



Increased Militarisation of Space - A New Realm of Security

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To cite this article:

Wehtje, B. (2022). Increased Militarisation of Space - A New Realm of Security, *Horizon Insights*, 5(4), 13-22.
<https://doi.org/10.31175/hi.2022.04.03>

Link to this issue of the journal: https://behorizon.org/wp-content/uploads/2023/06/Horizon-Insights_2022_4.pdf

Horizon Insights Journal Homepage: <https://behorizon.org/horizon-insights/>

ISSN: 2593-3582 (printed), 2593-3590 (online)

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by Betty Wehtje*

Abstract

The military use of space is not new, yet it has developed and become more advanced today. Major powers, such as the US, China, and Russia, now have their own military units specialized in space operations, indicating that space has become a new war-fighting domain. Although more nations develop and test sophisticated space capabilities, including kinetic and non-kinetic weapons, a conventional war in space is not expected. The stakes are high as the world has grown increasingly reliant on the information and connectivity that the military, civil, and commercial space systems provide, creating new realms of vulnerability. There are several weaknesses in the existing legal framework, looking at the Outer Space Treaty adopted during the Cold War. The militarization of space and developments in space technologies have resulted in growing tensions hinting at a need for new agreements to promote cooperation. So far, the UN has made several unsuccessful attempts to reach a new space treaty. Still, established in 2022 by the UN General Assembly, the Open-Ended Working Group might potentially decrease further space tensions. The group comes with a change in focus, as it has stepped away from the stalemate in discussing a new treaty on space weapons and moved towards a focus on non-binding norms, rules, and responsible behavior.

Introduction

One of the features of the Cold War was the intense space race following the technological developments in the 60s. The global superpowers challenged each other to explore Earth's orbits, the moon, and beyond in an attempt to become the space hegemon of the 20th century. The idea of a real-life "Star Wars" was on the edge of realization with the Strategic Defense Initiative¹ (SDI) presented by Ronald Reagan in 1983. While this never became a reality, space technology continued to be developed for military and commercial purposes. Decades later, space has slowly re-emerged as a crucial domain of national security.

Today, society is more dependent on space technology than ever before, and independent access to space has become a strategic interest. The world has grown increasingly reliant on the information and connectivity provided by the military, civil, and commercial space systems, creating new realms of vulnerability. Worldwide, governments have steadily increased their space budgets² over the past years, with the United States at the top. Even if the military usage of space is not new, it is a growing issue that attracts attention. As new technologies enable new space applications and the number of national assets increases, militaries now view space as a domain of war, like the sea, air, and land. As national security pertains to outer space, it challenges the perception of time, distance, and geography.

Nevertheless, space is relatively unregulated, as multilateral organizations such as the UN find themselves powerless to strengthen existing legal agreements. There have been several obstacles to space cooperation, but attempts are being made to hopefully generate more decisive changes, focusing on non-binding norms and principles of responsible behavior. Space is a critical and current issue to discuss, as it has become both an origin of threats and a means for security.

Use of Space for Security

The use of space for national security has a long history, going back to the first satellites orbiting Earth. As mentioned, space was one of the competitive realms of the Cold War. The military presence in space began with the first military communications satellite being placed in orbit by the Soviet Union and the US in the 1960s. Around 50% of all launched satellites at the beginning of the "space age" were satellites used for military reconnaissance. Intelligence was of great importance during the Cold War, and satellites enabled global surveillance, which was crucial for keeping track of hostile military activities. For example, American aircraft carriers project power wherever they appear. Their presence in the Soviet sphere of influence was of great concern for the Soviet Union (and later Russia), who then could use space technology to monitor these.

However, as technological developments increase the use of space in newer fields, the military use of space becomes more and more complex. Space today contributes³ significantly to intelligence, with surveillance and data collection as two crucial components reliant on space infrastructure. Strategic intelligence is closely linked to national security as a service to identify and protect the state from internal and external threats. Information dominance is crucial in conflict, and satellites are a vital part of this, making satellites potential targets to damage or intercept in times of war.

