



Interconnectivity of Space Exploration with Geopolitics and Astropolitics: A Review

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Abstract

If there's one thing that has no bounds, then it's outer space. It's the only place where no amount of discoveries would be sufficient enough for gauging out a particular phenomenon in deep space. But, as vast as outer space proves to be, it is also vulnerable. It is mostly susceptible to invasion because of its colossal resource reservoirs. There is a known fact that anyone who conquers space conquers the world, which is also an indispensable part of Astro politics. Whether it be Russia's cryogenic rocket launch, the space race during the Cold War, the establishment of space stations on the moon by the USA, China, and Russia, or the emerging national, and trans-national space programs of other countries, everything leads to one thing: territorial expansion along with protection of national borders. This review paper aims to delve deeper into contemporary Astro politics, space exploration, and its complex connection to the protection of individual sovereignty in international relations and classical politics. This review paper wants to prove that outer space is the new target for geopolitical expansion and rigorous display of hard powers through the help of various academic sources. While on one hand, we are discovering more and more of outer space, on the other hand, we are also impulsively invading it along with its relentless exploitation. Thus, this review paper will highlight in detail the contemporary format of space exploration with special emphasis on the space programs of South Asian and Southeast Asian countries like India, China, Japan, as well as South Korea.

Index Terms- Astropolitics, International Relations, space, South Asian

I. INTRODUCTION

In the vast realm of the cosmos, humanity's endeavors extend beyond the confines of Earth, reaching into the infinite reaches of outer space. As space exploration and utilization have evolved, so too have the complexities of ensuring security in this final frontier. The intersection of technological advancement, geopolitical rivalries, and the quest for strategic dominance has thrust space security to the forefront of global discourse.

On 4th October 1957, the Union of Soviet Socialist Republics (USSR) launched its first Earth-orbiting satellite into space: Sputnik 1 followed by another successful launch of Sputnik 2 which carried a female dog named Laika into space, becoming the first nation to successfully send a living organism into orbit. Before the world could even celebrate this feat, the United States of America

launched Explorer 1 into space. This was not about innovation anymore; it was a befitting response to the Soviet Union instead. This was the start of the first potential space war witnessed by the whole world which led to the making of countless satellites, rockets, and anti-ballistic missiles in the name of "innovation."

According to Launius (1994), the subsequent launch of Yuri Gagarin into orbit in 1961 along with the Apollo moon landings in the late 1960s were pivotal moments in the astropolitical history and the narrative of space exploration. These achievements weren't simply scientific but were also a symbol of geopolitical prestige and ideological superiority during the ongoing Cold War era. [9]

As the world got more and more unpredictable, humans and nation-states didn't stop with the militarization and the



weaponization of land, water, and air but they went beyond that: into outer space. As a result, we now have ventured to as far as near a black hole and even into deep space with Voyager 1. The convergence of space exploration and geopolitics has engendered a complex landscape of challenges and opportunities, profoundly shaping the trajectory of international relations and security paradigms.

However, what also cannot be denied is the increased collaboration between various nation-states and international organizations for innovation and commercial ventures and driven by scientific ventures, economic and geopolitical interests. This revitalization started in the post-cold war era in 1989 when the International Space Station (ISS) who's construction began with the President of the United States of America, Ronald Reagan's announcement in 1984 that the USA intended to build a permanently inhabited space station in the Earth's orbit which was later labeled as "Space Station Freedom." In connection with this particular announcement, he specially invited Canada, European countries, and Japan to participate in the project. This invitation was subsequently accepted by the European Space Agency (ESA) as well. This went on to become one of the biggest international space collaborations in the history of mankind. [1]

Satellites have become the new weapon for war in the contemporary geopolitical arena. Apart from being used for weather forecasting, supporting global communications and navigation systems, and environmental monitoring, satellites are also used to detect incoming missiles and attacks in order to carry out national security operations. However, this strategic importance of space assets has led to concerns about their vulnerability to threats, space debris, cyber-attacks, and anti-satellite weapons further prompting nations to militarize their space assets increasingly.

