Forum: Political & Economic Committee

Issue: Promoting peaceful uses of outer space

Student Officer: Jack Kent

Position: Chair

PERSONAL INTRODUCTION

Deal delegates,

I'm overjoyed to be the one to introduce to you a fascinating topic as part of the Political & Economic Committee. My name is Jack Kent, and unlike many of the other chairs and co-chairs, I've only recently started participating in Model United Nations. So far I've been a delegate for just three topics, but thoroughly enjoyed my experience with each. The leap from being a delegate to a chair is one I'm more than excited to take part in, and I hope you all enjoy your journey through MUN as well.

This issue enthralled me right from the beginning. Other than the fact that space is simply just really cool[1], if you compare it to many other topics it has a minuscule amount of background information. A different subject matter, particularly one that involves territory disputes, may have thousands of years of intricate and detailed history to delve into. This is far from the case here, as much to do with the legal and political details of space are as uncharted as space itself. This makes it exciting new territory, and will really allow you to get creative in your discussions.

This document was a joy to put together. My research led me to many areas I wouldn't have expected, and I hope that you find what you learn as interesting as I did. That being said, this document shouldn't be the sole instrument in your research. Plenty of what I've written here is merely the tip of the iceberg, and I encourage you to do your own investigation into the areas you find captivating. If you have any questions, no matter how small, I'll always be happy to help!

Should you have any questions or need any help, please feel free to contact me via the following email: 2995@queenelizabeths.kent.sch.uk,

Looking forward to meeting with all of you,
Jack Kent, Year 13

[1] https://www.youtube.com/watch?v=dQw4w9WgXcQ

TOPIC INTRODUCTION

No human in history has ever travelled more than 400,171 kilometres away from our home planet - a record held by the crew of Apollo 13 from April in 1970[2]. Between the goal of NASA's Artemis program to bring humans back to the moon, SpaceX and Blue Origin's objectives to allow people to live and work in space, and the hard work of numerous governments, organisations and workers, it's clear that this record (and many others like it) may be surpassed in the near future. But while advancements in space technology are capable of providing innumerable benefits for humanity, there is also the looming threat of the military potential of outer space.

We are fortunate enough to live in a world where space warfare is a concept linked mainly to science-fiction, but it should be noted that this could be different if it wasn't for the policies we currently have in place. Most militaries make minimal use of space, and are bound by such policies to keep it that way. In the modern day, much of the research and technological advancements we have are less to do with any form of combat and more to do with exploration, understanding, and benefiting humanity. Despite this, there are issues in our current treaties - they are vague and outdated.

A very notable political entity is the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS), which aim to make sure that space will be used in the interest of humanity. During the Cold War, the 'space race' could be considered to also be an 'arms race', with large advancements in military understanding posing a very significant threat to a number of nations, as well as to all of humanity. Many of COPUOS' goals relate to preventing the involvement of space in such military escalation[3], and it has become one of the largest Committees in the United Nations, increasing to 95 members from its original 18[4].

The issue of the peaceful use of outer space has been the subject of numerous discussions, both from a scientific and legal point of view. As such, COPUOS has two subsidiary bodies in the form of the Scientific and Technical Subcommittee and the Legal Subcommittee[5]. The former is responsible for examining space activities, from the dangers posed to Earth, to the use of aerospace technology, and how the economy and sustainability play into all of this. The latter focuses on the use of UN accords, defining legal terms, and putting forth legislation. Such a distinction is vital, as it highlights the importance of the different types of issues at play: the physical and tangible dangers of weaponry, and the judicial and political dangers of the laws we impose.

Within recent years, businesses with involvement in space have become increasingly more profitable[6]. Currently, satellites are one of the most profitable space-centric industries[7]. These, alongside rockets, have notable military applications, as was the case during the conception of these industries before being utilised in a more civilian capacity. This goes to highlight the disparity between the two extremes that

[2] https://www.britannica.com/topic/Apollo-13-mission
[3] https://www.unoosa.org/oosa/en/ourwork/copuos/index.html
[4] https://www.unoosa.org/oosa/en/members/index.html
[5] https://www.unoosa.org/oosa/en/ourwork/copuos/comm-subcomms.html
[6] https://hbr.org/2021/02/the-commercial-space-age-is-here
[7] https://sia.org/news-resources/state-of-the-satellite-industry-report/

space can be used for. The benefits of telecommunication, GPS and weather forecasting that improve the day-to-day lives of many civilians are also used within the military to cause death and destruction.

DEFINITION OF KEY TERMS

Outer Space

Space immediately outside the earth's atmosphere.[8]

Space Race

The competition between nations regarding achievements in the field of space exploration.

