical post-structural method provided a more dynamic explanation of how these principles came to being.

The findings indicate that the emergence of the four principles in question was contingent upon the presence of particular historical circumstances and specific cognitive structures of the early days of the Cold War. The emergence of the space sanctuary doctrine personified by these four principles was possible due to the presence of the following circumstances and cognitive structures: a) public fear of nuclear weapons, b) societal trauma incurred after World War II., c) competitive nature of the Cold War and the policy of containment, d) and highly politicized discourse pertaining to space activities.

The findings presented above revealed, for example, that the launch of Sputnik was a truly transformative event whose significance was at first not fully appreciated by decision-makers on both sides of the Iron Curtain. It was only American public reaction that allowed Soviet leaders to understand the immensity of their achievement. That in turn led them to pursue further ostensibly scientific and peaceful pursuits in space.

Perhaps the most important factor that led to the emergence of the four principles in question was pre-eminent public fear of nuclear weapons. Activities in outer space during the early days of the space race time and again induced fears of possible nuclear confrontation. The singular preoccupation of the LTBM with nuclear weapons,

²³⁸ Clarke, A. (1960) Essay, published in *Science Digest* (June 1960); later published in *Profiles of the Future : An Inquiry Into the Limits of the Possible* (1962), *Voices from the Sky* (1965), and *Greetings, Carbon-Based Biped!* : *Collected Essays, 1934-1998* (1999).

reviewed media discourse and public official statements all suggest that a plausible link can be established between non-militarization and peaceful use of outer space on the one hand and fear of nuclear weapons on the other.

A second important factor was a high politicization of issues pertaining to outer space throughout the examined period as a result of ongoing highly publicized space race, imminent fear of nuclear weapons and the novelty of the idea of man in space. The human preponderance to conceive of outer space as a value rather than a place did play a role in the construction of these principles. Or more precisely, this inclination was skillfully exploited by actors exercising power over the discourse. However, the findings also indicate that human inclination to conceive of space as a value, in and of itself, would not have been sufficient for the emergence of the principles in question.

And finally, a third major factor identified above was the competitive nature of the relationship between the two Superpowers. This structure forced both actors to compete with one another for prestige, influence, and technological dominance. Their acts were mutually constitutive and in many ways transformed the underlying dynamic of the Cold War itself.

The findings presented above, if taken together, further indicate that the four principles in question are unlikely to survive into the future. The reasons are threefold. First, many of the historical circumstances and cognitive structures that gave rise to these principles either no longer exist or play a much less prominent role in contemporary discourse. Second, some of the principles, if taken to their logical conclusions, can prevent mankind from venturing into the final frontier, not the opposite. And finally, the Bush Administration publication of new doctrinal guidelines for outer space are a clear testament that the principles in question are being already challenged and redefined. Indeed, the universality of these principles is a dubious proposition.

Summary

This diploma thesis critically examines traditional positivist interpretations concerning the birth of four core norms of the current legal regime governing activities of states in Outer Space: a) non-militarization, b) peaceful use, c) non-appropriation, and d) freedom of access. Traditional interpretations often explicate the emergence of the aforementioned principles in static terms, either as a result of universal aspirations of mankind to peacefully explore the final frontier, or alternatively as a product of rational calculations of self-interested states.

Analysis of the first decade of the space age through the lens of post-structural genealogical method proposed by Richard Price reveals a much more complex picture. Application of critical genealogical approach indicates that the emergence of the four norms in question was contingent on the presence of particular historical circumstances and cognitive structures of the Cold War: a) fear of nuclear weapons, b) policy of containment, c) trauma of the Second World War, and d) highly politicized outer space discourse due to the presence of the space race.

The findings also indicate that without the presence of the particular historical circumstances and cognitive structures that necessitated their emergence, the four principles in question are unlikely to survive into the future, at least not in their current form.

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Non-militarization of the Final Frontier Tracing the evolution of norms in Outer Space

Key words: outer space, discourse, critical theory, non-militarization,
evolutionary analysis, international law

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1. Research Question

On the 4th of October 1957 the Soviet Union successfully launched the first man-made object into outer space, capturing the imagination of the entire world in the process. Few would have questioned the significance of that day, which marked the beginning of the Space Age of mankind. Before the same decade was out, U.S. President Dwight Eisenhower took the floor at the 15th Annual Session of U.N. General Assembly and called on world leaders to combine efforts to “*preserve outer space for peaceful use and development for the benefit of all mankind.*”²³⁹

What ensued was a comprehensive effort of both Superpowers to agree on a set of rules that would govern the conduct of states in outer space. These efforts culminated on the 10th of October 1967 with the signature of the Outer Space Treaty that continues to form the basis of International Space Law in the 21st century. Among the most significant innovations of the so-called Magna Charta of Space was agreement of signatories to designate the entire outer space as ‘*res omnium communis,*’ or “*the province of all mankind.*”²⁴⁰ In other words, states agreed that outer space would not be subject to national appropriation by claims of sovereignty; instead, it would be open for peaceful exploration and use to all countries irrespective of their degree of economics, scientific or social development.