Space, once considered the ultimate frontier of human endeavor, has transformed into a strategic domain where nations vie for dominance, assert influence, and safeguard their interests. The rapid proliferation of space technologies, coupled with the increasing commercialization of space activities, has ushered in an era where the preservation of space assets is not only paramount for scientific advancement but also for national security and economic prosperity.

The economic significance of space assets is also one of the major reasons behind increased geopolitical interests and exploration in outer space. The commercialization of space by pioneer private companies like SpaceX, Blue Origin, and others has led to an expansion in economic growth and innovation in space technology (Smith, 2020).

These companies are significantly working towards reducing the launch cost, developing and reusing space vehicles, and also exploring new technologies like satellite broadband internet and space tourism. [10]

Another major development also came up: the Governance and Regulation of Space. For this, the first-ever Outer Space Treaty of 1967 was ratified by over 100 countries thus, forming the foremost pillar of Space Law which prohibited the placement of nuclear weapons in orbit and also established laws and guidelines on the sustainable ways to explore outer space.

Some recent initiatives like the Artemis records, led by NASA and some international partners aim to establish principles and norms for sustainable lunar exploration and resource utilization.[17] These agreements predominantly seek to express issues of space resource extraction, environmental protection, and international cooperation in space missions.

Against this backdrop, this review paper embarks on the complex, intricate, and delicate interplay of space security and geopolitics. Through a multidisciplinary approach, I have explored the causes, consequences, and solutions to this weaponization of space security and militarization with a special focus on the space programmes of prominent South Asian and Southeast Asian nations like China, India, South Korea, and Japan and how the emerging space programs of these nations are successfully nullifying the Eurocentric perspective of power politics and their dominance in the astropolitical arena.

Looking ahead, the future of space exploration promises both, opportunities as well as challenges in the geopolitical sphere. Nation-states are more confident in exploring space, but its pursuit also raises ethical, legal, and environmental considerations in regard to the extraction of minerals and water from the moon and the equitable distribution of benefits. [10]

Furthermore, the militarization of space and the development of anti-satellite technologies by different countries is an impending indication of the growing conflict and instability in outer space. [9] There is thus, an immediate need for confidence-building measures, deterrence, and weaponization of space.

This review paper eventually proves the complex relationship and interplay of space security and hence, proves that space "endeavour" has now turned into "space invasion" with nations rapidly building new space technologies to make space stations on different planets. The overarching objective of this review is to provide a



holistic understanding of the complexities inherent in space security and its geopolitical ramifications. By synthesizing insights from diverse scholarly perspectives and empirical evidence, I have tried to elucidate the challenges posed by militarization, weaponization, and the burgeoning space debris problem, while also delineating pathways for cooperation, diplomacy, and the sustainable utilization of space resources.

II. BODY

A. COLD WAR PERIOD (1947-1991)

The World War ended when the US decided to drop two atomic bombs on Hiroshima and Nagasaki in August 1945, which led to Japan surrendering. Some critics of the US decision to drop the bombs have argued that the US action was intended to stop the Soviet Union's geopolitical and friendly developments in Asia since at the time of the World War, Soviet Union was an ally of the US. Just after the end of World War II (1939-1945), a new kind of war emerged, however this war wasn't conventional like the other ones, this war was of deterrence- a war between the world's most powerful countries- the United States of America and Russia (the then USSR- Union of Soviet Socialist Republics). In this war, there were no weapons used, nor was there any direct interaction between the superpowers. Instead, there was a competition between the capitalist and communist forms of governments, western and eastern blocs, military expansion, weaponization of territorial allies and space programmes. This was also probably the world's first space race- from sending humans and animals into space, to making cryogenic rockets, and satellites, the US and Russia (Soviet Union) have done it all.

B. DEFINING SPACE

'Space' can be defined as anything that extends beyond the Earth's immediate environment. It particularly refers to the universe in which our planet, the Earth resides in.

