SPACE LAWFARE: A 'LEGAL' FIGHT FOR THE HEAVENS

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INTRODUCTION

Rapid advancement in space technology and demonstrative application of space capabilities in almost all walks of life have led to space being recognised as a "strategic asset" by nations today. Space is not only an enabler and provider of warfighting capabilities but also plays a significant role in the economic development of a nation. Space capability is a prominent 'force multiplier' for militaries around the world and economic benefits of the potential of linking vast distances, gathering information, improving education and exploiting resources, amongst others, makes the ability to access and utilise space a priority for any nation.

The growing dependence of some advanced nations on space has also opened up the possibility of it being a 'soft target' for adversaries. While it is recognised that space has always been linked to other goals (usually related to foreign policy),[1] in contemporary environment it is considered as 'congested, contested and competitive.'[2] Space is considered as the inevitable next domain of conflict and it can be expected that nations will

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1. Joan Johnson-Freese, *Space as a Strategic Asset* (New York: Columbia University Press, 2007), p. 7.
2. Joan Johnson-Freese, *Space Warfare in the 21st Century* (London: Routledge, 2017).

Major spacefaring nations have over the years adopted a security driven and lately, a commercial approach to shape the international space regime rather than cooperative or symbiotic ones.

employ all aspects of national power to secure an advantage.

For too long in our history we have considered war as an act of extreme violence unleashed by one State on another to force its will. However, it is well acknowledged that military is just one of the tools and one element of national power rather than the sole determinant of it. Today, nations adopt multifarious means to further their national interests in the competitive and contested world. It would not be incorrect to paraphrase Clausewitz's classic dictum 'War is the continuation of politics by other means' to suggest that 'politics is a tool of war'. The behaviour of almost every nation during the recent Covid-19 pandemic outbreak of putting national interests first by closing its borders, prohibiting exports of medical equipment and deploying all means available to procure required equipment from other countries[3] is a stark reminder to the policymakers of the Hobbesian nature of international relations, notwithstanding the 'globalised complex interdependence' advocated by some commentators.

It is argued that space exploration and exploitation, ostensibly governed by a legal regime apparently based on principles of international cooperation and 'good of mankind' is, in effect, largely a by-product of attempts by major spacefaring nations to deny others any advantage which might be detrimental to own national interest and to ensure own unhindered and uncontested access to 'space resources'.[4] Major spacefaring nations have over the years adopted a security driven and lately, a commercial approach to

3. Happymon Jacob points out that the first instinct of every major economy was to close borders, look inwards and localise. He mentions that in the EU the 'member states turned inwards for solutions: self-help, not regional coordination, was their first instinct'. Happymon Jacob, "COVID-19 and the crumbling world order", *The Hindu*, April 13, 2020.

4. The geosynchronous orbital belt is considered the most lucrative space asset at this stage of technological development. With technological advancement, extraction and exploitation of resources from celestial bodies may open up significant possibilities.

shape the international space regime rather than cooperative or symbiotic ones.

This article argues that the development of international space regime was largely influenced by, and today is shaped by, realist considerations of achieving advantage over adversaries for national security and prioritising national interests over the often claimed considerations of international cooperation. It is important that national policymakers and practitioners responsible for safeguarding Indian space assets be cognizant of the tools of 'lawfare' used by different nations in varying degrees to secure their interests in space without recourse to 'warfighting'. The article will briefly discuss the existing international space regime (hereafter referred to as regime) and then highlight the various considerations which informed its development and shape the regime as it stands today. The article highlights the predominantly 'realist' considerations that have shaped the regime and the ingenious interpretations of existing space laws by spacefaring nations which, it is argued, are against the spirit if not the letter of the regime. Some inferences and implications for India will also be discussed.

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LAWFARE

The conceptual foundations of lawfare can be traced back to ancient times wherein Sun Tzu recognised that war and diplomacy 'comprise a continuous, seamless activity' and viewed diplomacy as the best means of attaining victory without bloodshed.[5] It has been argued that Hugo Grotius, the 'father of international law', may be considered as the first practitioner

5. John W. Bellflower, "The Influence of Law on Command of Space", *The Air Force Law Review*, vol. 65 (2010), p. 110.

of lawfare for defending the concept of high seas.[6] In modern times the first reference of lawfare as a viable instrument of statecraft was recorded in a book, *Unrestricted Warfare*, written by two officers of People's Liberation Army of China in 1999.[7] The authors contend that war has undergone a metamorphosis wherein it is no longer simply "using armed forces to compel the enemy to submit to one's will, but rather… using all means, including armed forces or nonarmed force, military and non-military, and lethal and non-lethal means to compel the enemy to accept one's interest."[8] Built-in in the discourse was the concept of legal means to counter an adversary's strength. They defined 'legal warfare' as the "use of international law, and other means, to create a change in the strategic environment without the use of direct military action." Subsequently, US Air Force Major General Charles J. Dunlap Jr defined lawfare as "a method of warfare where law is used as a means of realizing a military objective."[9]

Fareed Zakaria contends that diversification and diffusion of power within the international system has led to an increased need for legitimacy in international conduct[10] and Kagan has remarked that "the struggle to define and obtain international legitimacy… may prove to be the most critical contests of our time."[11] Viewed in this light, achieving internationally recognised legitimacy for one's action has become the prerequisite for a successful national strategy. Logan defines lawfare as "the strategy of using or creating international or domestic law that result in a change in the strategic environment that is in the pursuit of a military or political objective."[12] As per Listner, employment of lawfare in outer space can be noticed even in the pre-Sputnik era, even though the term

6. Mare Liberum, published in 1609; ibid., p. 112.

7. Trevor Michael Alfred Logan, "International Law and the Use of Lawfare: An Argument for the US to Adopt a Lawfare Doctrine" (Graduate theses, Missouri State University, 2017), p. 4.

8. Bellflower, n. 5, p. 111.

9. Logan, n. 7, pp. 4-5.

10. Fareed Zakaria, "The Post-American World", pp. 4-5 quoted in Bellflower, n. 5, p. 110.

11. Robert Kagan, "America's Crisis of Legitimacy", *Foreign Affairs*, vol. 83, no. 2, March/April 2004, at 65 quoted in Bellflower, n. 5, p. 110.

12. Logan, n. 7, p. 5.

had not yet been defined, wherein the Soviet Union attempted to use customary law to claim sovereignty into space beyond the atmosphere. He argues that this tool of warfare, which uses 'clichés of cooperation and sustainability', is a ploy that employs the ambiguous nature of international law to create legal constraints to degrade an adversary's use of outer space. He asserts that lawfare in space has continued in the years since then and today manifests in the disarmament proposals for outer space.[13] It cannot be denied that attempts by major spacefaring nations towards proposals for disarmament of outer space are an acknowledged legal means aimed at limiting military advantage of the adversary and would justifiably fall under the rubric of space lawfare, hence this article will restrict the discussion of lawfare practised under the guise of international cooperation and legitimacy towards the development of the space legal regime and observed current practices of nations in space.

