South Asian Studies
A Research Journal of South Asian Studies
Vol. 35, No. 1, January – June, 2020, pp. 87 – 100

Space Militarization Race among China-Russia and USA: Implications for South Asia

Fazal Abbas Awan
University of the Punjab, Lahore, Pakistan.
Umbreen Javaid
University of the Punjab, Lahore, Pakistan.

ABSTRACT

The launch of Sputnik demarked the beginning of the space age and also the beginning of the militarization of the outer space. During the Cold War, the two strategic competitors exploited the outer space for their military purposes, which initiated an intense space race, lasted till the end of it. Due to intense competition in space, different satellites for photographic reconnaissance, surveillance, communication and intelligence were launched into the outer space and space became the area of conflict between the arch enemies. The major development in the militarization of space came under the President Reagan's period, when Strategic Defence Initiative was announced in 1983. This was the first step towards weaponizing the common heritage of the human being. The power trends in the militarization of outer space have also shown its implication on security of South Asia. China, under the consideration of security dilemma, has contributed its part in the militarization of space. As a result, India in collaboration with U.S is also crawling towards developing its space power, which has serious implications on the security of Pakistan. Therefore, the strategic competition among nations has resulted into their massive investment in the developing their space assets for military purposes and brought a paradigm shift in it. This research paper analyzes that space has become a fourth medium of warfare. The new plans from the major powers to utilize the outer space to dominate and to create their hegemony in the outer space will deteriorate the fragile peace in South Asia, as well as endanger the peace of the world. The design of present research is exploratory and for more empirical analysis, study also based on philosophical assumptions.

Key Words: **Space Militarization and Weaponization, Satellites, Security Competition, Surveillance and Intelligence, South Asia**

Introduction

The launch of Sputnik is the beginning of space age and space race. During the cold war, two strategic rivals (US-USSR) exploited the outer space for military purpose. This situation has started an intense space race for dominance and increased the probability, that space will become an area of Arms race between the major powers and perhaps a future field of contest (Mowthorpe, 2003). Space is the global heritage of man that has vast economic and commercial frontiers. But

the rivalry among nations generates doubts in the mind of people about the exploitation of global heritage. Space has rich strategic importance equal to air, land and sea. In which things are voyage similar to sea and provide examination of earth and path for Inter-Continental Ballistic Missile (ICBM) to reach the target. Therefore space can be used for both economic and military purposes (Sadeh, 2013).

Classical realist Hans Morgenthau believes that, human nature has lust for power, and wish for dominance that leads toward the war (Baylis, 2008). Similarly, the anarchic nature of international system allow nations to utilize all means to survive that is the main cause of conflict in international system. In the lens of realism, it can be argued that space militarization could lead towards the weaponization of space. Now the global powers are going to develop lethal weapons that can start dangerous Arms race and cause hArms for space which is global heritage of all human beings (Freese, 2017). The past events and global trends in space militarization shows the importance of outer space from the first launch day of Sputnik (Hays, 2011).

After the launch of Sputnik, global powers started to reach ultimate high ground and different space military mission started from the reign of President Eisenhower to Obama. Therefore, 'National Aeronautics and Space Administration' (NASA) and 'National Reconnaissance Office' (NRO) were established to exploit outer space for both civilian and military purpose (Montluc, 2009). CORONA and KOSMOS satellites used during cold war for photographic reconnaissance of the denied territories. Both strategic rivals felt fear from any surprise attack. Space was only domain for Intelligence, Reconnaissance and Surveillance (IRS) which was fully exploited by the two competitors during cold war. Although in early 1960 both rivals were locked up in Mutual Assured Destruction (MAD) (Launius, 2012). The idea of 'Star Wars' was given by US President Ronald Reagan which resulted in the establishment of Strategic Defense Initiative (SDI) and it has proposed the idea of a 'defensive shield' to intercept Soviet 'fourth generation ICBMs which has further triggered the militarization of space (Knelman, 2001).