Our main focus at the present should be around the boundary of orbital space which will also continue in the future. The universe cannot be measured in figurative terms, but the area in our solar system where we can send satellites, rockets and space stations like the International Space Station (ISS) is surely limited which measures up to 40,00 kilometers from the Earth's Centre. [6]

C. A NEW ARENA

In 2023, the government of the United States of America approximately spent 73.2 billion US Dollars on their space programme, making it the country with the highest price expenditure in the world. The United States of America was followed by China, with government expenditure on space programmes of over 14 billion US Dollars and Russia investing 11 billion US Dollars. South Korea's government invests about 564 million US Dollars for its space programme while India and Japan invest about 1 billion US Dollars and 6.7 billion US Dollars respectively [15]. If these numbers aren't proof enough, then the construction of space stations by powerful countries on the moon should be enough of an indication that geopolitics is now not only limited to land. It goes beyond the sky. Cold war era proved to be an inspiration for other countries to revitalize their space programmes and gather funds to make their own space agencies. Weaponization of space has been happening since the 1950s under the guise of 'exploration' and its results are clearly visible in 2024. Having fought so many wars on land using state of the art machinery and weapons, these countries have now discovered the importance of space and unlimited access to its resources for those who conquer it first. This has resulted in quick digression from land activities; thus, the countries are now rapidly making Anti-Ballistic Missiles (ABMs) as well as strong rockets to show their supremacy in space.

D. FIRST SATELLITE WAR

The Gulf War (1990-1991) is hailed as the first space war witnessed by the world. Iraqi forces in August 1990 invaded Kuwait, rapidly occupying and subsequently annexing it. After countless of failed diplomatic attempts, the United States of America after approval from the United Nations led a massive coalition force of about 6,00,000 troops from 34 countries to fight against Iraq's aggression and defeated it in what came to be known as the First Gulf War. This operation on the mandate of the UN was named 'Operation Desert Storm.' Although there was no fighting taking place in the atmosphere, but there was a vigorous use of satellite-based Global Positioning Systems (GPS) which played a major role in dismantling Saddam Hussein's military in the 1991 Persian Gulf War. Without the help of these orbiting satellites, the US and its fellow coalition troops would have found it practically impossible to communicate, use their weapons or coordinate in the sandy and stormy deserts of Kuwait and Iraq. It is also to be noted that this war was also the first war to be televised all around the world and that was also possible through the satellites only. This is also the reason why it's called a 'computer war.' [11]



E. THE POKHRAN MOVE

Since the end of the First Gulf War, the satellites have not only been used for exploration but also for weaponization, militarization and act as ‘cameras’ to keep a watch on other countries. These satellites were used by superpowers like the US to project their dominance and hegemony in the international arena. India too became the victim of the same. Fifty years ago, on 19th May 1974, India conducted its first nuclear test in the Pokhran range code named Operation Smiling Buddha thus, entering the League of Nations with nuclear capabilities. This was not fathomable by the US, who at the time was the most powerful nation with the most nuclear weapons and latest satellite technology which it used to its advantage to keep an eye on other nations. The same happened with India after India conducted its first successful nuclear test. [2]

In the name of checking for nuclear weapons for the proliferation treaty, the US kept countries like India and Pakistan in a chokehold. On 11th and 13th May 1998, India again decided to conduct five nuclear tests in the Pokhran range in Rajasthan and named it Operation Shakti. This was a defense tactic by India to counter the increasing hostility against it by its neighbours- China and Pakistan. The tests were a major escalation of India’s nuclear programme. It made India equipped with nuclear weapons, but it also had to face the anger of the Western world and the Clinton administration in the US whose satellites could not detect the suspicious activity happening in the Pokhran range due to strategic and complex planning by the Indian government.

The KH-11 and Lacrosse satellites which used to spy on India with every 12-hour rotation gap and immediately click photos of suspicious activity could not detect the nuclear testing as the Army Engineers, scientists from Atomic Energy Commission (AEC) and the Defence Research and Development Organization (DRDO) calibrated their movements with those of the satellites. The gap between each rotation emerged as a major weakness and technology breach of the US made satellites through which Buddha Smiled again in India. [12]

F. SOUTHASIAN SPACE PROGRAMMES

A space programme is an integrated effort of the government of a country that leads missions related to the outer space and helps in new innovations and explorations. There are private spaceflight companies as well as government space agencies all over the world.

