

## Space Militarization- A Peace Hoax



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**Abstract:** *States' proficiency to promulgate themselves as the hegemon in this contemporary world had encouraged them to expand their military horizon beyond land, air, and water, to maintain deterrence and dominance. The strategic stability order has been compromised by the consistent accumulation of armed satellites, leading towards space weaponization to secure their national sovereignty and integrity. The security trilemma in South Asia surely catered to the challenge with high risks evolving with it, giving rise to multipolarity in this political arena. The intensified commercial space utilization was soon maligned by the integration of nuclear-based satellites which called for the condemnation of the international community against proliferation, introducing major bilateral and multilateral agreements and treaties. The manoeuvring of international law according to the major space-faring states had demolished its purpose to serve legally. The limitations in international laws have been found outdated and need modifications according to the advanced deployments of space arms.*

**Key Words:** Space Militarization, Space Weaponization, Security Trilemma in South Asia, Space nationalism, International Law

## Introduction

Since that epoch, mankind has been striving for power, whether to survive or rule. After the tyrannical approach of subjugating land, air, and water territories, states have now been operating on occupying space domain, in order to gain maximum sovereignty and hegemony over others. The space war has been evolving since Sputnik-1's deployment in 1957 by the USSR during the Cold War era, raging an extensive proliferation of satellites in outer space (Engle, 2021). However, apart from commercial usage like communication, navigation, and weather meteorological and geological transmissions for the purposes of economic and technological prosperity, satellites are capable of military use in the form of surveillance purposes in terms of defence or

early warning. Additionally, the states have managed to incorporate the installation of nuclear missiles in the satellites, enabling them to be dreadful for mankind if they exploded in outer space. Nevertheless, these capabilities encourage the states to be more deterrent in order to sustain the balance of power.

The comprehensive study analyzes the trends of frequent launches and deployment of the nuclear arsenal in outer space by determining the historical aspects. The emergence of militarization of space leading towards the weaponization of space, would definitely alarm the global world with the consequences of deliberate or unintentional space war, due to the threatening number of space debris accumulated in space by the great powers. The article will explore the tyrannical

enhancement of space militarization in the presence of outdated international law and conventions, which ultimately provides states with the justified implementation of warfare zones in outer space. So declaring this act of states as a peace hoax leads towards the weaponization of outer space.

## Literature Review

A significant discussion surrounds the utilization of space for military means. The debate has attracted two groups; supporters and opponents. Supporters are advocating the compulsion of space militarization for national security, to maintain deterrence and most importantly to protect the state's space assets. As F. William Engdahl expertly described the concept of Full Spectrum Dominance in his book "Full Spectrum Dominance-Totalitarian Democracy in the New World Order", which explains that states' primary goal is to achieve absolute and total control over the land, sea, air, outer space and cyberspace. (Engdahl & David, 2009) Opponents argue that space militarization leads to space arms races and will increase tension among space-faring nations. The usage of kinetic weapons or anti-satellite tests in space can generate space debris and space debris can potentially risk space crafts in orbit or can destroy satellites. Critics argue that space weaponization could violate the spirit of the Outer Space Treaty. Ahmad Khan (A. Khan & Sadeh, 2019) come in the category of opposed absolute. They argue that the contest for power and the utilization of space technology in military and security concerns can't restrict its role in peaceful endeavours. China's assistance of Pakistan in space technological advancement and the USA's involvement in India's space program is the reflection of the argument that ongoing space competition between China and the USA is a security trilemma in South Asia. Samuel Black and Yousaf Butt (Black & Butt, 2010) argue that space debris can not only pose a risk to satellites, space crafts, and the International Space Station but also pose a collision risk to active space crafts. They didn't support the usage of anti-satellite weapons or kinetic

weapons. Esparza (2018) raised questions about the validity of the Outer Space Treaty regarding the militarization and weaponization of space and feels a great need for modification in international law because of advanced space weaponization.

## Evolution of Space Militarization

Legitimately, the states justified these deployments as a preemptive approach in order to cater to the fog of war (Khan, 2019). The weaponization of space has multiple dimensions, as once evident that the satellites carrying Global Positioning System (GPS) and Satellite Communication (SatCom) were majorly utilized during the first Gulf War 1991, through which the US and other allied states were able to manoeuvre on land in an advanced manner. Therefore, this war was named Desert Storm along with the First Space War (Gibson, 2001). Nevertheless, the pessimistic opinion regarding space militarization haunts the international community of its consequences on the world as well as outer space.

