



UNOOSA

Corporations in Developing Space Technology in the
Aftermath of the Cold War

STUDY GUIDE

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1. Letter from Secretary-General

It is my utmost pleasure to welcome you all to the Modern Model United Nations Conference. My name is Berçem Aydın, and I will be serving you as the Secretary General for this special event. I have been involved in the Model United Nations world for 8 years, and as the founder of Future Flow Social, I am excited to collaborate with Modern Eğitim College for this event.

Many of you may have your reasons for attending this conference; perhaps some of you were drawn by the excitement of the conference or the chance to connect with new people! However, I can assure you that Model UN is about so much more. It offers a unique opportunity to explore professional life, immerses you in a dynamic diplomatic environment, and helps forge friendships that feel like family. Additionally, it enhances your language, debating, and lobbying skills while encouraging you to find innovative solutions to global challenges, fostering your analytical thinking.

This year, our theme is "Resilience and Innovation in a Changing World." In today's fast-paced environment, the ability to adapt and innovate is crucial. We will explore how we can cultivate resilience and leverage creativity to address the pressing issues our world faces.

I encourage you to approach each session of this intellectual journey with an open mind, a spirit of collaboration, and a commitment to finding innovative solutions that embody resilience in a rapidly changing world. Your active and enthusiastic participation is fundamental to the success of this conference, and I am confident that your contributions will make it truly exceptional. I firmly believe this will be an unforgettable experience for all of us, and my final advice is to make the most of the three days you will spend with us!

With warm regards,

Berçem Aydın
Secretary General, ModernMUN'24
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II. Letter from the Chairboard

Dear delegates,

It is our utmost honor to be serving as your chairboard for ModernMUN'24.

We are looking forward to the unique and wonderful debates we will be having and seeing UNOOSA in action as your Board! We wish you all the best of luck and a remarkable experience.

If you have any questions or concerns ahead of the conference, please do not hesitate to contact via email or WhatsApp: ralhariri5@gmail.com , +905448823229

Kind Regards,

Roya Alhariri, Omar Soufi & Mohammed Kuhail

Board of UNOOSA, ModernMUN'24

III. Introduction to the United Nations

The United Nations is an international organization founded on 24 October 1945. Ever since, on 24th October is celebrated every year as the United Nations Day. The main organs of the UN are the General Assembly, the Security Council, the Economic and Social Council, the Trusteeship Council, the International Court of Justice, and the UN Secretariat. All were established in 1945 when the UN was founded. The UN has become a mechanism for governments to find solutions together.



Currently, with 193 member States, the United Nations main goal is to take action on the global issues such as sustainable development goals, human rights, health emergencies, peace and security, gender equality, international peace etc.

IV. Introduction to the Committee: United Nations Office for Outer Space Affairs

The United Nations Office for Outer Space Affairs (UNOOSA) is an office of the United Nations Secretariat that promotes and facilitates



UNITED NATIONS
Office for Outer Space Affairs

peaceful international cooperation in outer space. It works to establish or strengthen the legal and regulatory frameworks for space activities, and assists developing countries in using space science and technology for sustainable socio economic development.

A. History

In 1957, the launch of Sputnik 1 spurred a global dialogue on space exploration's legal, scientific, and political impacts. In response, the United Nations established the

Committee on the Peaceful Uses of Outer Space (COPUOS) in 1958 and the United Nations Office for Outer Space Affairs (UNOOSA) to support it.

UNOOSA evolved over the years, becoming part of the Department of Political and Security Council Affairs in 1962 and then the Office for Outer Space Affairs in 1992. The Outer Space Treaty, which came into force in 1967, was the first international legal framework for space activities.

In the 2000s, UNOOSA initiated programs to foster global cooperation and aid developing nations in utilizing space technology.

B. Roles and Responsibilities

The United Nations Office for Outer Space Affairs (UNOOSA) helps countries, especially developing ones, use space for sustainable development. They provide resources like training and workshops, offer opportunities through fellowships, and assist with disaster management using space technology. UNOOSA also supports countries in creating national space laws that align with international standards, maintains a register to track space objects, and works on global issues like space debris and satellite compatibility. Their goal is to ensure space is used effectively and sustainably for all nations.

C. Partnerships

As the only UN office entirely dedicated to space affairs, UNOOSA works across the legal, policy, scientific and technical aspects of the peaceful use of outer space. To enhance the impact and scale of this work, UNOOSA partners with stakeholders from across the international community, such as international organizations, national and regional space agencies and a range of other public, private, academic and civil society institutions.

V. Introduction to the Agenda Item: Corporations in Developing Space Technology in the Aftermath of the Cold War

The agenda at hand aims to address the implications that corporations pose for the future of space exploration and utilization. The significance of this issue can be traced back to the Cold War which began shortly after the second World War had ended. It was marked by a race for ideological superiority and a technological rivalry that would last for decades. During the Cold War, space exploration had been dominated by two powers being the United States and the Soviet Union. Although this rivalry created political tensions, it also resulted in rapid advancements in space technology for both entities. Later on, with the dissolution of the Soviet Union marking the end of the Cold War resulting in the easing of geopolitical tensions, the nature of these space advancements began to transform.