INTERNATIONAL SPACE REGIME

The international space regime is primarily centred around five primary treaties.[14] However, there is much more to space law than these five core treaties. International space law is embedded in the bigger system of public international law and much of 'general international laws' apply to space or space activities. Various international laws like Law of Armed Conflict, Human Rights Law, environmental laws, UN Charter, Resolutions and Articles can all be considered to be part of the

13. Michael Listner, "The art of lawfare and the real war in outer space." *The Space Review*, https://www.thespacereview.com/article/3571/1. Accessed on March 17, 20.

14. The five treaties are: (1) Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies; (2) Agreement on the Rescue of Astronauts, the Return of Astronauts and Return of Objects Launched into Outer Space; (3) Convention on International Liability for Damage caused by Space Objects; (4) Convention on Registration of Objects Launched into Outer Space; (5) Agreement Governing the Activities of States on the Moon and other Celestial Bodies.
Some commentators do not consider the fifth treaty, the Moon Agreement, as one of key constituents for the fact that is has been ratified by only 18 countries and none of them is a major spacefaring nation.

international space regime.[15] There is general consensus that the 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies,[16] is foundational in nature and character of international space legal regime as the rationale and contents of the four other space treaties are based on the provisions of OST[17] to the extent that some authors call the Treaty both the Constitution and Magna Carta of outer space.[18] This paper will, therefore, bring out the realist motives and considerations of spacefaring nations which guided the negotiations of OST.

DEVELOPMENT OF SPACE REGIME

Walter McDougall has argued that national space programmes were born of four great inventions: radar, ballistic rocket, electronic computer and atomic bomb[19] and Dolman postulates that it was the perceived military necessity predicated on the growing power of a potential enemy that drove the development of space programmes.[20] There is widespread consensus in the published literature that the space programmes of almost all nations initially originated as military programmes with subsequent diversification into the civilian field.[21] Space was recognised as the 'ultimate high ground' and could provide any nation that dominated it with a crucial battlefield edge. The launch of Sputnik by Russia in October 1957 had a profound

15. For a discussion on sources, formulation and constituents of international space law see Cassandra Steer, "Sources and law-making processes relating to space activities", in Ram S. Jakhu and Paul Stephen, eds., *Routledge Handbook of Space Law,* (Oxon: Routledge, 2017).

16. Hereafter referred to as Outer Space Treaty (OST).

17. Ram S. Jakhu, "Evolution of the Outer Space Treaty" in Ajay Lele, ed., *50 Years of the Outer Space Treaty* (New Delhi: IDSA, 2017), p. 13.

18. Joan Johnson-Freese, *Space as a Strategic Asset* (New York: Columbia University Press, 2007), p. 108. Although there are a few authors who do not agree with such an attribution.

19. Walter A. McDougall, *... Heavens and the Earth: A Political History of Space Age* (New York: Basic Books, 1985), quoted in Everett Dolman, *Astropolitik: Classical Geopolitics in the Space Age* (London: Frank Cass Publishers, 2002), p. 89.

20. Everett Dolman, *Astropolitik*, n. 19, p. 91.

21. The Indian space programme is acknowledged as civil-led which made entry into military applications subsequently.

effect on the American public. Having been beaten by the Russians in launching a satellite was considered to be not only a reflection of the communist advancement in the scientific field but also a proof of the superiority of the communist military, cultural and political system. The aspect of a Russian satellite making a pass over the mainland United States four to six times in a day triggered US public insecurity that no one and nowhere was safe from nuclear devastation by the Russians. Having had the first mover's advantage, it appeared that the Russians were prepared to dominate the new domain.[22]

United States found an answer to the Soviet threat in public efforts at cooperation while the scientists worked to catch up. With the potential of the new frontier to be the ultimate 'high ground', US foreign policymakers set out to convince or manipulate the Soviets into a public position of joint exploration of outer space.

Dolman has argued that international cooperation in space evolved not due to noble ideas of synergy or benevolence but as an integral component of an overall strategy by spacefaring nations to ensure their political survival.[23] In line with the accepted military dictum to 'control' any factor which provides an advantage and deny the same to the adversary, the United States found an answer to the Soviet threat in public efforts at cooperation while the scientists worked to catch up. With the potential of the new frontier to be the ultimate 'high ground', US foreign policymakers set out to convince or manipulate the Soviets into a public position of joint exploration of outer space.

The approach was to offer space exploration as 'common heritage of all mankind' and to ensure that if outward cooperation was not feasible, military

22. Although the USSR was the first to launch a satellite and the public perception in the West was shaped by politicians and media (*Life* magazine published articles like "Soviet Satellite sends US in a Tizzy"; "The Feat that Shook the World") as having been beaten in the race, there are counterviews that the Russians did not have the edge over the US as was brought out to be and it was politically and militarily prudent for the US not to bring out the deficiencies of the Soviet system. In fact, some accounts suggest that the US allowed Russia to be the first to launch a satellite as the event served the larger interests of the US. In either case, it is evident that the event was managed to further the national interests of the US.

23. Dolman, n. 19, p. 109.

neutrality was to be ensured. In the view of the US, a policy of outwardly global cooperation was to be followed to deny supremacy in space to any other nation.[24] Further, by the 1960s, the space power rivalry fuelled by the Superpower competition of the Cold War and the massive space build-up by President Kennedy had reached a point where it was felt that an international regime had to be enacted.[25]

NEGOTIATIONS FOR OUTER SPACE TREATY

It can be argued that the negotiations for the Outer Space Treaty (OST) commenced as arms control negotiations which, after the rigours of realpolitik, ultimately culminated in the Treaty. At the peak of the Cold War, the US had the advantage of forward bases in Europe and other parts of the world where it based its strategic bombers and had the capability to target the Soviet Union. The Russians, on the other hand, did not have the advantage of forward bases and as such mainland US was insulated from attacks by the Russians. However, the launch of the space vehicle (Sputnik, in October 1957) demonstrated the capability of the Russians to manufacture ICBMs and target the US Mainland.[26] Against this background, President Eisenhower sent a proposal to the Soviet Union for banning of ICBMs in space. The proposal was the first veiled effort to neutralise Soviet ICBMs, and predictably, it was rejected by the Soviets who responded by linking it with US willingness to withdraw nuclear weapons from all foreign bases. The negotiations resulted in a proposal for United Nations to establish a programme to oversee international use of space[27] which then led to the formation of Ad Hoc Committee on the Peaceful Uses of Outer Space (AHCOPUOS)—the precursor of COPUOS. The Committee proposed some

24. Dolman, n. 19, n. 19, pp. 94-96. The 'realist' approach to space of the US has been acknowledged by several authors. See below.

25. Dolman, n. 19, p. 109. Byers has argued that spacefaring states have a shared interest in avoiding the uncertainties and challenges that would result from absence of rules. See M. Byers, "Cold dark and dangerous: international cooperation in the arctic and space", *Polar Record* 55 (2019), p. 38.