Yet why would states so quickly agree on excluding the entire outer space – essentially a limitless spatial frontier - from the Westphalian concept of sovereignty, which has by then become the very basis of the world order? How did outer space come to be regarded as different from other spatial dimensions of human activity and why was it subjected to special regulatory regime recognizing only community rights rather than states’ sovereign rights?²⁴¹ The nations of the world must have immediately understood the importance of outer space. The last frontier would offer not only unlimited source of natural resources but also a tremendous strategic and military advantage to whoever would achieve dominion over it. Yet, the same nations of the world apparently choose to exempt outer space from the vicious cycle of competition and committed to use it exclusively for peaceful purposes.

The primary purpose of this M.A. research project is to answer how did the outer space regime emerged and how it evolved over time. Furthermore, the author’s main motivation is to critically examine the existence of general belief that outer space should not be militarized, which emerged despite the fact that International Space Law does not specifically prohibit proliferation of conventional weapons and military technology into

²³⁹ Eisenhower, D., *Remarks at the Annual Session of the 15th UN General Assembly*, September 22, 1960.

²⁴⁰ United Nations General Assembly, *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies*, UNGA/RES/2222(XXI) of 19 December 1966, Article 1.

²⁴¹ Price, R., *A Genealogy of the chemical weapons taboo*, International Organization, Vol 49., No. 1, 1995, page 73.

outer space (it only implicitly prohibits their use).²⁴² By tracing the evolution of outer space norms over time, the author also hopes to identify specific trends, which might provide further insights into future prospects for upholding the non-militarization principle in this domain. Since scientific progress today is acquiring an ever-more rapid pace, the question of whether outer space will be preserved as a zone for peaceful exploration, or whether it will be transformed into an area of military competition is more urgent than ever. The answer may very well define the entire future direction of mankind.

2. Methodology & Terminology

The methodology of this research project is based on post-structural discursive analysis. Richard Price and his article titled “*A genealogy of the Chemical Weapons Taboo,*” which traces the discursive strategies employed to delegitimize the use of Chemical Weapons in the first half of the 20th century, provided important inspiration for devising the methodology of this M.A. research design.

Adhering to methodology advanced by Richard Price, this research project will treat non-militarization principle of outer space as relative, rather than an absolute principle. This research assumes that the principle of non-militarization of outer space had to be constructed by relevant actors over time through utilization of distinct discursive strategies and moral concepts. This methodological approach also assumes that norms and principles can evolve over time and are subject to both external circumstances and changes in discursive strategies.

In order to analyze and explain establishment and evolution of outer space regime, the author of this research will go through the following specific undertakings: (1) identification of contending discourses and their evolution over time, (2) identification of particular historical circumstances that played an essential role in the development of the principle, and finally (3) identification of strategies, motivations, and mechanisms of actors who exercise power over discourse in the given area of policy-making.²⁴³

Such research design should not only reveal that actors who pushed for establishment of the principle of non-militarization of outer space had to use specific discursive strategies to succeed, but should also pin-point individual speech acts and concepts that these actors had to invoke to delegitimize practices contrary to the aforementioned principle. Furthermore, the aim of this research design is to demonstrate that actors who dominate the discourse concerning outer space are deliberately using this discourse as a source of power, which allows them to delegitimize practices of less influential actors.

²⁴² United Nations General Assembly, *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies*, UNGA/RES/2222(XXI) of 19 December 1966, Articles 1 & 2.

²⁴³ Price, R., *A Genealogy of the chemical weapons taboo*, International Organization, Vol 49., No. 1, 1995, page 89.

One must also keep in mind that according to Price, discursive strategies can be only successful at establishing and maintaining enduring principles if the discourse itself is highly politicized and if it skillfully invokes essential moral values.²⁴⁴ The author of this research project will also focus on identifying specific moral values invoked by relevant actors and assess the degree to which the issue of non-militarization of outer space is politicized in contemporary public and security discourses.