Satellites are also used as platforms for services to all parts of society, including geoinformation, communica-

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tions, and navigation systems. Space is used both strategically through reconnaissance and tactical to enable operations, exercises, and logistics worldwide. Navigation systems such as Global Positioning System (GPS) were first developed for military purposes and function as “gunsights” for weapons such as drones and missiles. Furthermore, they may enable the ability to disable foreign navigation systems in times of war which is a great military capability. Global powers such as China and Russia have therefore developed independent space systems to reduce any reliance on US space systems such as the GPS. Russia has its GLONASS system, the Chinese equivalent is called BeiDou, and even the European Union (EU) has developed a Galileo system. Independent access to space is vital for state power and influence, making satellites the groundstone for most parts of both civil society and military operations.

What are ‘Space Weapons’?

Military satellites are generally not seen as weapons, even though they provide intelligence and enable military operations. Despite the widespread opposition to the development of space weapons, several capabilities have been tested and deployed. They vary in place of operation and possible targets and can create both permanent and temporary damage.

Kinetic weapons

Kinetic weapons have the capability to destroy objects both in space and on Earth. Earth-to-space weapons include anti-satellite (ASAT) missiles. States with great power ambitions, such as the US, China, Russia, and India, possess these capacities and have tested them repeatedly. The latest test was in November 2021⁴, when Russia destroyed its satellite Cosmos 1408 in the Low Earth Orbit (LEO) using a direct-ascent ASAT weapon launched from Earth. These weapons create huge amounts of dangerous space debris, threatening any other orbiting spacecraft on a collision course with the objects, potentially creating a horrendous domino effect. Because of these destructive consequences, several countries, including the US, have opposed any future ASAT tests.

Kinetic weapons deployed in space have similar capabilities, including co-orbital ASAT weapons which can directly crash into or explode close to a target in space. Kinetic space weapons offer considerable advantages in conflict since they can target obstacles both in space and on Earth. Hence, these technologies alter the perception of time and geography as a space-based weapon can quickly reach anywhere. Therefore, these weapons may pose a significant threat to national security and challenge the national defense in unconventional ways.

Non-kinetic weapons

Non-kinetic weapons, e.g., lasers, jammers, electromagnetic pulses, and high-powered microwaves, may physically damage or disturb objects in space without direct contact. Several countries⁵, such as the US, Russia, China, Iran, and North Korea, have tested and deployed these capabilities. A recent example is how the American satellite company Viasat was subject to a cyber attack⁶, resulting in the immediate loss of communications for the Ukrainian military just an hour before the Russian invasion of Ukraine.

One may also include spacecraft aimed at tracking and examining target satellites as a non-kinetic capability, which might intercept communications and signals from other satellites. In August 2022, a Russian spacecraft was seen shadowing⁷ a US intelligence satellite, moving dangerously close to the satellite, which US officials saw as a severe threat to US space dominance. These methods may be dangerous and have malicious purposes, even if the spacecraft is not seen as a weapon. This incident visualizes the issue of dual-use technology and the need for better cooperation in space, which will be discussed later in this paper. Non-kinetic space weapons are already a reality when talking about weapons in space. These weapons are very sophisticated and advanced, challenging the perception of national security and its threats, which presents further challenges to international stability.

Stakeholders in Space - An Overview

The United States

The US is the most influential actor in space with advanced technology, significant military presence, and the world’s largest budget spending on space programs. As stated⁸ by President Trump in 2019, “Space is the world’s newest war-fighting domain,” and space has become an increasing source of threat to the national security of the US. Two key indicators are the establishment of the United States Space Force (USSF) in 2019 and the re-installation of the Space Command (de-established in 2002). The USSF⁹ became the sixth branch of military services in the US and is responsible for organizing, training, and equipping personnel, while the Space Command¹⁰ conducts operations and potential war-fighting. Space is an important aspect of the US global influence and image, reflected by its latest institutional developments.