The phenomena behind the expansionism of space militarization have been advanced to follow a neo-realistic approach as states tend to maximize their power structure in this anarchic world order to subjugate other states and to be prepared for the occurrence of war at any time. The probability of war is not limited to the military way only, but it has now beyond the traditional ways, encompassing economic, electronic, and cyber warfare, in all domains. The acquisition of space hegemony in International political and economic dilemmas is the attainment of power to control, destroy, manipulate, and conquer the potential adversary in outer space as well as on Earth. Referring to President John F. Kennedy's speech in October 1960, during the political and military tensions in the Cold War era, he assured the USSR's potential to dominate the world if they could acquire space hegemony, ultimately undermining the USA's supremacy. Therefore, nations in order to survive and sustain their sovereignty, engaged in heavy

proliferation and deployment of armed satellites in outer space (Bowen, [2020](#)).

## **Space Weaponization in the Multipolar World**

The expansion of the space race beyond Russia and the USA began in 2007, when China performed anti-satellite tests in outer space, abjuring all the peaceful projections of space militarization (Lieggi & Quam, [2007](#)). Thus states in Asia also engaged in the horizontal proliferation of ASAT capabilities along with the International Continental Ballistic Missile (ICBM) technologies, affecting the transformation of global political order. The significance of the space arms race could be determined by the state's annual budget for military expenses, as, in 1999, the USA spent almost 95 per cent of the global military spending. Yet, the other states have not reached the mark of the USA in space military spending, as reported by the World Population Review (POGO, [2023](#)). The intentions of major space-faring powers have left no ambiguity to show their motives through their integral policies acquiring the national objectives. Since 1988, the USA has presented its space doctrine projected toward superiority and endorsed the complete exploration of space technologies, whether offensive or defensive, to protect the national gains, under the umbrella of United States Space Command (USS-PACECOM) (Fabey, [2017](#)).

Contemporarily, the monopolistic regime of the USA to lead or control space had been disrupted by China, India, the UK, Israel, and Russia, which ultimately calls for the ramifications in International law in order to serve national and global security. The UN showed concerns about the ramifications behind the motive of peaceful space expedition, therefore establishing agreements and treaties in the form of an International Code of Conduct (ICC) to regulate disarmament policies regarding armed satellites in space. Ironically such profound sets of nonproliferation treaties and disarmament agreements seem to be ignorant due to the substantial deployment of

Hypervelocity Rod Bundles, Direct Energy Weapons (DEWs), and Kinetic Kill Vehicles (KKVs) in outer space. Yet another example of space weaponization is the installation of Space Test Bed (STB) X-37B, used for operating an extensive number of KKV in outer space by the USA in 2010 (William, [2010](#)). Apart from these hard kill weapons, states had managed to develop soft kill mechanisms, involving cyber and electronic warfare. These weapons identify, deny, destroy, and manipulate the adversaries' space assets by attacking and controlling their electromagnetic systems through direct lasers or ground-air-land-based stations (Young, [2021](#)). Moreover, these tendencies have been developed and advanced tremendously by Russia and China, deterring the defence system of the USA's space assets. Furthermore, the USA had already experienced this violation when China hijacked two of its national satellites, the National Oceanic and Atmospheric Administration (NOAA) (Flaherty et al., [2023](#)) and National Aeronautics Space Administration (NASA), in 2014 and 2018 respectively, declaring information warfare (Kane, [2018](#)).

On the other world of affairs, the rising tendencies of space weaponization by declared rogue states, like Iran, North Korea, and Iraq, as they had embarked on the advancement of cyber and electronic counter capabilities, sabotaging vulnerable Defense system of USA's space assets, consequently affecting the USA's space strategic policies, that have been now focused on strengthening their defence systems in outer space and they have been emphasizing on developing alliances based on the common national interests, especially in the Indo-Pacific and Middle East North African region, to cater the challenges from rogue states along with Russia and China (COATS, [2018](#)).