Arms Race

Competition between the United States and the Soviet Union to be the superior power in outer space, in terms of exploration, manned space flights, and lunar landings; it is generally considered as beginning in 1957 and ending in the mid-1970s.[9]

Prevention of an Arms Race in Outer Space (PAROS)

A UN resolution that reaffirms the fundamental principles of the 1967 Outer Space Treaty and advocates for a ban on the weaponization of space.[10]

Conference on Disarmament (CD)

A single multilateral disarmament negotiating forum of the international community.[11]

Strategic Arms Limitations Talk (SALT)

Negotiations between the United States and the Soviet Union that were aimed at curtailing the manufacture of strategic missiles capable of carrying nuclear weapons.[12]

Intercontinental Ballistic Missile (ICBM)

Any supersonic missile that has a range of at least 3500 nautical miles (6,500 km) and follows a ballistic trajectory after a powered, guided launching.[13]

High-altitude Electromagnetic Pulse (HEMP)

[8] https://www.merriam-webster.com/dictionary/outer%20space
[9] https://www.collinsdictionary.com/dictionary/english/the-space-race
[10] https://programs.fas.org/ssp/nukes/ArmsControl_NEW/nonproliferation/NFZ/NP-NFZ-PAROS
[11] https://www.un.org/disarmament/conference-on-disarmament
[12] https://www.britannica.com/event/Strategic-Arms-Limitation-Talks
[13] https://www.dictionary.com/browse/intercontinental-ballistic-missile

A near-instantaneous electromagnetic energy field that is produced in the atmosphere by the power and radiation of a nuclear explosion, and that is damaging to electronic equipment over a very wide area, depending on the power of the nuclear device and altitude of the burst.[14]

Orbital Weaponry

A weapon that is located in the orbit of Earth.

Kinetic Bombardment

The act of attacking the surface of Earth by deorbiting an object with very high kinetic energy.

BACKGROUND INFORMATION

It should be noted that there is comparatively little background information relating to this topic compared to others, since the idea of space military is a new concept in human history. Much of the events relating to this issue stem from as recently as the Cold War. The main example of major space-related technology that came beforehand would be missile and rocket-based technology. While the launch of Sputnik I in 1957[15] marked the start of a new era of military development by activating the start of the space race, rockets were still a major threat before then. Many advancements in allowing rockets to travel for long distances came about throughout the 20th century, with progression in the development of missiles happening throughout the second World War. The first intercontinental ballistic missile was developed in 1957, and was used to launch Sputnik into orbit less than two months later.[16]

Sputnik provided the framework for the technology that would one day allow humans to land on the moon, but with this, the development of space-centric weaponry would also begin. Throughout the space race, the available technologies were pushed to their absolute limits, sending more satellites, then animals, and eventually humans to orbit. In due course, the Americans, not wanting to be outdone by the astounding leaps the Russians had been making, made it a mission of utmost importance to land a human on the moon. The rest is history. Since Sputnik I, many more satellites have been launched into orbit, with there being an estimated 320 military or dual-purpose satellites out of the current 4,550 satellites in orbit.

In recent decades, the military use of space has been less direct. While the space industry seems to get larger and larger each year (particularly with the ever-stronger growth of private companies such as SpaceX and Blue Origin), space weaponry has remained stagnant. The only documented use of traditional weaponry in space is the TP-82 Cosmonaut Survival Pistol for protection against wild animals in the event of off-course landings[17], and a self-defence cannon on the Salyut 3 space station to protect against US anti-satellite weaponry[18]. As the possibility of humans living and working in space becomes a closer

[14] https://www.everycrsreport.com/reports/RL32544
[15] https://www.britannica.com/technology/Sputnik
[16] https://www.britannica.com/technology/R-7
[17] https://www.sandboxx.us/blog/tp-82-cosmonaut-survival-pistol-russias-space-gun
[18] https://www.popularmechanics.com/military/weapons/a18187/here-is-the-soviet-unions-secret-space-cannon

reality, small details such as personal weaponry will likely become a significant matter of debate moving forward.

There is a significant amount of purely theoretical or abandoned research when it comes to space warfare. During the Cold War, both the United States and the Soviet Union studied the practicality of orbital weaponry, though most of their research was scrapped. Nazi Germany was notably developing plans for a heliobeam (or sun gun) to weaponise the sun's light. Another proposed form of space warfare is the idea of orbital bombardment, in which nuclear warheads are designed to fall from orbit to cause devastating attacks with minimal reaction times. Much of this research has been prohibited by both the Outer Space Treaty and the SALT II treaty due to them forbidding weapons of mass destruction in space, however kinetic bombardment would not and as such it has far more research into it.

While not directly related to outer space, the Antarctic Treaty of 1959 is the largest, and most recent, example of an event in which nations around the world had to determine how to make decisions about the use of mostly uninhabited and unutilised locations. They set a precedent for how similar treaties about space may function, with notable objectives including the prevention of any territorial claims and all scientific advancements being made accessible.