The growing number of satellites launched by adversaries such as Russia and China and their improved military space capabilities are seen as huge threats to national and global security. Thus, the US has an arsenal of counter-space capabilities, including kinetic and non-kinetic weapons such as ASAT missiles and ground-based jammers. The last time the US launched an ASAT missile from Earth was in 2008, and in 2022 Washington an-

nounced¹¹ the prohibition of any such tests, calling on other nations to follow suit. Even if the US has been participating in the militarization of space, there are attempts to establish norms for responsible behavior in space as the Department of Defense adopted a new space policy in 2022. The policy document¹² outlines five “Tenets of Responsible Behavior” that are met with positive responses¹³ as a good start to communicating norms of behavior in space. Looking at the developments in the last couple of years, the US has continued to reinforce its role as a global leader in space and a military superpower.

China

During the last decade, China has become a global economic and military power, challenging the US and the West. President Xi Jinping described exploring space, building a space industry, and making China a space power as an eternal dream. Despite Chinese claims to use space for peaceful means, Beijing recognizes space as a new domain for contemporary military conflicts and its importance for the evolution of forms, methods, and rules of warfare. China has viewed space dominance as key to winning wars over the past 30 years, concluding that the US and the West have gained “unprecedented war advantages from space.”¹⁴ The military conflicts in space will therefore revolve around the dominance of space, making space significantly important for military strategy.

In 2015¹⁵, the People's Liberation Army (PLA) established the Strategic Support Force (SSF) to meet the new types of threats of the modern age. The SSF is a new type of combat force operating in near space, outer space, and network space. Its organization is divided into two departments; the Network Systems Department, which focuses on electronic warfare and cyber operations, and the Space Systems Department, which is responsible for executing the SSF's space missions such as space launches, tracking, and surveillance. The creation of SSF and its mission clearly recognize space and cyberspace as vital areas for Chinese expansion of military power. China has great capabilities¹⁶ in space technologies, both kinetic and non-kinetic weapons, such as downlink jammers and ground-based lasers. In 2007¹⁷, China tested a direct-ascent ASAT weapon that struck a Chinese FY-1 weather satellite in LEO, showing the Chinese ASAT capabilities that today might stretch to the Geosynchronous Earth Orbit¹⁸ (GEO) as well. Weapons of space-to-space and space-to-Earth operations are also being tested as Chinese space technologies continue to develop. In January 2022¹⁹, the Chinese satellite Shinjian-21 was observed pulling a dead satellite out of its geosynchronous orbit, placing it in a graveyard orbit while returning to GEO. The co-orbital maneuver was legitimate, yet it could be used for counter-space purposes, as it may move other satellites in orbit, potentially putting them out of service. China has remarkable space capabilities and the technology to develop sophisticated weapons that may target space objects in orbit and operate in space.

Russia

The Russian space program is viewed with great prestige as a leader in the international arena. Russia as a space pioneer dates back to the space race during the Cold War when the former Soviet Union launched the first-ever satellite and placed the first person into Earth orbit. More recently, this position has been re-established²⁰ as The International Space Station (ISS) relied on Russian launch vehicles between 2011 and 2020. While Russia is openly supporting space arms control agreements to prevent the weaponization of space, Russia has announced space as a war-fighting domain, continuing to test and deploy space weapons. In 2015 a new branch of the Russian Armed Forces was created, called the Aerospace Forces²¹, which includes the Space Forces, aimed at securing Russian space access. Russia is also developing counter-space capabilities that can attack adversaries like the US.

Russia shares a similar view as China on how space has been a crucial part of US military success, amplifying the Russian need to develop counter-space weapons. As mentioned earlier, just last year, Russia tested an ASAT missile which has been widely criticized for being reckless, as it creates dangerous debris. Russia has also tested some types of airborne and space-based ASAT weapons over the last ten years. Moreover, Russia developed a mobile ground-based laser weapon system called Peresvet,²² said to be able to dazzle or even fight satellites in orbit. Russia also has great electronic warfare capabilities, such as jammers and communications satellites. In 2020²³, the Russian military confirmed the active employment of an electronic warfare system able to de-activate the control system of hostile drones in Syria. It is clear that Russia highly values space as a strategic asset and source of power, pushing for further development of counter-space strategies.