Peaceful scientific evolution as possessing threatening scientific revolutions, as declared by Thomas Kuhn (Mengistie, [2013](#)), justified the absolute transformation of space militarization to space weaponization. Recounted by the UN Department of Disarmament Affairs report, named, Concept of Security, the proliferation

of anti-ballistic missile defence systems for the deployment in outer space potentially deters space security and could lead to space war, consequently bringing chaos in political, economic, and military, technical and psycho-social matters of the world, moreover threatening the peaceful existence of mankind (Secretary-General, [1986](#)). Undermining the concept of strategic depth, the states endeavoured to accumulate multifaceted weapons of mass destruction (WMDs) to operate in every warfare field, including aerospace, water, and land, sabotaging the international security environment. The space security dilemma encouraged states to indulge in the hyper-built-up of multidimensional WMDs in Lower Earth Orbit (LEO) to maintain the power dilemma. Security trilemma is a term defining the trilateral relations considering the political dynamics between China, Pakistan, and India in South Asia, considering their status of nuclear atomic power and the strategic depth between them (Einhorn & Sidhu, [2017](#)). Whereas the strategic and space partnership between USA and India and military cooperation between Pakistan and Russia, haunt the regional peace and security due to the maligned history of USA and Russia hostility over half a century. Retrieving the concept of space weaponization, the recent testing of ASATs by India and China ensured their offensive and defensive nuclear capabilities in the outer space arena (Khan & Khan, [2015](#)).

### Security Trilemma in South Asia

The phenomenon of deterrence works the same for all three states in South Asia as India indulged in the proliferation of ASATs in 2019 after China's ASAT testing in 2007, which was demonstrated by demolishing its own Yun 1-C weather satellite deployed in Low Earth Orbit in 1999 by KT-1 ASAT rocket on 11 January 2007 (Maogoto & Freeland, [2007](#)), so Pakistan has been urged to neutralize the threat. However, Pakistan has not advanced its capabilities yet (Khan & Sadeh, [2019](#)). However, this new development in the Chinese space program grabbed criticism from the space-

faring states. Instigated by this act, the USA as a space hegemon was considered an epic threat by Chinese proliferation of ASATs, therefore expanding its ABMs in space as the USA already had walked out of the ABM treaty in 2002 (Boese, [2002](#)).

In the realm of power and prestige, India had determinedly established its space program in 2000. Regarding the accelerating rate of arms proliferation in outer space, the Indian Space program focused on establishing 16 militarized satellites in space, including (Gunter's Space Page, [nd](#)) 1, 2, and 2A (Cartosat 2, 2A, 2B, 2C, 2D, 2E, 2F, n.d.), and Radar Imaging Satellites, Polar Satellite Launch Vehicle (PSLV) (Lele, [2011](#)), Ballistic Missile Defense and Anti Ballistic Missiles, Prithvi Defense Vehicle (PDS) (Listener, [2011](#)), GSAT-7B (Tripathi, [2022](#)), and more. Space weaponization by India was evident in the official statement given by Indian DRDO Chief V. K. Saraswat consistently first in 2010 and 2012, channelizing the need to deploy killer satellites, laser weapons, and ASATs in outer space, in order to defend itself from the rivals (Suriya, [2021](#)). However, such statements of flexing the missile muscles sabotage the motive of International organizations inclined towards sustainable space usage for international peace.

Moreover, in 2001, the former U.S. Secretary of Defense, Donald Rumsfeld, proposed, that any act of violence against the U.S. space assets in adverse times would be intolerant and surely call for space warfare (Report of the Commission to Assess United States National Security, Space Management and Organization, [2000](#)). Another statement by an official state member presented the normalcy of weaponization of orbits and celestial objects as space is considered as another war domain like air, water, and land (Fabey, [2017](#)). The progression would be assertive by the US Department of Defense which had established militarization of outer space, particularly to strengthen its sovereignty and national security against rising multipolarity and to secure its space assets from China and Russia (Davenport, [2017](#)). Politically speaking of the space arms

race, the EU had also invested substantially in this domain declaring it as a significant sector of the national security and military strategy of the European Union (Maogoto & Freeland, [2007](#)).

Monopolistic regimes to dominate the space race by the major state actors, acquiring full spectrum dominance is enough evidence of destruction and instability of international security dilemma. Ironically, International space agreements and other several legal entities presented the lawlessness of International law which was primarily based on peaceful resolutions but now subjugating the purpose and legality of limiting and disarmament of space arms proliferation through biased decisions. The hypocritic behaviour of states became more obvious when the space-faring states while entering into such agreements and treaties on the one hand, amplified their space technology on the other hand, yet became more tyrannical in nature, as in the 1980s, laser, and kinetic weapons such as well as Space Operated Vehicles (SOVs) were launched in Outer space.