26. *Life* magazine stated that "…the launching seemed to prove that Russia's intercontinental missile is a perfected machine…", Dolman, n. 19, p. 94.

27. Proposed by the Soviet Union on March 15, 1958.

basic principles which were unanimously approved as Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space in 1963 (the principles eventually became the basis for eight articles of OST). Subsequently in 1966, the US and the Soviet Union conveyed their desire to negotiate[28] a treaty which was accomplished on September 16, 1966. The Treaty was unanimously agreed to by UNGA on December 19, 1966 and entered into force on October 10, 1967.

To consider that the negotiations for norms to govern activities in a domain which presented the potential for unforeseen military advantages to any side to have been motivated by the larger good of mankind at the peak of Cold War—as opposed to realpolitik concerns—would be too optimistic an assessment of human benevolence.

It can be argued that the motives of the nations for negotiating a space regime attributed this approach to a fixed realpolitik perspective and discounted the possibility that the cooperation could have been motivated by a genuine desire of the nations to work harmoniously for the betterment of mankind. While it is not denied that countries of the world, especially the scientific community, have indeed cooperated and collaborated in diverse aspects of space exploration over the years, it is submitted that a discussion of politics of international cooperation in outer space *per se* is considered outside the purview of this paper.[29] With respect to the development of the space legal regime, it is important to remember the geopolitical context of the times when the regime was negotiated (1960s).[30] The world was at the peak of the

28. President Johnson announced his desire to negotiate on May 7, 1966 and Soviet Ambassador Gromyko conveyed his willingness on May 30, 1966.

29. Although it can be argued that even the limited cooperation has also been to a large extent influenced by realpolitik motivations. For a discussion on the international politics of space development, the reader is referred to the Pulitzer awarded W. McDougall, *… Heavens and the Earth* which is considered the best discourse on the subject.

30. Jakhu argues that the period between 1959 and 1963 was the most critical in the evolution of OST due to the geopolitical situation in the world—the height of Cold War. Although OST was finally signed in 1967, in 1963 the Declaration of Legal Principles was adopted which eventually formed the foundation of OST. Jakhu, n. 17, p. 15.

Cold War between the two blocs and had witnessed a major international crisis[31] involving deployment of missiles which is considered closest that mankind has come to a nuclear exchange till now. To consider that the negotiations for norms to govern activities in a domain which presented the potential for unforeseen military advantages to any side to have been motivated by the larger good of mankind at the peak of Cold War—as opposed to realpolitik concerns—would be too optimistic an assessment of human benevolence. Jakhu asserts that the geopolitical atmosphere at the beginning of the space age effectively determined the course of global space governance that ensued,[32] and as per Johnson-Freese, "a policy of strategic restraint, specifically restraint of military actions in space… had prevailed during the 'space race' years… These underlying premier strategic thoughts made possible the 1967 Outer Space Treaty."[33]

Johnson-Freese asserts that space politics are affected by the larger geopolitics[34] and Johnson postulates that an adherent of theory of "realism" would agree that states participate in international cooperation only when it is in their own self-interest to participate in cooperation."[35] Havercroft and Duvall in their critique of Deudney's "nascent theory of federal–republican international system that could limit conflict between space powers…" acknowledge that Deudney "ignores structurally asymmetric relations, in effect he ignores power." They argue that Deudney fails "to acknowledge the profound asymmetries of aspirations and technological-financial-military capacities among states for control of orbital space."[36] They also postulate that the realist version of astropolitics put forth by Dolman is "precisely the

31. The Cuban Missile Crisis of 1962.

32. Jakhu, n. 17, p. 14.

33. Johnson-Freese, n. 1, p. 8.

34. Ibid., p. 151.

35. Christopher Johnson, "Policy and Law Aspects of International Cooperation in Space", American Institute of Aeronautics and Astronautics, Inc. (2011), p. 2.

36. J. Havercroft and R. D. Duvall, "Critical Astropolitics: The Geopolitics of Space Control and the Transformation of State Sovereignty: International Relations Theory and the Politics of" in N. Bormann and M. Sheehan, eds., *Securing Outer Space: International Relations Theory and the Politics of Space* (Routledge, 2009), pp. 49-50.

strategic vision underlying the policy pronouncements" of United States.[37] Johnson-Freese also acknowledges that "realism… has often prevailed as the view of nation-states that consider space as… 'a vital national interest'" and further propounds that in outer space realist goals are best achieved by liberal-internationalist means (and includes legal means, such as OST, as one of them).[38] Thus, the underlying proposition of 'legal means to support realist goals' in space supports the argument of this paper, i.e., lawfare to achieve national objectives in space.

A significant aspect of the international space regime is the preference of the major space powers for consensus decision-making process and soft laws (rather than legally binding treaties). Contrary to what popular opinion might suggest that consensus decision making provides equal say to all members,[39] Byers argues that consensus decision making does not imply equality of power and influence but rather facilitates application of power. It provides a capacity to act as a spoiler in both theory and practice and hence makes it attractive for powerful states to protect their core interests. He argues that consensus decision making made it easier for the United States and Russia (the only space powers at the time) to achieve their desired outcomes, at least on issues of significant concern to them, while preserving the appearance of unanimity. Further, he argues that in a backdrop of rivalry and suspicion, soft law is preferred over legally binding treaties as states are able to pursue collective goals without making clear or firm commitments to others that they distrust and avoid mandatory commitments. It also helps that soft laws reduce the stakes and can be kept within the ambit of the experts for consensus decision making.[40]

37. Ibid., p. 47.

38. Joan Johnson-Freese, "Outer Space Treaty and International Relations Theory: For the Benefit of All Mankind", in Ajey Lele, ed., *50 Years of the Outer Space Treaty* (New Delhi: Pentagon Press), pp. 21-23.

39. Jakhu argues that to ensure that views and perspectives of all Committee members were heard and respected, it was decided that decisions by COPUOS will be made by consensus. Jakhu, n. 17, p. 16.

40. Byers, n. 25, pp. 39-40.

THE OUTER SPACE TREATY

Spacefaring nations recognised many requirements from outer space. These included monitoring the activities of the adversaries (at the peak of the Cold War); denying the adversary any perceived military advantage (of 'ultimate high ground'); safeguarding the (as yet undetermined) commercial value of outer space; and standardising the expected future behaviour in space while at the same time couching the objectives in morally acceptable terminology of international cooperation and larger 'good of mankind' … It would be instructive to assess the approach and motivations of the major powers towards negotiations for various aspects of the Treaty.