Recently, the Global South in general and South Asia in particular has been in a lot of spotlight whether it be for the

varying foreign policies of the South Asian nations, their geopolitical stand points or even their alliances with the other nations. We still cannot deny the fact that their unique space programmes also play a pivotal role in their geopolitical positions and determines the types of allies they’ll be having. Geographically speaking, India and China dominate these space programmes in South Asia, however if we were to include the parameter of technology, then Japan and South Korea are not far behind.

There are about five parameters that determine whether the space programme of a particular country is good or bad. These are as follows:

1. Types of Missions- Airborne Science, Analog Field Testing, Asteroid Deflection, Atmospheric Probe, Balloon, Commercial Crew, Commercial Resupply etc.
2. Funding- If a particular country’s space programme is getting adequate funding for deep space exploration.
3. Technology- Whether the type of technology used in making rockets or satellites is high end and up to date or outdated.
4. Successful Missions- How many of these countries have had successful missions in their space programmes. The more successful missions, the more is the credibility of that particular country’s space programme.
5. Supportive Environment and Citizen Awareness- If there is a supportive environment and a zeal for exploring deep space, only then can a country’s space programme succeed. Along with this, widespread awareness about outer space, importance of exploration and invention should also be present among the country’s citizens to garner support for the space. [17]

G. INDIAN SPACE PROGRAMME

The Indian Space Programme is said to have formally begun during the early 1960s by undertaking the launching of sounding rockets. A structured approach began with the establishment of the Indian Space Research Organisation (ISRO) on 15th August 1959. Since then, the Indian Space Programme has had a two-pronged approach towards outer space discovery: exploration and innovation with minimal budget use. This was understandable since the country had recently got independent and was still reeling from the massive effects of economic depreciation due to colonialism [8]. But this did not deter the Indian Space Programme, and they went on to have one of the most important and successful space programmes that the world has ever seen. From launching small satellites to launching



equipment carrier rockets, and leading successful missions to the Moon and Mars, India seems to have excelled in more than 124 space craft missions. This has not only opened new horizons for India but has also given it a chance to collaborate with other prestigious organizations like National Aeronautics and Space Administration (NASA) and the European Space Agency (ESA). [3]

H. CHINESE SPACE PROGRAMME

Another massive Asian giant, China has shown massive prowess in outer space explorations. It has been launching satellites since 1970 most of which include weather, remote sensing, communications, navigation and for scientific purposes. China also launched its first astronaut in October 2003 thus, creating history. With an annual budget of about 14 billion US Dollars, China National Space Administration has conducted 525 successful space launches. Major programmes of China include its Manned Space Program, BeiDou Navigation Satellite System, Chinese Lunar Exploration Program, Gaofen Observation and Planetary Exploration of China. In recent years, China has conducted several missions, including Chang'e-4, Chang'e-5, Chang'e-6, Tianwen-1 and Tiangong space station on the Moon. This not only shows its prowess in space but also takes it on a higher level in geopolitics. [5]

I. JAPANESE AND SOUTH KOREAN SPACE PROGRAMMES

The Japanese Space Programme started in the 1950s as a research group led by Hideo Itokawa at the University of Tokyo. The rockets were made but their actual launching took place in around the 1970s. For the proceedings and looking after the funding and mission controls, Space Activities Commission (SAC) was established in 1968. [7] Further, succeeding it was the Japanese Aerospace Exploration Agency (JAXA) which was established in October 2003 and since then, has conducted 48 successful launch missions. JAXA also currently houses 5 astronauts and has an annual funding of 1 billion US Dollars respectively. [18]

The South Korean space programme is also very diversified in its approach. The Korea Aerospace Research Institute was established in 1989 and is the official aeronautics and space agency of South Korea. Recently, though, they have launched their own version of the US based NASA. The South Koreans call it KASA- Korea Aero Space Administration. The country launched its first successful locally developed rocket Nuri, in the year 2021 and a year later launched its first satellite. The South Korean government on an average allocates 564 million US Dollars to its space agency annually.