After the collapse of USSR in 1991, President Bush proposed the idea of Global Protection Against Limited Strike (GPALS). He also planned for 'National Missile Defense' (NMD) and 'Theatre Missile Defense' (TMD) because all necessary information which included Intelligence, Navigation, Reconnaissance and Command and Control comes from space through satellites (Pilch, 2009). During the cold war era both strategic competitor sent thousands of satellites with military feature. Military feature satellites played an important role in the war, which made space as fourth medium of warfare. These satellites provide Navigation, Photographic Reconnaissance, Communication, Early Warning, Mapping, Weather Monitoring, Command and Control and Battlefield Management which is connected with soldier and protect them (Wang, 2013).

The space race among big powers urged other nations to develop their space capabilities. Rise of China as a global power with her space capabilities changed

the space scenario. It has also challenged the USA, a sole space power and entered in new space race. The China-Russia and USA space race implications could be better studied and understand in triangular relationship between China, India and Pakistan in South Asia. USA wants to hold her hegemony in both earth and heavens (space) and enhancing military space capabilities to counter China that has great implication on the security of South Asia (Lele, 2013). The strategic triangular relationship involves with two rivalries Pak-India; with three major wars and some border clashes. Serious Arms and nuclear race since its inception, and Sino-India; 1962 war has brief history of disputes. On the other hand, China-Pakistan friendly relations on the same page of cooperation (Kapur, 2011).

The 21st century is the century of innovation that highlights the Revolution in Military Affairs (RMA). The world has entered in 'fourth generation' warfare that improved the art of war which has further resulted in militarization and weaponization of space (Deblois, 2010). USA efforts of developing and deploying of space weapons for military purpose urge other nations to develop such technologies that have serious implications generally on world, and particularly for South Asia. The strategic space cooperation between India-US in 2005, and veto from Prevention of Arms Race in Outer Space Treaty (PAROS), including Israel. It forces China and Pakistan to take any defensive measure. China Anti-Satellite Test in 2007 was clear message to USA to bring on table to sign PAROS Treaty and challenged the US space power. But Eagle is still not ready to accept any treaty that limitises its space freedom and allow others to develop such technology that hArms its security (Zhang, 2013). The strategic importance of space and a new territory for conquering space leads toward an area of conflict and powers enter in world war three (Sage, 2008).

The states in anarchic world always feel insecurity. Their foremost intention is for survival by pursuing the military capabilities to dominate others nations and creates hegemony on air, land, sea and space (Skinner, 2014). Therefore, for the survivability of the states in the anarchic world China, Russia, U.S and India enhance their space capabilities. Today USA military is totally dependent on space and the security of its space assets has become the top priority of government. On January 11, 2007 China successfully launched a ground base Anti-Satellite (ASAT) Test by destroying its own weather satellite which gave a shock to the world especially USA. After that China became the third nation after the USA and Russia which have such capabilities.

Dragon (China) ASAT test changed the discourse of space weaponization and led Eagle (US) towards the formulation of new space policies and priorities. China ASAT test and recent launch of its 'Defunct' satellite counted offensive to all nations. Now Eagle established a relation with India to counter China and sign different space agreements (Lele, 2011). India starts its space program in 1950s in the wake of space race between two strategic competitors during the cold war (Sachdeva, 2016). The 1962 Sino-India war and the border disputes between India-Pakistan resulted in three major wars, which force three nations to develop

power generating capabilities and Indian nuclear test in 1974 badly disturbed the stability and security of South Asia (Jaspal, 2011).

In this context, the strategic importance of space attracted India to utilize space for both civilian and military purpose. Indian military and strategic space programs that always consider offensive towards China and Pakistan. Indian space capabilities and intention for develop ASAT technology is new threat for the security of South Asia especially for Pakistan and it further intensifies Asian space race (Ahmad, 2015). Pakistan started its space program in 1960 and still not able to develop any technology that could give hArms or hurt the common heritage (space) of man. If India goes to develop ASAT technology in future, it will be hArmsful and will destabilize the peace and security of South Asia. It will also start an Arms space race that will destroy the peace of this region. Now Pakistan has established their relations with China to encounter India to maintain regional polarity and going to enter in the club of space faring nations with the space vision of 2040 (Jaspal, 2001).