NATO

As the most extensive military alliance worldwide, NATO is also important to mention in the discussion about the militarization of space. In December 2019²⁴, space was announced as the Alliance's fifth domain of operations, alongside land, sea, air, and cyberspace. Furthermore, a Space Centre at NATO's Allied Air Command in Germany was created in 2020. The Alliance is incorporating space²⁵ as part of its core tasks to ensure collective defense, crisis management, and cooperative security.

Space is essential to the Alliance's deterrence and defense and crucial for surveillance, navigation, positioning, and tracking of forces, ensuring effective command and control, and providing early warning. In October 2022, NATO labeled²⁶ Russia and China as potential threats or challenges to the Alliance since these countries have developed counter-space technologies that can hinder access to space and threaten the freedom to operate in space.

While NATO may not become a space-based actor itself, it is clear that the Alliance views space as a domain of operation and is developing its space policy concerning space as both a security threat and a strategic asset. NATO may work as a coordinator, balancing the need for NATO to take on an active role in the space domain yet not participate in the militarization of space.

European Union

The European Union is one of the major actors in space and could therefore be worth mentioning. Even though military strategies are defined at the national level, military assets are often utilized to benefit the broader community within the EU. The Union sees autonomous and independent access²⁷ to space as a strategic asset that has resulted in heavy investments in space programs such as developing European global navigation satellite systems (EGNOS and Galileo) and the Earth observation program Copernicus. These space systems serve both civilian and military purposes as they enable operational control, indigenous intelligence, and early warning. Furthermore, surveillance and tracking are highly prioritized to secure EU space operations. As the EU recognizes space as a significant strategic advantage for many countries, it also visualizes space vulnerability and the need for protection, rules, and norms in space.

The Role of the Commercial Sector

Since space-based technologies have become essential for modern society, the demand for space capabilities is growing. These demands have pushed for the growth of the commercial space sector, which today is a multi-billion dollar business. The private industry has evolved rapidly and challenges governments' monopolization of the use of space. For example, governments are reluctant to put more people in space, while private companies like SpaceX seek to open up space²⁸ for tourism and settlements. Outer space is now a shared realm with both public priorities and private initiatives, which impacts state security and the military use of space. The private space industry is not only focusing on private consumers, as governments worldwide are becoming more dependent on the commercial space industry.

The sanctions on Russia amplified²⁹ the growing necessity for space capabilities which created an opportunity to expand the space industry's commercial sector since Russia has been a key actor in the global launch business. Moreover, the Ukraine war has revealed what impact the private sector might have on conflicts. The Starlink satellite communication system, owned by Elon Musk's SpaceX, has provided internet access to Ukrainians, which has been vital for military and civilian communication. SpaceX delivered thousands of satellite stations³⁰ to Ukraine and successfully kept them online despite attacks from Russian hackers. Satellite communication is increasingly important in war times, and the commercial sector may become a crucial part of this development.

In recent years, the private sector has increasingly developed satellite communications, space launches, and remote sensing capabilities, and this trend is anticipated to expand further in the future³¹. Looking at the US, the Department of Defense has grown more reliant³² on commercial space systems as they provide essential data for the military. The commercial sector may play a significant role in Space Domain Awareness (SDA), which refers to the knowledge of the space environment, including objects and their intentions.

The US Space Force sees great capabilities of the commercial sector and is buying commercial space data³³ to increase the SDA. The increasing militarization of space is creating a greater demand for surveillance data which the commercial sector might provide. The military use of commercial satellites is not particularly new, yet the discussion on lawful targets is somewhat new. The military use of commercial satellites may become a target of misinterpretation. When a military employs commercial satellites in war, there is a risk of becoming a military target. This has sparked discussions³⁴ about commercial protection in space and compensation if satellites are to be harmed.