RIGHT OF INNOCENT PASSAGE

At the time the major concern for United States was development of Soviet capability to target mainland US. It was US' objective to monitor and, if possible, impede the Soviet advances in development of ICBMs. Indeed, as was brought out earlier, the initiation of the negotiations for the outer space treaty was guided by US attempts to restrict Soviet ICBM development. The requirement to monitor Soviet activities in the field had also prompted President Eisenhower earlier to propose an 'open skies' policy to the Soviets in which International Air law was to be modified to permit 'innocent passage' of reconnaissance aircraft to gather information.[41] In order to pursue its larger interests, the US was keen on following the precedent of International Sea Law rather than the Air Law which would have restricted the right of overflight. It is argued that the dilemma for the US was solved by the Soviets 'winning' the space race by launching Sputnik first. Having first launched the satellite overflying other countries the Soviets were in no position to object to the principle of 'right of overflight' in space for other countries.[42] As McDougall comments, "having argued necessarily for the

41. The fact that the US continued to overfly the Soviet Union in disregard of the international law is moot. There were some attempts by the US to justify such flights on the basis of 'effective control definition' also till Gary Powers was shot down in 1960. See Dolman, n. 19, p. 118.

42. Some commentators attribute this concession gained as one of the reasons for the US to let the Soviets launch a satellite first.

legality of their satellite, the Soviets had to deal with the hidden American agenda, the use of satellites for espionage and military support."[43] The principle of unimpeded overflight in space established by the launch of the Sputnik in 1957 remains intact till date.

It is also worthwhile to note that with the option of accepting precedent of either the International Law of Sea or the Air Law available to the negotiators at the time, the choice was made for unimpeded right of overflight based on International Law of the Sea, whereas a precedent of Air Law which could have led to legally prohibiting carriage and photography by satellites signifies the importance attached to the requirement of monitoring the territory of adversaries[44] by the two antagonists.

VERTICAL SOVEREIGNTY

The motivations for defining the vertical limits of air and space were closely linked to the motive for right of unimpeded overflight as brought out above (although it was not the only consideration). The International Air Law asserts that "every state has complete and exclusive sovereignty over the air space above its territory."[45] An agreement by the contracting parties to extend the sovereignty of states on the Air Law precedent and on the basis of the legal custom of *cuius est solum, eius est usque ad coleum et ad inferos* ("Who owns the land owns it up to the sky")[46] would have extended the sovereign rights of nation-states to the outer space and hence denied the spacefaring nations with the right of unimpeded overflight.

The extension of unrestricted vertical sovereignty into outer space would also have resulted in sovereign claims over the limited geosynchronous orbital slots by the equatorial nations. As Johnson-Freese brings out, the most precious and limited commodity in outer space at this stage of technological

43. McDougall, *Heavens and the Earth*, p. 120 quoted in Dolman, n. 19, p. 108.

44. Innocent passage in the oceans allows for photographic and other reconnaissance activities in certain instances whereas as per Air Law, States "may prohibit or regulate the use of photographic apparatus in aircraft above its territory." Dolman, n. 19, pp. 119-20.

45. Convention on International Civil Aviation.

46. Dolman, n. 19, p. 117.

One of the primary considerations of space powers was to regulate the use of space for military purposes. The major obstacle to be negotiated was the definition of what constitutes 'peaceful use' of outer space. The United States was of the opinion that the difference should be between 'peaceful' and 'aggressive' use whereas the Soviets contended that the differentiation should be military (legitimate) or non-military (legitimate) use of space.

development appears to be the availability of geosynchronous orbital slots.[47] Denial of the freedom to occupy desired orbital slots or transverse the orbital space would have resulted in ceding the militarily advantageous 'high ground' and denied commercial benefits, and hence was not acceptable to the major powers. It could be argued that at that stage of space technology development, the benefits likely to accrue from geosynchronous orbits as being exploited today may not have been evident and attributing motives now amounts to selective application of hindsight. It is submitted that the benefits from space capabilities were widely predicted by science fiction writers a generation in advance and it is unlikely that the scientific community of the time would have been unaware of its potential, even though the technical capabilities may not have existed at the time. Nevertheless, the importance of the orbital real estate was realised by equatorial nations and sovereignty over them was claimed by them in the Bogota Declaration.[48] Needless to say, the Declaration by largely underdeveloped countries was dismissed by the major space powers.

Coupled with the realist concerns of reconnaissance and commercial exploitation which accrue to space powers, another impediment in defining the limits of vertical sovereignty is the difficulty in delimiting the air-space

47. Johnson-Freese, *Space Warfare*, n. 2, p. 131. Also Dolman, n. 19, p. 64.

48. In December 1976, the equatorial states of Brazil, Columbia, Ecuador, Indonesia, Kenya, Uganda and Zaire declared that their national sovereignty extended to the geostationary belt, 22,000 miles above the equator.

boundary. There have been numerous attempts at defining the limits of air by international organisations; however, till now there is no consensus on the aspect.[49] As there was no scientific clarity to the benefits that may accrue to certain States from a particular definition, it is unsurprising to note that "at the time of Outer Space Treaty negotiations, a definition of what constitutes outer space was not discussed."[50] Absence of clarity on benefits of any particular delimitation appears to be the motive and intent of spacefaring nations even today. The lack of interest on the part of nations to resolve the aspect is in part guided by the fact that the current regime does not impede any perceived utilisation of space by the major nations as desired.[51]

Article IV of OST limits military use of outer space by prohibiting the placement of nuclear weapons and weapons of mass destruction in orbit around the Earth and establishment of military bases and testing of weapons on celestial bodies.

USE OF OUTER SPACE FOR MILITARY PURPOSES

One of the primary considerations of space powers was to regulate the use of space for military purposes. The major obstacle to be negotiated was the definition of what constitutes 'peaceful use' of outer space. The United States was of the opinion that the difference should be between 'peaceful' and 'aggressive' use whereas the Soviets contended that the differentiation should be military (legitimate) or non-military (legitimate) use of space. The Soviet argument was based on the pretext that nearly every military application could be justified as defensive and hence, 'peaceful' in nature. In the end, the final text of the Treaty is considered to be more a reflection

49. A number of attempts have been made to define where air space ends and outer space begins since the launch of Sputnik-I. The issue has been on agenda of UNCOPUOS since 1959. For a brief expose on the attempts, approaches and difficulties to delimit the air-space boundary, see Stephan Hobe and Kuan-Wei Chen, "Legal Status of Outer Space and Celestial Bodies", in Ram S. Jakhu and Paul Stephen, eds., *Routledge Handbook of Space Law* (Oxon: Routledge, 2017), p. 28.

50. Dolman, n. 19, p. 114.

51. No country has as yet objected to a space object overflying (during launch or re-entry) its sovereign air space. Although there has been one known protest—Japan against North Korea in 2012. Hobe and Chen, "Legal Status of Outer Space and Celestial Bodies", n. 49, p. 28.

of the Soviet viewpoint rather than the American. Article IV of OST limits military use of outer space by prohibiting the placement of nuclear weapons and weapons of mass destruction in orbit around the Earth and establishment of military bases and testing of weapons on celestial bodies.[52] It says that States are obliged to use celestial bodies 'exclusively for peaceful purposes' and that outer space needs only to be explored and used for 'peaceful purposes'. It has been argued that use of the word 'exclusive' for peaceful use of celestial bodies and excluding the same for outer space implied that certain military activities in outer space were legitimate if exercised lawfully.[53] Notwithstanding the text of the treaty or the apparent acceptance of the same by the US, the interpretation of the 'peaceful use' by United States does not appear to have changed and is still interpreted as 'defensive' and permissive of military use, as will be discussed later. At this stage, it is sufficient to recognise that the powers consented to consider military activity in space legitimate if undertaken 'lawfully' and not prohibit placement of general weapons in space (it prohibits placement of weapons on celestial bodies and only WMDs in space). Whether the same was the desired objective or a clever interpretation is moot and in either case supports the basic argument of use of law to achieve national objectives.