The earliest Chinese space aspiration was scientific development in space and use for economic purpose to compete with other nations through economy. But with the Revolution in Military Affairs and Eagle intentions towards earth and heaven hegemony has forced Dragon to generate power capabilities for their survival in international system and emerged as a major regional and international actor (Tellis, 2007). USA over-all policy for space as 'rules of roads' and vetoing from PROAS treaty and relation with India forced the great powers to adopt defensive approach towards the militarization and weaponization of space. Great powers have entered in new Arms race which make the space a new battlefield among them (Krepon, 2008). China-Russia and USA space race urged other nations for the militarization and weaponization of space and intention of India for ASAT capabilities greatly influence the regional Security of South Asia (Samson, 2011).

Theoretical framework

In the 20th century, the art of war advanced and the modern technologies are the outcomes of two world wars that instigate other nations to enhance information technology, missile defense system, aircraft, command and control and develop nuclear weapons to maintain hegemony. Nations established different research and development programs to develop such technologies and weapons that can destroy the world in minutes (Japan is best example during World War). The main objective behind the development of such weapons is to secure state security. According to Hans Morgenthau, power is the key to get the best of world, for once we can ignore the reality of power, but we cannot reject it because the tendency of human nature is towards competition and conflict (Booth, 2011).

Offensive realists believe that all nations want to reach at the top of hill. No nation still could achieve it because every nation wanted to secure its survival and enhance their military capabilities because without strong military capabilities long

term economic and political objective could never be attained in this anarchic world (Griffiths, 2007). Therefore during cold war, both powers undermined the Arms control agreement to shift the balance of power in their favour (Sadeh, 2011). According to Thomas Hobbes, human nature is inherently selfish, greedy, have lust and desire for power and more power. We can see that this 'Hobbesian' notion is the foundation of conflicts among states (Heywood, 2011). Classical realist Thucydides quoted that, "standard of justice depend on power, stronger do what they have the power to do and weak accept what they have to accept" (Lawson, 2015). Structural realist Kenneth Waltz argued that states behavior is always determined by the anarchic nature of international system, in which states do not trust on others for its security and drive for self-help principle to ensure its security and survival. Waltz elaborates the principle of self-help, balance of power and suggested states, to seek only relative power not absolute power. Self-help means those who got fail in helping themselves exposed themselves in danger and this fear leads states towards the creation of balance of power. He further argued that states can end conflict through cooperation and self-restrain (Baylis & Smith, 2008). In realism, states are key actor in international system and they are motivated by their national interests. States seek power; calculate interest in terms of power and anarchy allows states to compete for survival (Kegley, 2011).

Offensive Realist John J.Mearsheimer argued that, "the anarchic structure of international system motivated the states to act offensively and to seek hegemony. The desire for survival encourages states to behave aggressivly and survival is the number one goal of great power. He further argued that states are always in anarchic system and there is no night watcher to help them when they attack by others. Anarchy and mistrust create fear among states that leads states to maximize their power and enhance military capabilities for hegemony on the other hand it also creates fear among its rivals and start to act as balancer". There are five major assumptions of 'Offensive Realism': 1. International system is anarchic. 2. Great powers are rational actors. 3. Survival is the primary goal of great powers. 4. Great powers inherently retain some offensive military capabilities. 5. States can never trust on other states for its security. Structural conditions allow states to maximize relative capabilities and to look for opportunities and power to become hegemon. Their ultimate goal is to become hegemon. Every state wants to be at the top of hill but no one can reach there. When great powers feel fear they make alliance with others (Mearsheimer, 2014).

The aim of study is to analyze the China-Russia and USA Space Race and its implications on the security of South Asia through the lens of structural realism particularly (defensive-offensive) and for the better understanding of research all types of realism.

Space militarization race among China, Russia and USA

The human dream to journey or fly into space finally achieved in mid-20th century with the enormous hard work of thinkers, leaders and scientists. After the World

War II, world divided into two blocs and both powers started to exploit space for political and military purposes for hegemony. They started to spend huge amount on their space programs and launched thousands of satellite with military features. The development of ICBM technology by both powers enhanced the fears of surprise attack, and started an Arms space race and undermined the Arms control regime. USA President Ronald Regan proposed the idea of 'star wars' to protect the U.S interest, which further triggered powers towards the militarization and weaponization of space. After the end of Cold War Eagle (USA) became the sole super power of the world and space (Wirbel, 2004).