As the number of satellites in space grows, the need for tracking and surveillance increases. Space Situational Awareness (SSA) is a growing issue when Earth's orbit is getting more crowded by both military and civilian satellites. The number of satellites³⁵ has grown from 986 in 2009 to 1 877 in 2021 and is projected to keep growing. Additionally, more than a million³⁶ debris items larger than 1 cm orbit around Earth. Therefore, SSA is important to avoid collisions in space as it tracks objects in orbit. There are several SSA organizations today, such as the U.S. Strategic Command (USSTRATCOM) Space Surveillance Network, European Space Agency SSA Programme, and the Russian Military Space Surveillance Network (SKKP). However, the growing need for SSA has resulted in attempts to centralize the organization to create a global "Space Traffic Management" (STM). While powerful governments such as the US are important for promoting international coordination, such as the STM, commercial space companies should be included in this work. Commercial actors are already widely engaged in SSA and STM and can fill the technological gaps³⁷ that might be needed. The public-private collaboration may be essential to protect spacecraft around Earth and ensure the safe use of space for all.

Legal Framework & Space Cooperation

Multilateral treaties - the United Nations bodies

Five treaties adopted to deal with space activities form the basis of international space law: “The Outer Space Treaty” 1967, “The Rescue Agreement” 1968, “The Liability Convention” 1972, “The Registration Convention” 1976, and “The Moon Agreement” 1984. (Most states, including the US, China, and Russia, neither signed nor ratified the Moon Agreement). Furthermore, there are five other legal principles and declarations. Looking at the weaponization of space, the Outer Space Treaty³⁸ provides the existing legal framework for weapons in space. Article IV of the treaty states the ban on placing nuclear weapons or weapons of mass destruction in space. It also prohibits military activity on celestial bodies and details rules for peaceful space exploration. The space treaties are vaguely written and limited in scope, therefore unable to prevent the increased militarization of space. Emerging technological developments present new challenges that could also make it necessary to strengthen the existing legal framework.

The United Nations Office for Outer Space Affairs³⁹ (UNOOSA) was established in 1958 and has promoted international cooperation in outer space. It focuses on helping countries access the benefits of space to accelerate sustainable development and functions as a guide to assist governments in space laws. The Committee on the Peaceful Uses of Outer Space⁴⁰ (COPUOS) was set up in 1959 and was an active part of the making of the space treaties. The militarization of space, however, has been handled by the Conference on Disarmament⁴¹ (CD). The CD was established in 1978, with one of its missions to prevent an arms race in outer space. The Conference comprises 65 member states, including the five nuclear-weapon states. Additionally, non-member states are participating in the Conference’s work, reaching an additional 50 states in 2019. This Conference has annual meetings and functions as a forum for discussion, and a Prevention of an Arms Race in Outer Space (PAROS) treaty has been discussed. States may use this forum to express concerns and discuss matters of disarmament, such as nuclear weapons and the weaponization of space. However, it has experienced a deadlock for the past decades. Since 1996, the CD has not produced⁴² any agreements or even reached a consensus on the agenda, as states value national interests above collective security.

Weaknesses in the Outer Space Treaty

It is evident that the existing legal framework to secure the peaceful use of space needs to be revised. Since the 60s, space technology and space actors have changed dramatically. Additionally, vaguely written treaties are subject to a vast number of individual interpretations. With the weaponization of space in mind, there are several weaknesses in the Outer Space Treaty, below three of these are mentioned.

Firstly, the Outer Space Treaty prohibits weapons of mass destruction, but there is no sufficient definition of such weapons other than mentioning nuclear weapons. Furthermore, no additional space weapons are banned, including ASAT missiles which reveal significant gaps in the existing legal framework, as there is no actual ban on weapons being placed or used in space. Technology has dramatically developed since the Outer Space Treaty was signed, which provides new and more complicated issues regarding weapons in space. One growing challenge is the dual usage of satellites and space technologies. For example, the technology for on-orbit maneuver satellites used to “clean up” the orbit from debris could be used for malicious purposes.