In the aftermath of the Cold War, the role of corporations in the development of space technology has become increasingly prominent. It is important to note that private corporations had always been involved in space technology during the Cold War, however, in the post-war era, the commercialization of space had seen its start. Companies had begun privately funding their space ventures due to the subsequent reduction in government space budgets. These ventures now consist of space tourism, asteroid mining, and private satellite constellations. As a result, these corporations have introduced many new technologies and have also significantly lowered the cost of space access in addition to expanding possibilities for space exploration and commercialization.

Nevertheless, all these advancements also have their own set of drawbacks which must be discussed further. The main question in an issue such as this is finding the balance between commercial interests of a commodity and the greater public good. While these corporations are driving innovation and easing access to space, they also risk the exploitation of resources and the creation of inequality between nations. Robert Frost, a NASA Flight Controller had weighed in on the issue stating that: “ The objective isn’t to

hand over space exploration to the private sector. The objective is to expand upon the utilization of space by finding opportunities where the private sector could benefit.”
(Forbes, 2024)

In conclusion, what now must be considered is corporate and international interests. The needs of developing nations also play a part in this as they often lack the necessary resources and expertise for the space industry. Regulating corporations in their space activities and promoting international cooperation must be the main focuses when addressing this issue in addition to the implications for global governance, equity, and sustainability.

VI. Key Terms

Cold War: A period of geopolitical tension from 1947 to 1991 between the United States and the Soviet Union, with their respective allies. It was characterized by ideological conflict, nuclear arms race, proxy wars, and propaganda against each other but with no direct military conflict between the superpowers.

Space Race: A competition during the Cold War between the 2 main superpowers, The United States and the Soviet Union, to achieve superiority in space activities and outer space milestones.

Government Space Agency: Agencies established by the government of its respective nation for the goal of advocating and leading space activities such as National Aeronautics and Space Administration (USA), ROSCOSMOS (Russia), and Indian Space Research Organization.

Private Space Corporation: a privately-owned organization involved in developing, launching, and operating space missions, technology, and infrastructure. Examples are SpaceX, Blue Origin, and Virgin Galactic.

Outer Space Treaty (1967): Based on an international treaty constituting the basis for international law of space, it forbids putting nuclear weapons into space, restricts the use of the Moon and other celestial bodies to peaceful purposes, and proclaims that space exploration shall be conducted with the interest of all countries taken into account.

Space Commercialization: The process of developing commercial products, services, and activities, such as satellite communications, space tourism, and resource extraction, mainly by private corporations, in space.

Satellite: An object launched or put into orbit around the Earth or any other celestial body for collecting information, enabling communication, or conducting research.

Space Tourism: The term describes the nascent industry of flying private citizens into space for purposes of recreation, leisure, or business; often, the flights are short-suborbital or orbital.

Developing Nation: A developing country, as defined by the UN, is one that has a moderate to low Human Development Index (HDI), an undeveloped industrial base, and a relatively poor level of living. This index compares several aspects of life expectancy, literacy, education, poverty, and other characteristics across the globe.

VII. Background Information

A. Space Technology Development in the Cold War

The Soviet Union's launch of Sputnik 1 on October 5, 1957 marked the beginning of a decades long Cold War. The world's first artificial satellite to be launched into space had sent shock waves in many parts of the world, especially the United States, which had immediately recognized the importance of space technology advancement from a national

security standpoint. This is because this Soviet act had suggested the potential to launch Intercontinental Ballistic Missiles (ICBMs), which Nazi Germany was close to developing near the end of the second World War. The United States had then hastened its own space program and, as a response, launched the National Aeronautics and Space Administration (NASA) in the following year.

During this era, the governments were leading the efforts of space exploration and pouring massive resources into the programs aiming to possess the technological upper hand and gain strategic advantages. Many of these accomplishments by both nations were extremely significant, including the launch of Yuri Gagarin, the first human in space in 1961, and the Apollo 11 mission landing the first humans on the moon in 1969.

At that time private corporations had only background roles in space technology. They were often contracted by governments to supply parts and hardware needed for space missions but would not embark on these missions themselves. As an example, more than a dozen private corporations had been contracted in the Apollo project. Those include: Grumman Corp., North American Aviation, General Motors, and many more. Nowadays most of the smaller firms involved have been acquired by larger companies like Lockheed Martin and Boeing. During the Apollo era in the US, these companies were mainly working for hire wherein government agencies would have precise requests and the companies would deliver. Their goal was to follow government and national interests rather than commercializing their services. They lacked autonomy and did not possess the same commercial orientation that can be seen nowadays.