Today USA is more dependent on space and not ready to accept any treaty that limited its space freedom and has the right to prevent any nation's actions that hArms its space freedom. Now U.S is going to make alliance with India, Israel, Japan and South Korea to counter China as an emerging power with ASAT capabilities. This new Arms race is also the base of Asian space race that is a disaster for the peace of world and would make life insecure on earth (Gagnon, 2010).

Now space became the sign of national pride among nations and going to color it more political. The growing capabilities of space have become the integral part of states to weaken their rivals. The competitive multi-polarity turned the world is most dangerous zone (tension, violent and confrontation), where each states is going to develop offensive and defensive capabilities. Now the pattern of space policy changed, due to economic, political and technological reasons and powers planned for to weaponize space (Samson, 2011). In future space will determine the outcome of conflict or war and the protection of space assets will be the highest priority of the states.

Figure 1.1

Source: www.worldofapplication.com

Figure 1.2

Source: weknownyourdremz.com

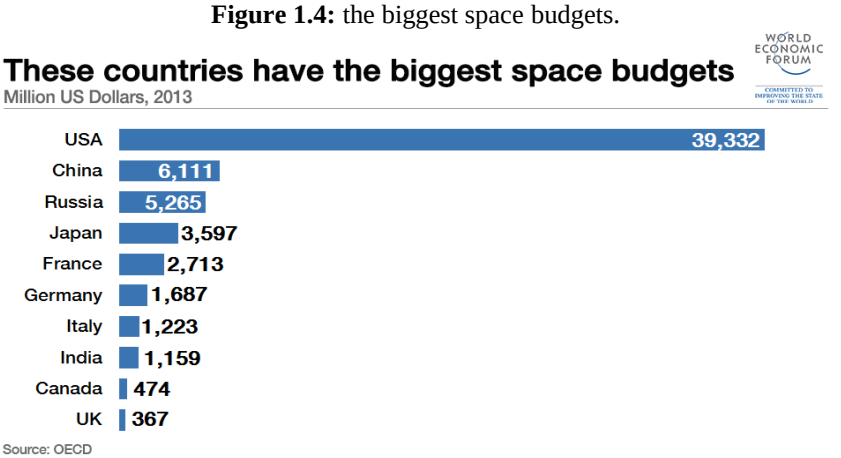
Figure 1.3

Source: www.facenfacts.com

Now the nature of warfare changed and space became the essential component of warfare. For powers space is weapon of victory and hegemony and changed the phenomena of occupying territory by force that was the thing of past (Poduval, S. 2012). China space program started in 1950s with the objective of economic development, national defense and enhance the indigenous capabilities (Chunsi, 2008). China is emerging power with nuclear, ICBMs and ASAT capabilities that attract Eagle (U.S) and effect the relations. Some considered that recent ASAT test by Dragon was a protest against Eagle space policies and dominance and some considered, it was a strategy to counter overall military capabilities of Eagle and some considered, it was a clear message for Eagle to bring on table to sign PAROS treaty.

Now Eagle started offensive and defensive space strategy to counter Dragon (Tellis, 2008). China ASAT capabilities and US interference in Asia to counter China further hArms the peace and security of South Asia. Space will be high frontier in Sino-U.S rivalry because U.S military is most dependent on space and any country easily defeats U.S by destroying or disrupting its space program and space is best option for China (Krepon, 2008). Today both nations expending huge amount on space program for both military and civilian purposes. According to 2013 estimate by Organization for Economic Cooperation and Development, China was the second largest spender in space with the annual budget of $13 billion — but still well behind the U.S-$40-billion.

Figure 1.4: the biggest space budgets.



Source: https://www.weforum.org.