### **Space Nationalism Versus Global Institutionalism**

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To evaluate the need for the advancement or reduction of space weaponization, the frameworks of space nationalism and global institutionalism should be analyzed critically. Space nationalism proposed that the states should cooperate with each other only if their national objectives have been met and there is no need to subjugate their own interest regardless if it would harm the other, presenting the essence of realism. Global institutionalism advocates cooperation through bilateral and multilateral agreements for the commercial expedition of space for mankind's advancement rather than exploiting space assets and creating space debris which would ultimately cause the destruction of the environment and socio-political affairs, somehow projecting idealism. Global institutionalism idealizes the peaceful utilization of nuclear capability to produce energy and for monitoring the sustainable

livelihood on earth instead of military usage of nuclear satellites in orbit. The legal bindings are somehow inspired by the notion of social interactionism, which restricts the amplification of WMDs and restrains states from vandalizing space assets in outer space. Moreover, it encourages the states to engage with each other in order to dispense and bargain the information and technologies regarding this aspect (Moltz, [2014](#)). Another concept in favour of space weaponization is Astrodeterminism, which believes that the likelihood of space warfare leads to space power and is somehow connected with Earth but space supremacy is probably not assertive regarding the power acquisition on Earth as well. This phenomenon involves the manoeuvring of space assets through electronic and cyber counter capabilities for gaining strategic and political objectives, ensuring space warfare (Bowen, [2020](#))

### **Space Weaponization and International Law**

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The irrational proliferation of space arms by states led to the formation of legal bindings to impose limitations and even disarmament in extreme cases. In 1959, the UNGA initiated a terrain by forming the Committee on the Peaceful Uses of Outer Space (COPUOS) which analyzed legal governance regarding the utilization of outer space. Due to persistent efforts of International peace and legal parties to abjure space militarization, the UN presented specific laws catering to the problems regarding space weaponization. In 1961, the UN postulated general principles for the examination of space assets after the USSR and the USA demonstrated their access to the celestial bodies by successfully launching land-based Inter-continental Ballistic Missiles (ICBMs) in the 1950s (Report of the Commission to Assess United States National Security, Space Management and Organization, 2000), violating Article 4 of the Outer Space Treaty (OST), which banned the ICBMs deployment in outer space as they are nuclear-based trajectories, intended to weaponize space. Similarly, the testing and

stationing of the ASATs in outer space are considered to violate Article 4 of the OST which regulates legalities regarding the utilization of satellite interceptors, such as China's ASAT testing in 2007 and the USA's instalment of the missile shield in outer space, confirming the essence of space warfare, obviously to procure the violent objectives (Maogoto & Freeland, 2007).

In 1966, UNGA presented a formal "Outer Space treaty" also known as "Space Magna Carta" concerning this subject which ensures the sustenance of international peace and prosperity according to Article 3 and referring to Article 2, Section 4 of the UN charter, which restricts the forceful exploitation of space and restrain the states by stationing any nuclear satellites or weapon of mass destruction (Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including Other Celestial Bodies, 1966). As space technology was evolving, international law and binding were also advancing, the ABM Treaty of 1972 constrained states to neither proliferate nor test or deploy ABMs in outer space, though these modified treaties still failed to serve the purpose of prohibiting the testing of ASATs in outer space (Boese, [2002](#))

The Moon Agreement (1979), is viewed as advanced scripture, which accommodates general principles of the UN charter regarding space weaponization, postulating the laws for controlling and exploring space assets. Additionally, it limits space exploitation for economic uses by states. However, the limitations of these agreements are deplorable as the major space-faring states (USA, Russia, and China) are not signatories to it. The contradictory understanding of the principles of the Moon agreement by states led them to proliferate and deploy extensively, as the US claimed that Article 3 of the said agreement licensed space militarization in outer space for peaceful motives, yet managed to manipulate the moon and its resources for seeking its own national interests, as per Moon Agreement, Article 11, declaring moon as a common space asset for mankind. Correspondingly, the Limited Test Ban Treaty (1963), had also been

conspired as it limits the installation of WMDs on celestial bodies and orbits, so critics argue that it does not prohibit the installation of biological, chemical, conventional, or laser weapons, paving the way for space-faring states to manipulate this treaty too, instigating space weaponization.

Furthermore, the Partial Test Ban Treaty 1963, the Outer Space Treaty 1967, the Agreement on the Rescue and Return of Astronauts 1968, Intelsat 1971, the Convention on International Liability for Damage Caused by Space Objects (1972), 1972 Anti-Ballistic Missiles Treaty (ABM), the Convention on the Registration of Objects Launched into Outer Space (1975) and the Moon agreement 1979, were established to prohibit positioning nuclear arms in outer space via satellites and prohibit the exploitation of space assets. In 1981, the UNGA restrained space weaponization, followed by the Conference of Disarmament (CD) agenda.