Before proceeding further, one must also address the issue of terminology, especially the difference between weaponization and militarization of space. Whereas weaponization refers to activities that would aim at stationing offensive weapons in outer space, militarization of space assumes placement and development of either weaponry or technology that could be used for military purposes in outer space. It is important to point out that while weaponization of outer space has arguably not yet taken place, militarization of space is already well under way according to assessments of many military experts and some intergovernmental organizations.²⁴⁵

For the purposes of this research design, the author of this essay will focus on the broader question of militarization, rather than weaponization of outer space. In a similar sense, the principle of non-militarization of outer space would consider as a matter of concern all activities connected to outer space that might have potential military dimension.²⁴⁶ Such focus stems not only from the realization that many man-made objects placed in outer space have dual military-civilian utility but also from author's conviction that both activities (i.e. weaponization and militarization of space) would in fact constitute a normative (if not substantive) violation of States' commitment to use outer space exclusively for peaceful purposes.

3. Review of Existing Literature

Author's preliminary research into the topic suggests that there is a plethora of academic literature dealing with the topic of outer space. Yet, to author's best knowledge, the existing literature focuses overwhelmingly on whether non-militarization of space is a desirable and sustainable phenomenon.

On the one hand, proponents of non-militarization continue to reproduce the same discursive strategies entrenched in the claim that outer space is not a normal dimension of human activity, and human conduct there should, therefore, be governed by a higher set of moral principles.²⁴⁷ On the other hand, proponents of militarization point to various strategic uses of outer space and the inevitability of eventual proliferation of conventional weapons into this sphere, which will be necessitated by states' desire to secure vital national interests.²⁴⁸

²⁴⁴ Idem, page 90.

²⁴⁵ Mrázek, J., *Právo mezinárodní bezpečnosti a odzbrojení*, Academia, Praha 1990, page 339.

²⁴⁶ Idem, page 341.

²⁴⁷ Barnett, T., *United States National Space Policy, 2006 & 2010*, Florida Review of International Law, Vol. 23, No. 1., 2001, page 286.

²⁴⁸ Spring, B., *Slipping the Surly Bonds of the Real World: The Unworkable Effort to Prevent the Weaponization of Space*, Online Lecture from the 10th of May, 2005, available at:

A sizable body of literature is also devoted to interpretation of legal aspects governing the outer space regime. Most authors in this stream seem to be inclined to uncritically accept many of the discursive justifications based on moral considerations.²⁴⁹ Few authors examine the issue historically, but such historical analyses tend to focus on purely linear narratives and largely overlook evolving discursive strategies that are used and repeated over time.²⁵⁰

Finally, a number of studies is devoted to space programs of various countries or technological developments in the field.²⁵¹ While the last type of studies provides invaluable insights into contemporary development of military technology that could have tremendous strategic value if used in outer space, this type of studies is too technical and fails to take into account political, as well as moral issues, which indeed form an indispensable part of the discourse surrounding the prospect of outer space militarization.

The author's review of relevant academic literature suggests, that no study to date has attempted to identify specific discursive strategies that allowed for outer space to be framed as different from other special dimensions of human activity. Furthermore, to author's knowledge, no study has ever attempted to map the evolving trends in the discourse surrounding the outer space in a holistic and comprehensive way. It is indeed a pity that both proponents and opponents of militarization of outer space advance mostly static arguments, which are at any case entrenched in positivist thinking of traditional international relations theories.

The author is strongly convinced that a more critical, dynamic, and post-structural analysis which would take into account the fact that principles can emerge, evolve and decline over time, is sorely needed to provide a fresh perspective on the subject. Therefore, it is the author's genuine belief that a study based on discursive evolutionary analysis would be a valuable contribution to research endeavors in this particular field. Such research could not only cast a light on how the principle of non-militarization of outer space emerged and evolved over time, but could also reveal what strategies had to be used by relevant actors to bring the establishment of this principle about, and whether these strategies transformed with the change of security environment after the end of Cold War.

4. Data & Analysis

The primary set of independent variables related to this research will be derived from all available sources of International Space Law,²⁵² namely: 1) international

<http://www.heritage.org/research/lecture/slipping-the-surly-bonds-of-the-real-world-the-unworkable-effort-to-prevent-the-weaponization-of-space>, retrieved on 06/03/2013.

²⁴⁹ Cassese, A., *International Law (2nd edition)*, Oxford University Press, New York, 2005, pages 95 – 96.

²⁵⁰ Buncombe, A., *Space: America's New War Zone*, The Independent, 19 October 2006.

²⁵¹ Spacy, W., *Assessing the Military Utility of Space-Based Weapons*, in: SPACE WEAPONS: ARE THEY NEEDED?, pages 157 – 173, John Logsdon & Gordon Adams, eds., 2003, available at http://www.gwu.edu/~spi/assets/docs/Security_Space_Volume.Final.pdf, retrieved on 05/25/2013.