India developed its space program for commercial purpose but changed its space policy with the time being. Indin efforts to develop Ballistic Missile Defense (BMD) and ASAT capabilities are the clear sign of offensive behavior. India recently launched its Agni-V and planning for ASAT capabilities in future under the Department of Defense and Department of Organization (DRDO), opened a new missile and Arms space race in Asia (Rajagopalan, 2011). Paikowsky argued

that "India and Israel shared similar threat and interest. Israel wants to enhance Indian space power for a stronger and better balancer in South Asia and Asia in general. This will serve the short and long term interest of Israel" (Paikowsky, 2011). Lele explained that "India is going to utilize space for military purpose and started to build ASAT capabilities that can change the nature of warfare in Asia and particularly hArms the stability of South Asia. Indian attention to counter China and play the role of balancer further triggered the Asian space race that will destroy the peace of region" (Lele, 2013).

Space warfare and its elements

As compared to other nations, Eagle more relies on its space and used it to protect its national security and its investment. In this regard, in the event of any future conflict between Eagle and Dragon, then the dragon will be left with one option that to adopt the policy of Pearl Harbor and to attack Eagle space assets. This doctrine is characterized as the element of space warfare. International Law, clear define the definition of space warfare weapons but on the other hand Eagle military has no definition of space warfare and created the U.S Strategic Command (USSTRATCOM) the organization dedicated to fight war in space. On the other hand, Dragon scholar defined war in space with different rational views, the more descriptive PLAs definition "Military confrontation mainly conducted in outer space between two rival parties. It includes offensive-defensive operations between the two parties in outer space as well as offensive-defensive operation between the two parties from outer space to air or the ground and vice versa. Space force, space control, space force enhancement and space force application are the elements of space warfare" (Seedhouse, 2010).

The Eagle and Dragon both wanted to avoid an arms race in space but both continued to develop military space capabilities. Eagle wanted to develop more advance military space capabilities to reduce its space vulnerability through defensive counter space technologies and also planned to build a space force to maintain space dominance around the globe that further intensified space race among powers. Dragon space policies considered as the reaction of Eagle offensive space policies and behavior that is going to an unpredicted future space conflicts or a new world war three in space (Hays, 2011).

The term "weapon in outer space" means any device or equipment which placed in outer space that is based on any physical principle; which has been specially designed to destroy, damage or disrupt the normal functioning of satellites in outer space, on the Earth or in the Earth's atmosphere, or to eliminate a population or components of the biosphere which are important to human existence or inflict damage on them (Johnson-Freese, 2017).

Summary of Paper

At the beginning of the space age, both superpowers had initiated their space programs, presumably for the benefits of the human beings; but, both super powers U.S and the USSR exploited the outer space for military purposes rather than for the welfare of the human beings. Spy satellites were extensively used during the Cold War to get the photographic reconnaissance of the denied terrains of the adversary. President Reagan in 1983, announced Strategic Defence Initiative to counter the massive ICBM capability. In doing so, rigorous R & D program was started to intercept any incoming ICBM from the USSR, in case of surprise attack from the USSR. Huge funding was released to accomplish the strategic goals- to save USA. But, after the demise of the Soviet Union, President Bush during his period, discarded the whole phase 1 of the Strategic Defence Initiative, and announced his own program of Global Protection Against Limited Strikes. The announcement Global Protection Against Limited Strikes (GPALS) program also gave birth to several other programs like National Missile Defence, and Theater Missile Defence, in which the space based interceptors, became the integral part of whole defence against the ICBMs. After the incident of 9/11, President Bush in 2001, unilaterally, withdraws for the ABM Treaty, and announced Ballistic Missile Defence program. These programs increased the militarization of the outer space and led to start the new debate of the weaponization of the outer space.