Secondly, the perception of space has evolved since the first treaties were signed. Modern technology has enabled human activities to exceed further into space. While it may be possible to interpret the treaties to include new areas of activity, the legal framework must be strengthened. The Outer Space Treaty treats outer space as one entity, while space is more divided today. For example, just around Earth, there are several different orbits that may have different implementations. Furthermore, one may question what is to be counted as “in orbit,” as the treaty prohibits the placement of weapons of mass destruction “in orbit around the earth.” If an object carrying weapons does not complete a full orbit around Earth, shall it still be seen as a break of the treaty? The treaty has loopholes, which are essential to identify and manage in future frameworks.

Finally, one specific question may arise in this discussion, who is in charge of policing outer space? The existing legal framework does not provide a “guardian police” to ensure that laws are followed. Even if cosmopolitan ideas such as the UN as a global power are a reality today, the international system is still based on state legislation and enforcement. Since the existing framework enables individual interpretation, state behavior may vary, and no consensus on what is legitimate and legal is achieved. The issue of international law enforcement is a common issue throughout the organization, and only the future might entail further developments in the UN’s legitimacy and authority.

Further attempts for multilateral cooperation

The need for further efforts to strengthen global cooperation has taken different forms. There have been several attempts to reach new agreements regarding the prohibition of weapons in space. For example, in 2008, China and Russia jointly presented a draft⁴³ for “The Treaty on the Prevention of the Placement of Weapons in Outer Space and of the Threat or Use of Force Against Outer Space Objects” (PPWT) to the Conference of Disarmament. Even if the two countries have advocated for the implementation of such a treaty, Russia and China have militarized space and developed advanced weapons able to operate and target objects in space. The US and the West have not accepted these treaties, referencing how the treaty is written. It is seen as an effort⁴⁴ to prohibit any attempts to put weapons in space, still protecting the already developed and deployed Russian and Chinese capabilities such as ASAT missile systems and in-orbit technologies.

One attempt made by the UN was the creation of the Group of Governmental Experts⁴⁵ (GGE) in 2017 which was established to make recommendations for an international legally binding framework to prevent an arms race in outer space. The GGE failed, unable to even reach a consensus on the organizational agenda. The most recent attempt made is the United Nations Open-Ended Working Group (OEWG) which the General Assembly established in December 2021 through resolution 76/231⁴⁶. All UN member states are invited to participate in the OEWG, and meetings with industry, non-governmental organizations, and academia may also be held. The way forward might not be signing a new treaty since this has been proven difficult. The aim is to create universal norms, rules, and principles for responsible behavior in space and develop a series of transparency and confidence-building measures (TCBMs).

The OEWG functions as a forum for open discussions about the responsible use of space to reduce space threats and had its first session in May 2022. Its inclusiveness and open-ended discussion design may be beneficial to reach cooperation on norms and responsible behavior in space as more states seek individual access to space. The OEWG will have four meetings before finalizing its work in August 2023, sharing different views on threats and behavior in space to reach some form of consensus. Even if a consensus may be difficult to achieve, the OEWG may provide better understanding among states and provide suitable learning tools which could be incorporated into state regulations of their space capabilities.

Change in focus

Space is no longer an exclusive realm for global superpowers. Today, more states are involved in space activities, aware of the importance of space and concerned by the destabilizing forces present. While some states, like Russia and China, seek to adopt new treaties that focus on bans on particular weapons in space, other actors identify other aspects, such as dual usage of satellites, close approaches, and long-lived debris, as the most approachable issues to deal with globally.

There now is a shift in focus⁴⁷ away from the non-developing treaty/no-treaty debate to focus on behavior. Space weapon technology is dangerous, but the intentions may cause threats to space security. Mistrust among states creates tensions in which one may always assume the worst. For example, technology to maneuver other objects in orbit could be considered responsible behavior to “clean” space, but rivals may portray it as a potential threat if used for other purposes.