Further, Poulsen contends that stationing of military forces in outer space was not forbidden, as both the Soviet Union and United States wanted to prevent a debate on the military satellites they both had circling the globe. Seen in this light, it is evident that the Treaty aimed to keep the window of 'legitimacy' of military use of space open for the two space powers and at the same time restrict the military advantage that may accrue from space capability.

COMMERCIAL EXPLOITATION

One of the major considerations of the contracting states was to lay the framework for defining the legal status of the resources that were or likely to be available for exploitation in space. With the desired norm that sovereignty of a state did

52. OST, Article IV.

53. Hobe and Chen, "Legal Status of Outer Space and Celestial Bodies", n. 49, p. 34.

not extend indefinitely vertically into space, and hence by corollary that space was for use by all 'mankind', there was a requirement to establish norms for the exploitation of space resources. Historically, the notion of 'common goods' as are understood date back to the Roman times with the concepts of *res communis* ('thing for everyone') and *res nullius* ('thing for no one'). There are divergent views amongst scholars on the applicability of the two concepts for outer space. What is important is that the definition proposed by the US was more attuned to the concept of *res communis* and it was expected that the 'communal' definition would be more acceptable to the Soviet Union. However, it was opposed by the Soviet traditionalists as being a product of capitalism which justified 'the rule of the exploiting classes'. Nevertheless, the definition as proposed by the US was finally accepted by the Soviets since it served Soviet national interests better, even though it ran counter to their ideological beliefs. The Soviet Union was the first nation to launch a space object and believed had the infrastructure to exploit the advantage. The definition as proposed could position the Soviet Union in an advantageous position as compared to any other nation and hence was acceptable. At the same time, it was the known Soviet intent that future negotiations would be directed at changing the meaning of the term to make it consistent with contemporary socialist theory—the aim to convert from 'no-public-sovereignty' to 'no-private-property'. The Soviets wanted to deny space exploration to private enterprises—something that would have given the West a definite edge.[54]

The other concern was expressed by non-spacefaring nations who argued that as all states collectively owned space, all should equally benefit from the fruits of the exploitation.[55] Towards that a principle of 'non-appropriation' of space resources was incorporated in OST according to which no State could claim sovereignty over any celestial body.[56] Article I of OST also stated that all countries should share the benefits of space 'irrespective of their degree of economic or scientific development'. It can be said that experience over

54. Dolman, n. 19, pp. 97-100.

55. Ibid., p. 100.

56. For a discussion of the principle, see Hobe and Chen, "Legal Status of Outer Space and Celestial Bodies", n. 49, p. 29.

the years does not suggest that the benefits of space exploration have been distributed equitably amongst all nations as even though the Treaty gives all states the freedom to explore and use outer space, not all states have the economic and technological capabilities to profit from space activities.[57] Perhaps the limitation was instrumental for the Third World countries to insist on inclusion of 'equitable' sharing of benefits among all nations of the Earth in the Moon Agreement. It is no surprise that the Moon Agreement has not been ratified by any major spacefaring nation.[58] As brought out earlier, the attempt by Third World equatorial countries to benefit from commercial exploitation of the limited geosynchronous slots was also not ceded by the major spacefaring nations.[59]

REGISTRATION OF SPACE OBJECTS

The requirements for registration of objects in space[60] are much more stringent than those for sea and air. The strict requirements have been justified on the grounds of the larger potential for global physical or environmental damage as also the specific peculiarities of establishing accountability between the launching and controlling state. However, it is instructive to note that while referring to the ratification of the OST, US Ambassador Arthur Goldberg stated that "This is a matter of national security. We believe that when there is registration of launchings this gives us an opportunity to, and the world community to, check up on whether the launchings are, indeed, peaceful or whether they are for some other purposes."[61] Once again it can be seen that the motives for the requirement were primarily military but couched in terms of rule-based regime to gain legitimacy for keeping a check on the adversary's activities in space.

57. Hobe and Chen, "Legal Status of Outer Space and Celestial Bodies", n. 49, p. 35.

58. The agreement has been ratified by only 18 countries.

59. Refer to the Bogota Declaration.

60. Article VIII of OST mentions the requirement of 'registry' of objects launched into space. The modalities were further clarified in the Convention on Registration of Objects Launched into Outer Space.

61. Dolman, n. 19, p. 119.

PRINCIPLE OF COOPERATION

It has been argued earlier in the paper that negotiations for the OST were guided by the self-serving motives and national interests of spacefaring nations rather than for promoting international cooperation. References to cooperation can be found in Articles III, IX and X of OST. Article X was a Soviet proposal which stated that States that allow another State to use its earth observation facilities to track satellites should also allow all other States to do the same. This seemingly cooperative approach to facilitate space activity was guided by the fact that while US had territories and allies in all four hemispheres, the Soviet bloc was mostly located in central Eurasia, giving the US a clear advantage in space affairs.[62] Further, as Hobe and Chen bring out, space law does not provide a definition of the exact scope and meaning of the cooperation principle. The principle is formulated in OST in a broad sense that States shall be 'guided by' cooperation and mutual assistance and shall carry out space activities with due regard to activities of other States. It further only 'calls upon' States to carry out activities in outer space in accordance with international law "in the interest of maintaining international peace and security and promoting international cooperation and understanding." They argue that OST (and the Moon Agreement) is broad in this respect and does not provide procedural mechanism to facilitate cooperation. The Treaty does not specify requirements or guide to States as to how they can exercise their activities in a manner that would ensure that the standard of care towards activities of other states is 'enough'[63] and neither does it establish any central authority to direct and oversee acts of cooperation—it is left to the States how much cooperation, as envisaged in the treatise, is implemented. And while they acknowledge that attempts to clarify the duty to cooperate under Article I of OST did not bear fruit,[64] it would not be incorrect to assume that the same was intentionally left ambiguous to prevent any firm commitment

62. Jesper Poulssen, "Rivals and Cooperation in Outer Space" (Master Thesis, 2016), pp. 9-10.

63. Hobe and Chen, "Legal Status of Outer Space and Celestial Bodies", n. 49, p. 36.

64. Ibid.

Spacefaring nations including France, Japan and India do not pose a credible challenge to US supremacy in space and the space race between erstwhile Soviet Union and US has now been replaced by a contest between China and the US.

from spacefaring nations towards non-spacefaring nations and was the grand bargain[65] of the 'haves' with the 'have-nots'.