Figure 1- Falcon 9 soars past the Moon by Paul Eckhardt, Best Newcomer in Astronomy Photographer of the Year in 2021 [19]

J. INDICATIONS

What does this indicate? This indicates that as more and more time is passing, the international arena is becoming even more unpredictable. A country's prowess is now assessed by the type of space technology it has rather than just its on-ground military prowess. Weaponization of space seems to be happening at lightning speed with the quick buildup of space stations like International Space Station (ISS)- a collaboration project of Ros cosmos, NASA, JAXA, ESA and the CSA as well as China's own Tiangong Space Station (TSS).

What started as a mere exploration project has now stemmed into massive production of anti-ballistic missiles, satellites, rockets, and rapid territorial domination of sources of valuable resources like the Moon and the Mars. Building space technology is extremely expensive and hence, the larger the economy, the more resources, and the more power it gains. The United States of America is currently the largest economy in the world followed by China and Russia.

Ironically, the US is also the sole superpower spending the highest amount of money on building Space Technology. There is a good enough reason for this as well. The United States of America relies heavily on technology for inflow of information whether it be general or confidential. However, there is also a big risk of American National Satellites and space resources getting destroyed through vigorous use of Anti- Satellite Weapons (ASAT). The Chinese and the Russian Intelligence seem to be aware of it and have significantly been revitalizing and improving their own resources to put a stop on the coveted American dream of conquering space. [4]

This volatile situation where America's weakening stature is clearly visible, gives a very good chance for the Global South in general and the South Asian region in particular.



A weakening superpower is an indication of the shift in global hierarchy power towards other regions. The way we look at wars and conflicts are also evolving in a multilateral way seeing the changing systems of governance in the countries of the world.

K. SPACE: A TOOL FOR GLOBAL SECURITY

Earth has seen countless wars, loss of resources, manpower, money and what not. Yet all of this has always broiled down to whether global security is more important or national security is a much more important aspect. National Security in simple terms refers to the security and defense of a sovereign state including its citizens and political, economic, and social machinery. Here, personal interests of the country matter more than that of its allies combined.

Meanwhile, Global Security on the other hand is a broader concept in the International Relations. Here, there are no personal interests, instead, countries make alliances with each other and pool a part of their sovereignty for the greater good and benefit of the world. Global security includes measures like diplomacy and international organizations like the United Nations promoting global peace to prevent devastating wars.

In the midst of all this, countries are starting to realize the importance of outer space as a valuable tool for security. Space race is now a thing of the past and space agencies are now collaborating to form more powerful and secure space weapons for the future weapons. This mutual benefit and coalition is also in a way preventing war, heavily promoting global peace. Countries realize that collaboration is the only way which can promote global peace and prevent conflicts and dire consequences.



Figure 2- The International Space Station (image via NASA) [20]

III. METHODOLOGY

IMPENDING SECURITY THREATS IN SPACE

It is no new news that some countries for their personal interests might weaponize space which will have long term negative consequences on Earth and the human species. The security threats in space are real and we are much prone to these threats than we think. Policymakers of the world need to attend to this impending and dangerous situation as soon as possible. This has also been signified by former North Atlantic Treaty Organization (NATO) head Anders Fogh Rasmussen who said that “military threat in space is real, and it is growing” and that the Western policymakers need to react to it.

Recently, THE NAKED SCIENTISTS, an independent group of scientists who are based in Cambridge University’s Institute of Continuing Education (ICE) held an interview with Dr. David Whitehouse who is a space scientist, author and former British Broadcasting Channel (BBC) Science editor about the impending military threats in space. [16]

David - I think the Ukraine conflict has brought into focus a lot of the feelings and worries about space-based warfare that have been around for a long time. It is said in space warfare history that the Persian Gulf War of 1991 was the first space war in which space assets were a real importance to finding out what was going on on the ground and directing conflict. Ukraine is the first two-sided space war in the sense that Ukraine is not a space power, and yet it's been able to use space resources to aid its fighting in a much more efficient way than Russia has. I mean, Ukraine has used communications and it has used commercial satellite observations to find out what's on the battlefield. Russia, you would've thought, would have a space advantage, but it hasn't because it's outdated and it's not been able to get its systems to work. So for future conflicts, and people are talking in this respect, not about Russia, but about America and China, there are a lot of lessons to be learnt about the importance of protecting space, the infrastructure of space, during a conflict.