MAJOR COUNTRIES AND ORGANISATIONS INVOLVED

United Nations Committee on the Peaceful Uses of Outer Space (COPUOS)

The world's nations were concerned during the Cold War that space would turn into yet another arena for competition between the superpowers, or that it would become subject to exploitation. COPUOS was founded after the launch of Sputnik I, the first artificial satellite, in 1958, with the intent for it to provide a means of cooperation between nations. It was only founded as a temporary measure, but became permanent in 1959 with 24 members, and has facilitated the exchange of information regarding space, and aided in the research of policies to encourage international cooperation.

United Nations Office for Outer Space Affairs (UNOOSA)

UNOOSA was initially a small and specialised unit housed within the UN Secretariat to service COPUOS in 1958. In 1962 they were moved to the Department of Political Affairs. They have a number of roles, such as helping nations with space law and developing space sectors.

The United States

The US has been at the forefront of much research and development regarding space technology. In the past, they revolutionised a lot of expectations of what was even possible, from landing the first human on the moon to more recently launching the James Webb Space Telescope. Even long after becoming the victors of the space race, the US continues to be on the cutting edge of space technology, with their space program receiving $54.6bn in 2021, and similar amounts in other years, making it the most funded space program in the world.

The Union of Soviet Socialist Republics (USSR/Soviet Union)

While the Soviet Union ultimately lost the space race to the United States, their contributions and achievements are nonetheless extremely impressive. After launching the first satellite into orbit, they also launched the first animal, man, woman, and multi-person spacecraft into space. The USSR then achieved the first spacewalk, moon landing, and had the first spacecraft return to Earth after flying around the moon. Their achievements can be summarised by them being first in a great number of accomplishments, but ultimately losing the race.

TIMELINE OF EVENTS

Date of Event	Description of event
October 4th, 1957	The first human satellite, Sputnik, is successfully launched into orbit, starting the Space Race between the Americans and the Russians
December 13th, 1958	COPUOS is founded as a temporary measure
December 12th, 1959	COPUOS is made a permanent body within the United Nations
October 10th, 1967	The Outer Space Treaty is passed, advocating for a ban of the weaponization of space moving forward
July 20th, 1969	The crew of Apollo 11 land on the moon
April 11th, 1970	The Apollo 13 mission launches
May 26th, 1972	The first Strategic Arms Limitation Talks (SALT I) reaches an agreement, making the Superpowers reduce their number of ballistic missiles
February 22nd, 1978	The first GPS satellite is launched
December 26th, 1991	The Cold War officially comes to an end
November 20th, 1998	The International Space Station is launched into orbit

PREVIOUS ATTEMPTS TO SOLVE THE ISSUE

Formation of COPUOS and their subsequent policy-making

The very foundation of COPUOS was one of the first attempts to prevent the military use of space. It has been quite prominent in the years since, such as in 1967, when the Outer Space Treaty was enacted, creating a legal framework that would subsequently serve as the foundation for international space law. Afterwards, numerous additional international accords continued to be added.

The Creation of the Conference on Disarmament

The establishment of the Conference on Disarmament in 1979 is a crucial event. The UN had used this meeting to advocate for demilitarisation generally, including with regards to space. Outer space has since been a stronger focus following more UN initiatives.

Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies

In 1966 this treaty was put into effect, providing the fundamental structure for international space law. It laid out vital ideas such as nations being unable to claim parts of space, banning the use of nuclear weapons in space or in Earth's orbit, and preventing military use of celestial bodies.

Convention on International Liability for Damage Caused by Space Objects

From 1963 through 1972, the Legal subcommittee reviewed and negotiated the Liability Convention. It makes nations entirely accountable to pay damages for harm done to aircraft or the Earth's surface, as well as by outlining processes for the resolution of damage claims.

POSSIBLE SOLUTIONS

A major shortcoming of current policies regarding the banning of weapons in space is the focus placed on nuclear weaponry and other weapons of mass destruction, with minimal regard to other forms of warfare. While this is certainly important, and a good first step, it may be important to extend this ban to other types of weaponry. A major example to look out for would be kinetic bombardment which would not classify as weapons of mass destruction but are still incredibly deadly. There currently are no such weapons in space so none need to be removed, just to prevent them from being implemented moving forward.

While space law is quite encompassing when referring to what it wishes to accomplish, much of it is still built upon the now-outdated framework of the 1967 Outer Space Treaty. As such, developing updated rules is a valuable step. Notably, the treaty only states that celestial bodies are not to be used for military projects, missing out the rest of outer space. Furthermore, the treaty states that space activity must take into account the interest of other nations, however, it is quite ambiguous about what this means.

The resolution may talk about methods of safety from the dangers of space, both for astronauts and regular civilians. Possible areas of discussion may include redirecting resources to ensure the safety of astronauts while in outer space / in orbit, and making sure that humans on earth are not subject to dangers of space debris, be it artificial or natural.

Finally, the use of advanced space technology such as GPS and communication satellites have clear benefits to humanity, but they also are currently used heavily within the military. For example, GPS satellites are used to guide smart missiles, so stronger regulations regarding the hostile use of such technology are worth exploring.

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