In the end, it can be seen that the motivations for the two space powers at the time of negotiating OST were largely guided by the realist approach to safeguard and pursue their individual national interests legitimately in the domain which had potential to offer tremendous advantages both in military and commercial terms. The spacefaring nations were able to establish the foundation for an international regime that ensured none of them could obtain an unanticipated advantage in space domination.[66]

OBSERVED PRACTICE

Having established that the development of the international space regime was predicated on the desire of the space Superpowers to safeguard their national interests, it would be instructive to examine practice and approach of major spacefaring nations towards the basic principles of the space regime in contemporary environment. Today, access to and unrestricted use of space is considered a 'vital national interest' by the US,[67] a revitalised national interest by Russia and an aspiring national interest by China, India and many other countries.[68] Russia, although still a prominent player in space, is a shadow of the erstwhile Soviet Union at least with respect to the

65. Jakhu asserts that the maintenance of "fair balance between the interests and obligations of all concerned" is the fundamental requisite for success of OST and the global space governance it initiated. Jakhu, n. 17, p. 18.

66. Dolman, n. 19, p. 87.

67. "United States considers unfettered access to and freedom to operate in space to be a vital interest". 2017 US National Security Strategy, quoted in John Klein, *Understanding Space Strategy* (New York: Routledge, 2019), p. 101. Johnson-Freese also contends that the US is working for 'space supremacy' where no other nation can challenge it in space.

68. Johnson-Freese, n. 38, p. 20.

capacity to put in space effort relative to the US. Other spacefaring nations including France, Japan and India do not pose a credible challenge to US supremacy in space and the space race between erstwhile Soviet Union and US has now been replaced by a contest between China and the US. Today, the US is the undisputed leader in space capability with 2,382 out of a total of 5,799 space objects currently in orbit[69] and, as a consequence, gets to set the agenda for determining the space regime. Johnson-Freese argues that geopolitics affects national interpretations of OST[70] and that "by virtue of its size and scope, the efforts of US space policy spill over to the rest of the world."[71]

Indeed, Bellflower argues that "America's extensive use of space … should translate to significant power to guide and shape international law regarding space"[72] and that it "must actively engage the international legal process in an effort to mould law in such a way as to enhance national security interests."[73] It is considered that the approach of the US, as exemplified by formulation of its domestic space laws and policies and her views on furtherance of international space regime, would not only be a reflection on the use of law(fare) by the US to achieve national objectives in space but also inform the actions of other spacefaring nations. The same is discussed in brief next.

'PEACEFUL USE' OF OUTER SPACE

Article IV of the Outer Space Treaty mentions that "… The moon and other celestial bodies shall be used by all States Parties to the Treaty exclusively for peaceful purposes."[74] As discussed earlier, during the negotiations for the treaty there were conflicting interpretations put forward for 'peaceful purposes'; however, the phrase itself was not defined in the Treaty. Although the understanding, as put by the Soviets, of 'peaceful purposes', implying

69. UNOOSA. www.unoosa.org/oosa/osoindex/seach-ng.jspx. Accessed on April 9, 2020.

70. Johnson-Freese, n. 38, p. 20.

71. Johnson-Freese, n. 2, p. 158.

72. Bellflower, n. 5, p. 109.

73. Ibid., p. 116.

74. OST, Article IV.

From the Kennedy administration until Reagan administration, non-aggressive meant 'passive systems' only and used for force enhancement. In its zeal to purse SDI, the Reagan administration redefined 'peaceful purposes' as 'defensive'.

non-military, was understood to have been accepted, till today there is a considerable debate whether 'peaceful purpose' signifies 'non-military' or 'non-aggressive or non-hostile'.[75] While some countries believe that 'peaceful purposes' precludes any military activity in space,[76] the US has maintained the view that 'peaceful purposes' means 'non-aggressive' which is again open to interpretation. From the Kennedy administration until Reagan administration, non-aggressive meant 'passive systems' only and used for force enhancement. In its zeal to purse SDI, the Reagan administration redefined 'peaceful purposes' as 'defensive'.[77] The US military in itself has always supported the more liberal interpretation as meaning non-aggressive and not restricted to passive systems. Since then, US policy has repeatedly stated that 'peaceful purposes' within OST means non-aggressive and allows for space to be used for national and homeland security activities. The US interpretation means that space-based systems may be legally used for functions that facilitate military activities.[78]

It can be argued that it was the intent of nations to ensure that man does not extend his fights of earth on to the 'Heavens', which prompted the state parties to include 'exclusively for peaceful purposes' in the Treaty.[79] By

75. Michael N. Schmitt, *International Law and Military Operations in Space*, 10 UNYB 89, 101(2006) quoted in Bellflower, n. 5, p. 128; "The United Space Force," Space Legal Issues, https:// www.spacelegalissues.com/space-law-the-united-states-space-force/. Accessed on April 14, 2020; Klein, *Understanding Space Strategy*, n. 67, pp. 50, 101; Johnson-Freese, *Space as a Strategic Asset*, p. 108.

76. Klein, *Understanding Space Strategy*, n. 67, p. 101.

77. Johnson-Freese, n. 2, p. 108.

78. Klein, *Understanding Space Strategy*, n. 67, p. 101.

79. UNGA resolution of December 13, 1958 stated that it wished to avoid the extension of present national rivalries into the field of outer space.

using the interpretation of 'peaceful' implying 'non-aggressive'[80] and hence gaining legitimacy to use of space for military purposes, the United States believes that the treaty does not hinder protection of its national interest in space and is one of the factors for US reluctance to negotiate a new legal regime for space.[81]

WEAPONISATION OF SPACE

The official US view on the weaponisation of space assumes that conflict in space is inevitable[82] and the US Doctrine Document enjoins upon US Air Force to execute "the counter space function to protect US military and friendly space capability while denying space capability to the adversary, as the situation requires."[83] It is widely acknowledged that 'denying space capability to an adversary' would necessitate use of force and the same is opined to be 'legal' in the understanding of the USAF. One of the arguments presented is that the legality of any action depends upon the actor's intent and not with the capability itself, and as the intent of the US is 'self-defence' to maintain its "legal right to continued and assured access to space" the same is permissible under international law. It is also argued that OST does not prohibit self-defence in outer space via non-nuclear weapons and non-weapons of mass destruction.[84] In a similar manner it is argued that Anti-Satellite Weapons are not legally prohibited under Article IV of OST as they are not weapons of mass destruction.[85] USAF doctrine also clearly annunciates that "the right of self-defence, as recognised in… international law, applies to outer space."[86] Public statements by US military leadership,

80. Bellflower, n. 5, p. 128; "The United Space Force," Space Legal Issues.

81. Klein, *Understanding Space Strategy,* n. 67, p. 101.

82. The Rumsfeld Commission report stated "we know from history that every medium—air, land and sea—has seen conflict. Reality indicates that space will be no different." Quoted in Johnson-Freese, n. 2, p. 58. Also, "according to Pentagon, the only thing inevitable about space is that it will be a battlefield." Ibid., p. 165.