The space race between the powers has also made China, India, and Pakistan aspirants of the space exploration. China in this regard, for couple of decades, has augmented its space exploration power. The U.S and USSR ambitions to create their hegemony, especially the U.S policy of full spectrum dominance, have prompted other nations to exploit the outer space for their military purposes. China, in this regard, is also building its space power, by constructing its satellite systems in the outer space. Similarly, it has also demonstrated its most destructive anti-satellite capability in 2007, by destroying one of its defunct weather satellites in the outer space which also created huge amount of hazardous space debris. India in this whole story has also contributed a lot. Its space activities since 1990s has also created security dilemma for Pakistan. India is aiming to build its BMD and much anticipated ABM system for security to contain Pakistan and China in South Asia. Although, it hasn't achieved significance dedicated military satellite system in the outer space; but, its growing BMD capabilities- incorporation with U.S, Israel, and Russia, can bolster its strategic aspiration in the region. All three powers are continuously increasing their military capabilities at a moderate level, because of the U.S offensive missile defence system in Europe and in the Far-East. Because of this, there is a chance of horizontal proliferation of space weapons in the world.

Findings, recommendations & conclusion

During Cold War space was rich domain for the sake of hegemony. But it became dangerous because the absence of space policies and formal treaty regarding space militarization between contesting parties. The powers deal the space militarization on the same pattern like they are contesting on earth. The arms race in space lead nations to good bye disArmsament, peace and plunged in perpetual nightmares.

Now time has come to stop Arms race, safe heavens and protect the global heritage of human beings. Pakistan, in this regards, needs to boost up space explorations efforts, so that, it can also foster its economy. On the other hand, to maintain its credible minimum deterrence in the region because the dangerous posture of India is a direct threat, which disturbs the space equilibrium of the South Asian, an efficient and reliable surveillance and early warning system in the outer space is the need of hour. Therefore, it has to build satellites for early warning and surveillance.

During the Cold War only super powers had capability to exploit space for military and political purpose and attracted other nations to develop space capabilities like today India and Pakistan following this pattern. The military utilization of space increased globally and competition among great powers convert it surrogate battlefield. Today more than 35 countries have their space capabilities. In 2005, USA including India and Israel vetoing from 'Prevention of an Arms Race in Outer Space' (PAROS) in the 'Conference of DisArmsament' (CD) and 'Anti-Satellite Test' (ASAT), by China in 2007, changed the discourse of space and the probability if space weaponization in future. Indian attention to counter China and play the role of balancer further triggered the Asian space race that will destroy the peace of region.

References

Ahmad, K. (2015). Security Implications of Indian Space Program. *Stratigic Studies*, 31-41.

Bardeen, J. (1986). The Origins of Star Wars. *JSTOR*, 1-2.

Baylis, J. (2008). *The Globalization of World Politics: An Introduction to International Relations.* New York: Oxford University Press.

Booth, K. (2011). *Realism and World Politics.* New York: Routledge.

Brown, T. (2011). The American and Soviet Cold War Space Programs. *Comparative Strategy*, 177-186.

Chandrashekar, S. (2015). *Space, War & Security–A Strategy for India*. Dehli: National Institute of Advanced Studies.

Chapman, B. (2012). *SPACE WARFARE AND DEFENSE.* London: ABC-CLIO.

Chunsi, W. (2008). China's Outer Space Activities: Motivations, Goals and Policy. *Strategic Analysis*, 621-636.

Dawson, L. (2017). *The Politics and Perils of Space Exploration Who Will Compete, Who Will Dominate?* Switzerland: Springer.

DeBlois, B. M. (1999). *Beyond the Paths of Heaven The Emergence of Space Power Thought.* New York: Air University Press.

Dingli, S. (2008). China's Military Space Strategy: An Exchange. *Survival*, 157-198.

FitzGerald, F. (2000). *Way Out There in the Blue: Reagan, Star Wars, and the End of the Cold War.* London: Oxford University Pres.

Gopalaswamy, B. (2014). India and Space Weaponization: Why Space Debris Trumps Kinetic Energy Antisatellite Weapons as the Principal Threat to Satellites. *India Review*, 40-57.

Goswami, N. (2018). China in Space Ambitions And Possible Confilicts. *Jstor*, 74-97.

Griffiths, M. (2007). *International Relations Theory for the Twenty-First Century An Introduction.* New York: Routledge.

Hagt, E. (2008). China's Military Space Strategy: An Exchange. *Survival*, 157-198.

Hall, R. C., & Neufeld, J. (1998). *The U.S. Air Force in Space 1945 to the Twenty-first Century.* Washington, D.C.: Oxford University Press.