²⁵² See section 'Preliminary Sources' for complete overview of the international legal acts (author's note).

treaties, which are binding upon all signatories, 2) legal principles governing the conduct of states in outer space, which are non-binding in general, but may reflect a customary practice in specific areas, 3) U.N. General Assembly Resolutions, which are non-binding but arguably represent general political consensus of the world community as a whole, and finally 4) authoritative relevant rulings of the International Court of Justice.

The review of the aforementioned legal documents will not only enable the author to identify key concepts, notions and discursive strategies that states regarded as crucial for the establishment of the outer space regime, but will also allow the author to trace the evolution of changes in these key concepts, notions and discursive strategies over time. The revision of substantive provisions of international legal acts is, in and of itself quite useful, but one should not overlook the importance of declaratory preambles contained therein, which often include comprehensive explanation of states' rationale for action as well as invocation of specific moral values.

However, any discursive analysis would be incomplete, if it relied only on legal acts. In order to introduce greater diversity into this research, the author will also analyze mass media discourse in relevant countries (especially the USA and the USSR), high-profile remarks of public officials, historical and contemporary official state strategies regarding the use of outer space, as well as official records of the U.N. Registry of Space Objects, which contain an exhaustive summary of all objects launched into outer space, along with general description of the objects' purpose supplied by the launching state.²⁵³

As mentioned earlier, one key aspect of the proposed research design is also the analysis of historical environment in which the principle of non-militarization of outer space developed. Apart from the aforementioned sources, the author will also draw on extensive array of academic literature devoted to the dynamics of both the Cold War in general and the militarization of outer space in particular, in order to effectively identify various historical tangles and specific circumstances that affected birth as well as evolution of the outer space regime.

5. Operationalization

For the purposes of this M.A. research, the principle of non-militarization of space will perform the role of dependent variable. As mentioned earlier, the set of independent variables have been derived from comprehensive review of all available sources of International Space Law. The preliminary list of variables, which might be expanded or shortened as the research progresses, includes many, if not most, supportive arguments that states used to establish or to enhance the principle of the non-militarization of space.

The list of supportive variables is as follows: (a) ban on conventional weapons, (b) ban on nuclear weapons, (c) notion of space being the province of all mankind, (d)

²⁵³ United Nations Space Object Registry, *2010 Summary Report of Objects Launched by the USA*.

notion of space being the common heritage of mankind, (e) invocation of sentiments of humanity, (f) use of space for peaceful purposes, (g) use of space for the benefit of all mankind, (h) notion of positive scientific progress, (i) notion of international cooperation, (j) equality of states' access to technology, (k) principle of assistance in exploration and emergencies, (l) ban on private ownership in space, (m) sharing of information, (n) protection of environment, (o) ban on national appropriation, and (p) presence of specific enforcement mechanism.

The author strives to analyze whether all of the aforementioned variables gained on importance in outer space discourse over time, or whether they exhibited a tendency to disappear from space discourse and loose on relevance as the time progressed. In order to determine the frequency with which each of the aforementioned variables is invoked, the author will create a chart placing the relevant sources on the horizontal axis according to their year of adoption, and the supportive variables on the horizontal axis. The chart should not only reveal whether the aforementioned concepts, notions and values remained valid from 1957 onwards, but also indicate whether these variables exhibited a tendency to disappear from discourse over time (see attached excel table for preliminary overview of the chart design).

The author assumes that the more these aforementioned independent variables will be invoked, the more likely it is that the principle of non-militarization of outer space will be adhered to and generally respected. Additionally, the chart should also reveal which of the independent variables are the most frequently utilized (1) in certain time periods, and (2) which key concepts, moral values and notions are most invoked overall.

The ultimate aim of this analysis is not only to uncover how the principle of non-militarization of outer space originated, but also to determine whether the end of the Cold War somewhat affected the evolution of the principle or altered specific discursive strategies used to delegitimize certain practices with regard to conduct of states in this domain. Similarly, the presented methodological approach should also allow the author to determine whether current discursive trends suggest weakening or reinforcing of the non-militarization of outer space principle.

6. Preliminary structure of the M.A. thesis

- Introduction
- Overview of existing provisions of International Space Law
- Traditionalist interpretations of non-militarization principle
- Genealogy of non-militarization
- Evolution of outer space discourse over time
- Contemporary discursive strategies
- Reality of outer space militarization & dual-use technology
- Future prospects and scenarios
- Conclusions

7. Preliminary Sources

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