States need to seek common ground, which demands discussions. There needs to be an exchange of views on space, such as definitions of threats, responsible behavior, and intentions, in order to enable cooperation. (Mis)interpretations can be very dangerous. The OEWG has the potential to be a platform for exchanging ideas and hopefully leading to some form of cooperation, even if it means partial consensus on particular ideas. Space conflicts will not be resolved in a year, but the change of focus from treaties on weapon bans to building deeper trust based on common understanding can be a stabilizing force.

Conclusion

Today, modern society heavily relies on the basis of space technology. Space as an area of national interest is not new, yet the use of space has dramatically transformed during the last decades. Space technologies are vital to all parts of modern society, and this dependency is both a strength and a vulnerability. National security has expanded to outer space as independent access to space is considered a strategic and critical asset. This has impacted the use of space and the development of space technologies. Space can be used strategically, enabling communications and intelligence in order to identify threats and increase awareness of the environment. The military use of space is very complex. It enables operations, exercises, and logistics worldwide, but also space is perceived as a war-fighting domain. Dominating space may become a cause for future conflict. Space is not an area of free and peaceful exploration as long as the militarization of space continues. Further technological developments can also produce even more advanced and sophisticated space capabilities.

A real “Star Wars” is not to be expected, but the increasing militarization of space is alarming. The creation of space forces such as the USSF clearly indicates the still growing military presence in space, as major military pow-

ers label space as a domain of war. While conventional weapons are unlikely to be placed in space, it has become a battleground for non-kinetic warfare and a demonstration of power. Space weapons challenge the perception of time, geography, and war. Space can be the next area for the balance of power if space weapons are used for deterrence. Major powers show their military capabilities when testing advanced space weapons such as ASAT missiles and space maneuvers.

Satellites can now be seen as both threats and potential military targets, even though they do not carry conventional weapons. The differences between military and civilian satellites are blurred because of their dual-use nature. Advanced technology and access to spatial data collection for Space Domain Awareness are increasingly regarded as crucial parts of state security. The gap between the commercial and military use of space is decreasing, raising new challenges for legitimacy and legality. As the war in Ukraine has shown, commercial companies can play a vital role in conflicts since space is not an area exclusively for governments. Further investigation of the commercial sector's role in militarizing space is required to ensure the safe use of space for all.

The militarization of space is filled with uncertainty, and the legal framework is very flawed. Misperceptions and mistrust regarding military activities might result in a military conflict with catastrophic consequences. International cooperation, a functioning legal framework, and space diplomacy are essential to prevent these risks and ensure peaceful access to and exploitation of space. While the existing treaties can serve as an embarking point for devising a legal system, they must be updated, upgraded, and replaced with new ones when necessary. It may seem impossible to sign a new multilateral treaty to expand international space law in the UN, yet there are other ways to make space more secure. The aim should be to create norms, rules, and principles for responsible behavior and confidence building in space, which the Open-Ended Working Group is intended to do.

The lack of cooperation in space can be traced to mistrust, misinterpretations, and hostile behavior, which need to be addressed to create stability. Open discussions help share different views and ideas to find common ground to ensure the safe use of space for all. These discussions need to be inclusive since more and more actors are aware of the importance of space. One starting point for responsible behavior in space might be to prevent further weapon tests that leave space debris, as the US signed a unilateral treaty to ban such tests, which might become a norm. An ASAT-test ban does not prohibit the development of such technologies, yet it secures the safe use of space free from debris. Debris can cause significant damage to other satellites and space stations as thousands of pieces of space junk may travel uncontrollably in orbit. While keeping space clean and secure is essential, it is only a first step for international cooperation. States need to build transparency and trust in order to avoid an arms race to space that might quickly escalate into conflict.

Acknowledgment

I would like to thank Sven Grahm, former General Manager at Swedish Space Corporation and current Project Manager for MIST at the Royal Institute of Technology in Stockholm, for his expertise and meaningful insights. I also want to thank Victoria Samson, Washington Office Director for Secure World Foundation, for sharing her expert knowledge in the field and for our fruitful discussions.

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