Harvey, B. (2000). *Emerging Space Powers: The New Space ProgArms of Asia, The Middle East and South America.* Springer.

Hays, P. L. (2002). *United States Military Space: Into the Twenty-First Century.* Air University Press.

Hebert, K. D. (2014). Regulation of Space Weapons: Ensuring Stability and Continued Use of Outer Space. *Astropolitics*, 1-26.

Hilborne, M. (2016). China. *Space Policy*, 39-45.

Hitchens, T. (2008). *Security in Space:The Next Generation.* Geneva, Switzerland: UNIDIR United Nations Institute for DisArmsament Research.

Jaspal, Z. N. (2001). India's Missile Capabilities: Regional Implications. *JSTOR*, 33-64.

Johnson-Freese, J. (2007). *Space as a Strategic Asset.* New York: COLUMBIA UNIVERSITY PRESS.

Kapur, A. (2011). *India and South Asian Stategic Triangular.* London: Routledgre.

Kegley, C. W. (2011). *World Politics Trend and Transformation.* Clark Baxter (THOMSON).

Krepon, M. (2008). China's Military Space Strategy: An Exchange. *Survival*, 157-198.

Launius, R. D. (2012). *US Presidents and the Militarization of Space,1946–1967.* Texas A&M University Press.

Lawson, S. (2015). *Thoeries of International Relations Contending Approaches to World Politics.* Polity.

Lele, A. (2013). *Asian Space Race: Rhetoric or Reality?* New York: Springer.

Li, Z., & Handberg, R. (2007). *Chinese Space Policy A Study in Domestic and International Politics.* New York: Routledge.

Mearsheimer, J. j. (2014). *The Tragedy of Great Power Politics.* New York: Norton.

Mehmud, S. (1989). Pakistan's space programme. *Space Policy*, 217-226.

Moltz, J. C. (2010). China, the United States, and Prospects for Asian Space Cooperation. *Journal of Contemporary China*, 69-87.

Morgenthau, H. (2005). *Politics Among Nations: The Struggle for Power and Peace.* McGraw-Hill Education.

Mowthorpe, M. (2002). US Military space policy 1945–92. *Space Policy*, 25-36.

Nardon, L. (2007). Cold War Space Policy and Observation Satellites. *Astropolitics*, 29-62.

Nixon, M., & Heginbotham, E. (2015). U.S. Counterspace Capabilities Versus Chinese Space Systems. *Jstor*, 227-243.

Paikowsky, D. (2011). India's Space Program: An Israeli Perspective on Regional Security. *India Review*, 394-405.

PPoduval, S. (2012). China's Military Space Capabilities. *Maritime Affairs:Journal of the National Maritime Foundation of India*, 85-101.

Sachdeva, G. S. (2016). Space Doctrine of India. *Astropolitics*, 104-119.

Sadeh, E. (2016). Dynamics of the Indian Space Program: Doctrine, Power, Strategy, Security, Policy, Law, Commercialization, and Technology. *Astropolitics*, 101-103.

Samson, V. (2011). India, China, and the United States in Space:Partners, Competitors, Combatants? A Perspective From the United States. *India Review*, 422-439.

Seedhouse, E. (2010). *The New Space Race China vs. the United States.* UK: Springer .

Sheehan, M. (2009). *Securing Outer Space.* New York: Routledge.

Tellis, A. J. (2007). China's Military Space Strategy. *Survival*, 41-72.

Waltz, K. N. (2010). *Theory of International Politics* . New York: Waveland Press.

Wirbel, L. (2004). *Star Wars U.S Tools of Space Supremacy.* USA: Pluto Press.

Zhang, Y. (2013). The eagle eyes the dragon in space A critique. *Space Policy*, 113-120.

Biographical Note

Fazal Abbas Awan is Ph.D. Scholar at Department of Political Science, University of the Punjab, Lahore, Pakistan.

Prof. Dr. Umbreen Javaid is Dean, Faculty of Behavioral & Social Sciences and Director, Centre for South Asian Studies, University of the Punjab, Lahore, Pakistan.