83. US Air Force Counterspace Operations, AFDD 2-2.1, p. 1.

84. For a description of the argument presented, see Bellflower, n. 5, p. 129.

85. "The United Space Force", Space Legal Issues.

86. Bellflower, n. 5, p. 128.

including (then) US Strategic Command Commander Gen John Hyten, also supports the position that the US believes the right of self-defence applies in space.[87] It is significant that the doctrine accepts "precepts such as necessity, distinction and proportionality will apply to any military activity in outer space." This clearly signifies that the US does contemplate use of force as a viable 'legitimate legal' option, and hence the weaponisation of space. Since then the US has also established a 'Space Force'. The Space Policy Directive-4 states that "it is imperative that the United States adapt its organizations, policies, doctrine, and capabilities to deter aggression and protect its interests," and one of the tasks of the Space Force is "to defend satellites from attack."[88] The US also continues to perceive proposals for Prevention of an Arms Race in Outer Space (PAROS) treaty as lawfare by Russia and China against it.[89]

COMMERCIAL EXPLOITATION OF CELESTIAL BODIES

Since time immemorial, the desire for greater economic power has been considered a national interest which needed to be protected and advanced. The commercial interests of a nation have influenced the character of warfare and it can be safely assumed that commercial considerations in space will influence national strategies in space[90] as well. It is important to note that while negotiating the OST, the parties had agreed to incorporate a 'non-appropriation principle'[91] wherein States were prohibited to declare sovereignty or territorial claims over outer space and on celestial bodies. Article II of OST states 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 other means.

87. US Strategic Command Commander Gen John Heyten quoted in Klein, n. 67, p. 77.
88. "The United Space Force," Space Legal Issues.
89. Listner, "The art of lawfare", n. 13; Bellflower, n. 5, p. 133.
90. Klein, n. 67, p. 178.
91. Hobe and Chen, n. 49, p. 29.

The non-appropriation principle is also enshrined in the Moon Agreement which states that "… The Moon is not subject to national appropriation by any claims of sovereignty, by means of use of occupation or by any other means."[92] However, in December 2015, the US adopted a domestic legislation[93] which guaranteed private actors rights in an "asteroid resource or space resource obtained, including the right 'to possess, own, transport, use, and sell the asteroid resource or space resource.'"[94] The US Act recognised the rights of US citizens to own the resources they obtain through the mining of asteroids.[95] There has been considerable debate on whether the Act was in consonance with the internationally recognised principles and it is considered by some that endowing private actors with rights goes above and beyond the original purpose and interest of OST.[96] It is argued that it is "not possible for a State to legislate such that it allows commercial entities to claim property rights over celestial bodies, given that Outer Space Treaty prohibits this."[97] The passage of the Act by the US Congress was also denounced by the Russians as an egregious breach of the OST.[98] Notwithstanding international opinion, the US considers the Act to be in compliance with OST and the same is explained in the Act as "it is the sense of Congress that by enactment of this Act, the United States does not thereby assert sovereignty or sovereign or exclusive rights or jurisdiction over, or the ownership of, any celestial body."[99] And while doing so the US Congress seemed to disassociate itself from the statement of the US delegate for the negotiations of OST who had stated that "… the provision prohibiting national appropriation … was a strong safeguard for those States which at present had no space programme of their own."[100]

92. Article 11 of Moon Agreement.
93. US Commercial Space Launch Competitiveness Act 2015.
94. Hobe and Chen, n. 49, p. 30.
95. Johnson-Freese, n. 2.
96. Hobe and Chen, n. 49, p. 37.
97. Steer, n. 15, p. 13.
98. Johnson-Freese, n. 2, p. 154.
99. Klein, n. 67, p. 202.
100. Jakhu, n. 17, p. 18.

The 2011 NASA budget explicitly forbade it to use any funding to cooperate with China or Chinese companies or to host Chinese scientists in any of their buildings.

Perhaps recognising that the Act was unable to further the US commercial interests as desired, the US further promulgated an Executive Order on April 6, 2020 that clarifies the US position that she "does not view it (Outer Space) as a global commons" and "…it shall be policy of the United States to encourage international support for public and private recovery and use of resources in outer space…" The Order further mentions that "United States does not consider the Moon Agreement to be an effective or necessary instrument to guide nation-states regarding the promotion of commercial participation.…"[101] While on the one hand the Order makes clear that the US recognises OST but supports exploitation of space resources,[102] on the other it also demonstrates that the US considers domestic legislation and its interpretation of international treaties to support its commercial interests as legitimate. The US stand on the aspect is clear vindication of use (and interpretation) of law to further its interests in space. The position of US (and other States) with respect to the claims of equatorial nations over geosynchronous orbital slots has already been referred to earlier.

COOPERATION WITH CHINA

While the initial history of the space age was characterised by a fierce competition between the US and erstwhile Soviet Union, the current environment is one of rivalry between the US and China. It has been US' aim to obstruct the rise of China as a major space power and paradoxically,

101. United States White House, *Executive Order on Encouraging International Support for the Recovery and Use of Space Resources*. https://www.whitehouse.gov/presidential-actions/executive-orderencouraging-international-support-recovery-use-space-resources/. Accessed on April 7, 2020.

102. Marcia Smith, "New Executive Order Calls for International Agreements for Space Resource Rights, But no New Treaty." Spacepolicyonline.com, https://spacepolicyonline.com/news/new-executive-order-calls-forinternational-agreements-for-space-resource-rights-but-no-new-treaty/. Accessed on April 10, 2020. It can be argued that US recognition of OST is a result of its reluctance to negotiate any new treaty (see below).

Russia and the US seem to have found common interest in that aim. Byers argues that Russia and the US are resisting greater Chinese involvement in outer space and greater reliance on the part of the two countries on soft law in space could be in part due to their efforts to slow down China's rise as a space power. According to Byers, the US and Russia have also not shown much interest, or effort, to pursue any new multilateral treaty on space as it would recognise and involve China as a major space power.[103] Domestically, the US has used legislation to curtail any international space cooperation which might not be beneficial to the US and especially with China. NASA policy directive states that:

> "Each cooperative activity must demonstrate a specific benefit to NASA… or it may directly support broader US policy or interests."[104]

The 2011 NASA budget explicitly forbade it to use any funding to cooperate with China or Chinese companies or to host Chinese scientists in any of their buildings. International Space Station, which is considered to be an example of exemplary space cooperation,[105] does not have Chinese participation because US Congress banned NASA from working with Chinese National Space Agency in 2011[106] and for the same reason China is not part of NASA's proposed Lunar Gateway, while paradoxically Russia is an ally in this endeavour.[107] Incidentally, the Executive Order referred to in the previous section calls upon "international support for… use of resources in outer space.…" It is argued that the same is motivated by the fact that in the near future no other nation except China can be expected to reach technical maturity to attempt such an endeavour. By welcoming international (Chinese) cooperation, US aims to pre-empt any opposition to the endeavour.