The OST was revised in 1985, by establishing the Prevention of an Arms Race in Outer Space Treaty (PAROS) by the UNGA, under the banner of the Conference on Disarmament (COD) in Geneva. The general principles of the PAROS treaty are ensuring peaceful exploration, preventing the experimenting, proliferation, and deployment of WMDs in space, encouragement of peaceful resolution in times of conflict via confidence-building measures, diplomacy, and cooperation, respecting other's sovereignty and restraining destruction of other's space assets and respecting existing international treaties and agreements following the Outer Space Treaty (PAROS Treaty, [2022](#)).

Besides, several treaties existed regarding the non-weaponization of space, still, there was a need to amend the legal framework of these treaties, thus formulated PAROS, with high motivations to drop the militarization and promote space disarmament and prioritize the peaceful expedition of space for fulfilling the national objectives in the form of commercial gains. The proposition of PAROS was much needed during the increasing intensity of space militarization in the Cold War era, leading towards severe technological advancements



in science and militarization, ignoring the repercussions for the world. However, taking into account the catastrophe it might cause to other space assets including both artificial (commercial and military satellites) and natural (moon, asteroids, meteoroids, etc.), the PAROS had been designed to prevent space weaponization leading toward space war (PAROS Treaty, 2022).

PAROS was established to regulate the agreements between states regarding providing legal protection to space satellites and entities through confidence-building measures. In recent affairs, Russia tested its ASAT in Low Earth Orbit for the 10th time, on 15 April 2020, stimulating the threatened conflictual environment for its adversaries. On the other hand, it was reported that two Russian satellites, Cosmos 2542 and Cosmos 2543, were shot within 100 miles range of a USA space asset. Following the event, the First Committee of the UNGA revised five principles of PAROS assuring the protection of space objects from weaponization. Furthermore, the accountability, traceability, and CBMs between the space-faring states are assumed to be assured, to which the USA deliberately rejected four out of five resolutions (PAROS Treaty, 2022).

PAROS treaty along with other international agreements still has not been implemented to date, due to the few objections of the USA, as it claims that PAROS is just a weak theoretical legal framework for the prevention of space militarization and it would not resolve with the needs of multilateral expansionism in outer space. Since the 1990s, negotiations have been made by the major space-faring states and the international community, to cater to the challenges of the treaty. When the USA exited the ABM 1972 treaty in 2002 during the Bush administration, the President skepticized this treaty as a hindrance to deploying ABM in outer space (Meyer, 2021). Consequently, in 2008, Russia and China suggested incorporating the principle in the PAROS treaty, that, it should refrain states from stationing their nuclear missiles in outer space and prevent the coercive measures in space. Additionally, Russia emphasized the alignment

of cooperative measures between states to ensure harmless space inspection. Yet again in 2014, the formal proposal cited the Prevention of the Placement of Weapons in Outer Space and of the Threat or Use of Force Against Space Objects, presented Russian Federation and People's Republic of China was rejected by the USA, as according to the USA administration, the treaty had not particularly sensitized and defined the legitimate usage of space and failed to categorize the deployment needs of military and commercial utilization (Meyer, 2021). The sanctimony of the USA over ratification of PAROS had been determined by its recent move in the 2020 UN General Assembly secession, in which the U.S. along with Israel voted against its implementation while 182 states were assertive to force PAROS. Eventually, on November 6, 2020, the five resolutions of the treaty were considered by the UNGA members, agreeing on the prevention of space weaponization and building confidence via bilateral or multilateral agreements, ensuring the accountability and traceability of each other's actions (PAROS Treaty, 2022).

## Conclusion

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The Outer Space Treaty along with the other various legal agreements has not been found enough to dissolve the space arms or to promulgate the disarmament of space. The modifications in international law regarding the aspect have been necessitated because of advanced space weaponization. Along with that, the global transition from space militarization to space weaponization could be evident from the above discussion. However, the so-called non-violent and peaceful exploration of space would somehow lead towards the destruction of mankind due to space debris causing environmental hazards on earth and additionally consuming the states' exorbitant budget on the proliferation of space arms. Nevertheless, international law has its own limitations and the imposition of such bindings has been challenging since its evolution.

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