Chris - What sorts of legislation treaties, preexisting agreements are there to safeguard space, if any?

David - There are two that come to mind. The first thing that Russia did when it invaded Ukraine was hack the ViaSat satellite system to disable Ukraine's communications. Ukraine responded by using a different set of communication satellites, the SpaceX satellites launched by Elon Musk. Legally, that actually means in terms of international law, that SpaceX is a participant in the fighting in the Ukraine. Under international law, Russia would have the right to attack a third party, which is aiding its adversary. That worries people a lot. But also, the recent



announcement by Russia that it was thinking about some form of nuclear-powered weapon in space did force people to think again about the outer space treaty, which was signed in 1967, which prohibits the use of nuclear weapons or the kinds of weapons of mass destruction in space. And people realize that actually that wording in 1967 is rather loose, and that there are ways that Russia could put a nuclear-powered weapon in space by not violating that treaty.

Chris - The other thing, of course, is that space is becoming quite crowded and there are predicted to be more than a hundred thousand satellites in space within the next decade. As some people have pointed out, you don't actually even have to put a weapon in space to weaponize space because all you'd have to do is to knock a couple of those satellites off kilter and there'd be potentially a runaway collision effect where everything would smash into everything else. You could cause a catastrophe and a major problem for everyone on the Earth's surface because of our reliance on space without actually having to fire anything anywhere

David - You are quite right. We are all vulnerable. There is a worry in the future that, particularly if a nation like Russia would get desperate, it could sabotage the whole space ecosystem for everybody. Because as you said, if you blew something up in space, you could create a self-sustaining cloud of debris which might achieve your military objectives, but it would blind you. It would blind everybody else. It would interfere with communications, with positioning television, with not just the military, but the whole space infrastructure. Satellite navigation in our cars might be affected by this. That would be a brute force, last resort strategy that military space planners don't rule out in extreme circumstances. As you imply, there is a whole space ecology on which society relies which needs to be not only investigated in terms of how vulnerable it is and how it could be attacked in space but needs to be updated. It's very interesting to see the United States Space Force which is charged with protecting the American space system and developing ways to attack the Chinese space system in the future. They've been disappointed by the fact that they've got slightly less budget this year because they're going to spend a lot of money on upgrading, updating, and modernizing all their space systems so that they could be more immune against attack. But you're right, if somebody blows something up and scatters shards of debris everywhere, there's no protection against that. So, people need to talk.

This interview clearly signifies the ever-growing importance of deterrence regarding space weapons and their lethal and careless use at the hands of powerful

countries like Russia against Ukraine. This brings a new perspective into focus of how important it is for the world to come together to stop the careless and lethal usage of space resources by economically and internationally powerful countries who have advanced space programmes.

FUTURE TRAJECTORIES

Now that everything is clear about outer space, its importance, utilization and various space programmes of different countries and how they are moving forward, it is time we talk about the future trajectories of outer space, Astro politics and space governance.

1. All the countries of the world need to come together in order to carry out a collective deterrence and make sure that no one country weaponizes outer space in such a way that it turns out to be detrimental for our planet Earth.
2. Individual Space Forces made by different countries like the United States of America, Russia and China should come together to encourage the same for countries who have their individual space programmes, so that future collaborations can take place should Earth ever be in danger from incoming threats from outer space.
3. A concise and precise framework needs to be made for space debris management. Compliance with international guidelines for debris mitigation is extremely essential for all the countries in the world.
4. Nations also must address the impending issue of resource sharing and individual property rights in outer space such as mineral and energy resources. International agreements need to be made so that conflicts can be avoided.
5. With countless environmental issues like global warming, forest fires, species extinction, earth cannot afford another major problem and hence, agreements need to be made for sustainable and environmentally friendly exploration and practice in outer space.
6. Humans are greedy and ambitious and with more and more nations turning to space exploration, it is imperative that we follow the Outer Space Treaty which prohibits nations from treating planets and



celestial bodies as their own property. Balancing this treaty with several other agreements is crucial for the world.