103.Byers, n. 25, 41.
104.NASA Policy directive 1360 2B, http://nodis3.gsfc.nasa.gov/.
105.Johnson, n. 35, p. 6.
106.Byers, n. 25, p. 42; Poulssen, n. 62, p. 2.
107.Ibid.

The current international space regime, for its lack of any enforcement or regulatory mechanism serves larger national interests and hence is unlikely that the US would be willing to develop a more regulatory framework in the future.

FORMULATION OF NEW SPACE REGIME

The US considers the right of passage and access to outer space without interference as an inalienable right and that it will "preserve its rights, capabilities, and freedom of action in space."[108] The US has been against "the development of new legal regimes or other restrictions that seek to prohibit or limit US access to or use of space"[109] and, as Smith puts it, the "Executive Order (of April 6, 2020) formalizes it."[110] With respect to exploitation of resources, Hitchens says that "US is just adamant and focused about it being the State which establishes precedence on the use of space resources, rather than have a long and uncertain process within COPUOS … develop rules."[111] The current international space regime, for its lack of any enforcement or regulatory mechanism serves larger national interests[112] and hence is unlikely that the US would be willing to develop a more regulatory framework in the future.[113] Klein also argues that the US believes its interpretation of 'peaceful purposes' within the OST does not hinder protection of its national interests in space and hence, does not seek development of a new legal regime.[114] Incidentally, the US is also amongst the countries where

108. Bellflower, n. 5, p. 125.

109. Ibid.

110. Marcia Smith, "New Executive Order Calls for International Agreements for Space Resource Rights, But no New Treaty." Spacepolicyonline.com.

111. Theresa Hitchens, "WH woos Potential Allies, Including China, for Space Mining." *Breaking Defense*, https://breakingdefense.com/2020/04/wh-woos-potential-allies-including-china-for-space-mining/. Accessed on April 9, 2020.

112. Johnson, n. 35, p. 6.

113. Hitchens also asserts that "it is consistent with the administration's long-standing reluctance to empower multinational bodes … to set legally binding rules for space." Hitchens, "WH woos Potential Allies".

114. Klein, *Understanding Space Strategy*, n. 67, p. 101.

compliance for registration of space assets is less than complete[115] which can be considered as a reflection of its intent to utilise the current framework to its advantage.[116]

It can be seen that the US has been fairly successful in developing legal positions to achieve its national objectives in space, namely, continued hegemony in space, impeding the growth of Chinese space capabilities and commercial exploitation of resources on celestial bodies, at the same time building a framework to gain 'legitimacy' for placement and use of weapons in outer space in future, should it be required. Seen in light of the definition of lawfare discussed earlier it can be justifiably concluded that the US is employing law(fare) to achieve its national space objectives. It is not to suggest that other spacefaring nations can be absolved of the equivalent charge. Indeed, the US has maintained that Russia and China are engaged in lawfare to impede US development of space capabilities. However, a discussion of employment of lawfare by other nations is not feasible in this paper due limitations of space. Being the predominant space nation, actions by the US are likely to set precedents and inform future behaviours of other nations. From the preceding discussion, it can be surmised that the use of lawfare to further national objectives in space has been an established practice and is likely to be so in the future.

IMPLICATIONS FOR INDIA

The foundations for the Indian space programme were rooted in civilian purposes, however, over a period of time she has taken steps towards military utilisation of space assets. India has made steady progress in utilising space for weather, reconnaissance and communications for supporting military activities and the test firing of Direct Ascent Kinetic Kill capability demonstrated the advances made in the field. It is argued that there is a strong correlation between the nuclear and space programmes of a country, to the extent that it is said that the development of space capability was

115.Johnson-Freese, n. 2, p. 175.

116.Johnson-Freese argues that for both political and legal reasons it may be advantageous for states not to register space objects. Johnson-Freese, n. 2, p. 152.

spawned by nuclear capability,[117] and hence, there is an inherent tendency for policymakers to term space programme along with nuclear programme of a nation as 'strategic'. This portends the possibility of doctrinal thought and employment philosophy developed for nuclear capability being extended for military utilisation of space assets. It is argued that whereas nuclear capability can justifiably be considered a political weapon to deter war, space today is already heavily militarised and extensively utilised in the conduct of military operations by major powers. Any country deprived of the advantages accruing from space capabilities would be severely handicapped in any future conflict; the same needs to be considered while developing a framework for utilisation of space capabilities by the Indian military.

India has been an active member of COPUOS and has played a proactive role in space negotiations for development of international space norms which have not hindered development of our space capabilities. As has been brought out in the paper, the development of international space regime is still informed by realist self-interests of space powers to deny (military) advantages to (potential) adversaries; it would be to our advantage if India's interests and international position are guided by military considerations also rather than purely scientific and diplomatic. There is a requirement for the Indian position in the international fora to be also informed by people who would be tasked to protect Indian space assets and utilise them to achieve India's national objectives in the future. For that it is incumbent on us to build a pool of people trained and also exposed to nuances of space legal regime and diplomacy to be able to ensure that Indian interests and ability to utilise space capabilities are not compromised by any unintended concession in international space negotiations. It is important that we equip ourselves to prevent either a 'Space Pearl Harbour' or an 'NPT moment'. This implies a situation that might place India in a disadvantageous position owing to non-demonstration of a capability that a treaty seeks to prohibit.

117. The impetus to the space programme was the military necessity of delivering powerful nuclear weapons over large distances.

CONCLUSION

The advantages offered by space to enhance the security of a nation and contribute to its economic development had always been the primary factor for nations to regulate the exploitation of space. While the initial part of the space age was more guided by the realist aims of countries to secure a military advantage, over a period of time the significant potential of economic benefits that accrue from the capability has also shaped the behaviour of countries. In a world where gaining acceptance of the world community is increasingly becoming a priority for nations to get 'legitimacy' for their actions, the use of non-confrontational methods is becoming a preferred option from the toolkit of national power.

While diplomacy has been a recognised means of achieving national objectives, in the contemporary environment the use of law is becoming a preferred option for governments across the globe. 'Lawfare' has always been utilised by nations for shaping the environment to gain strategic advantage even though the term has gained acceptance only in recent times. The space race between the world's two Superpowers at the peak of the Cold War expectedly created security apprehensions in both camps, and it was in the interest of both to shape a legal regime governing exploitation of space in a manner that prevented one adversary from gaining any significant advantage over the other without impeding furtherance of own interests. The international space regime today—which is primarily founded on the Outer Space Treaty of 1967—was negotiated by the two space powers on the realist motivations to secure individual military advantage and denying the same to the adversary while seeking legitimacy of actions under the rubric of international cooperation. The behaviour of major spacefaring nations with respect to the space legal regime since then is still guided by individual national interests. It is important that the Indian policymakers and practitioners entrusted to safeguard national space assets are sensitised to the motives of established spacefaring nations to ensure that 'legal' attempts (if any) to impede our ability to utilise space capabilities are not successful.