7. Nations need to resolve their internal conflicts and external conflicts with each other and focus on collaborating with each other on space exploration activities. Present collaborations are not enough to mitigate the threats of security outer space faces in the contemporary era. [13]
8. To make sure that there are no discrepancies and problems in the outer space sector, just like the UN, a world organization for space needs to be made for better communication and alliances for space exploration.

IV. DISCUSSIONS

My main aim through this review paper was to prove the impending security threats in outer space, the space programmes of different countries, and where they are heading and also primarily highlighting the importance of outer space in geopolitical interactions and international relations. In today's era, a country with its own independent space programme signifies its supremacy and sovereignty in outer space and is also an indication of its supreme technological advancements. Thus, I have already proven the importance of independent space programmes, Astro politics in geopolitics in the main body of my review paper.

Space turns out to be the fourth frontier of war in contemporary times. Weaponization of Space essentially means putting attack satellites in the orbital area of the earth in order to put down enemy satellites and also used ground-based missiles to destroy satellites in space. [14]

This impending problem puts the major question in our brain: To what extent can the countries go in order to weaponize space?

Countries are weaponizing space for the sole reason of projecting their supremacy on all fronts- land, air, water and now space. There is also an atmosphere of mutual suspicion between allied countries, they cannot trust each other easily neither can they depend on others for space exploration or protection. Hence, the hostility stems from mutual trust and dissatisfaction, to have power over the other countries, and rule space. [14]

Treaties like the Outer Space Treaty need to be kept in mind, but more treaties need to be made in order to stop an all-out space race which would further lead to a space war. This not only affects the countries with a space programme, but it renders those countries weaponless who don't have their own independent space programmes. The UN also needs to promote International Code of Conduct for Outer Space Activities (ICoC) which is a non-legally binding, voluntary international instrument that is aimed at enhancing responsible behaviour in space. [13]

In such a volatile arena, South Asian countries need to recognize their prowess and move towards mutual peace and benefit for the people. India, an Asian giant with its own independent space programme is known for its peaceful use of weapons and is never the first to attack in the history of wars. Countries like India, need to come together and assert their powers for a peaceful outer space and for impending economic and security reasons.

V. CONCLUSION

This review paper essentially discusses and proves the importance of space in geopolitics as well as the impending security threats to outer space from superpowers looking to establish their supremacy in the fourth frontier. Land, water and air are no longer the main ground for fighting wars as space has emerged as the new area for wars. It is predicted that the third world war might be fought in space. In such dire times, this review paper discusses the need for Outer Space peace treaties, responsible use of space resources, addresses the need for intellectual property rights and also proves why vigorous collaboration is the only way Earth can be protected and weaponization of space can be stopped. The future of space governance lies in the hands of emerging superpowers in this multipolar geopolitical arena especially from the Global South and now is the time to act before another world war breaks out.

ACKNOWLEDGMENT

I would like to take this opportunity to thank Pahal Horizon- An International Research Journal for giving me the opportunity to pursue a research internship in their



prestigious organization. The great intellectuals at Pahal Horizon have not only helped me in honing my research skills, but they have also imparted invaluable knowledge to me along with a newfound zeal for research and academia. A special thanks goes to Mr. Akash Arya for being with me every step of the way and helping me in clearing my doubts and Mr. Lokesh Sahu for helping me in finalizing my research paper and getting it published in the Journal.

I would also like to give a special thanks to my parents, friends, mentors and my fellow interns who have provided me with their unconditional support and help. This research paper wouldn't have been able to get published if they wouldn't have encouraged me during the writing process.

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