B. Aftermath of the Cold War

The post-Cold War era marked a big shift in the aerospace industry and the development of space technology. Governments now had a decreased interest in space exploration as the Space Race tensions had diminished along with the Soviet Union. There was now decreased government budgets for space exploration around the world, particularly in the United States and Russia, leading to an overall decrease of space missions and interest in

the matter. In the United States this caused a major crisis in cities whose economies depended on aerospace, consequently they managed to shift to different industries. However, the large amount of employees, scientists, and engineers in the field were now not in demand. This led aerospace firms to frantically sell and acquire within themselves. The result would be that now Lockheed Martin and Boeing would end up with approximately ten percent of all government space contracts. NASA was now looking for “faster, better, and cheaper” (EH.net, 2024).

Aside from the remaining government contracts, other private corporations found the opportunity to explore on their own without the limitations of government budgets and commissions. What this period would now entail was the emergence of a new model of aerospace activity wherein privatization and commercialization were the main characteristics. In order to make aerospace more commercially viable, companies were aiming to reduce space costs and develop new technologies that would help achieve these goals. As an example, the innovation of reusable rockets by SpaceX and Blue Origin was a major step in driving down high launch costs that held back all entities, making space more accessible.

VIII. Current Situation

A. Rise of Corporations

Currently, decades after the end of the Cold War, private enterprises have seen an even bigger transformation. State-controlled space activities are no longer a priority as companies venture into the aerospace world with major technological advancements and the increased recognition of the commercial potential of the industry. This has brought about private aerospace companies with levels of autonomy that are previously unheard of.

Some big actors include:

1. [SpaceX \(United States\)](#)

Founded in 2002 by its current CEO Elon Musk, SpaceX has been known for revolutionizing space transportation and satellite deployment. The company conducts more than half of all orbital space launches around the globe including launching NASA astronauts into space. With a focus on cost reduction, they have been able to pioneer many technologies such as the Falcon 9 that holds the record for the most launches in history as a US rocket, and its Starlink satellite internet business that has launched more than 5,000 satellites to date. SpaceX is considered to be the most valuable aerospace company and one of the most valuable private companies overall. (Sheetz et al, 2023)

2. [The Boeing Company \(United States\)](#)

Being involved in the space industry since the early days of the Space Race, Boeing has the backing of significant technological expertise. Its legacy runs long as the company has played a critical role in many of NASA's major programs like Apollo and the Space Launch System (SLS), considered to be the most powerful rocket ever built designed for deep space exploration. Now it leads in satellite manufacturing that is used for communications, weather forecasting, and defense purposes.

3. [OneWeb \(United Kingdom\)](#)

OneWeb is considered to be relatively new yet still very powerful. Their focus lies with providing broadband satellite internet services across the globe. They have also innovated in the field of low Earth Orbit (LEO) satellites which allow for delivering faster internet speeds with lower latency.

4. Airbus Defence and Space (Germany)

Leading in satellite manufacturing, Airbus' aim is providing telecommunications and navigation satellites to “enable people to connect everywhere and navigate safely on Earth.” (Airbus, 2024) In addition, they have prioritized scientific missions, gathering data with the hopes of building knowledge of the universe.

5. Astroscale (Japan)

Promoting the safe and sustainable development of space, Astroscale is considered to be one of the first of its kind. Their services currently are the focus of satellite end-of-life management and active debris removal to ensure there is no hazardous accumulation in space.

The United States currently holds the majority spots for top 20 private space companies in the world. The above list is simply given as an overview of major actors in the scale of the global space industry, provided to showcase and highlight the different focuses and goals that private companies can have in this field. Other companies worth mentioning include Northrop Grumman (US), Blue Origin (US), Rocket Lab (New Zealand/US), and Lockheed Martin (US).

In the aforementioned examples, satellites are shown to play a huge role in these companies' activities. Although they may not seem very outstanding in the space field for the general public like the launching of spacecrafts, they provide many important services in our daily lives like communication, imaging, and navigation. Satellites possess the ability to provide high-speed uninterrupted internet and services for mapping and monitoring the Earth in order to assist in disaster management and weather forecasting. Private companies are supplying for the ever growing demand which has proved to be lucrative.

B. Implications for Developing Nations

As previously mentioned, the United States is home to the majority of top private space companies along with certain enterprises from Europe and Japan. As for government space agencies, NASA (US), ROSCOSMOS (Russia), and the China National Space Administration are considered to be in the hierarchy. While the modern commercialization of the space industry has proven to provide opportunities for many, there lies a risk that these benefits will be concentrated among a few wealthy nations and large corporations. Considering that developing nations lack the financial and technological resources to enter the industry, they are left behind, further widening the gap between developed and developing nations.

Nevertheless, the increasing activity and innovation of these private corporations is what has brought about major reductions in launch costs and the availability of commercial satellite services. These types of developments provide unseen opportunities for developing nations to access space technology, which has consequently led to satellite imagery now widely used in these countries for agriculture and environmental monitoring.

In order to address concerns of inequity, UNOOSA has been leading the effort of promoting international cooperation in space activities. What their initiatives also entail is technical assistance and support in building the necessary infrastructure so that the benefits of space technology are more accessible around the world. Despite these efforts, the aerospace industry remains too costly for many nations and the growing influence of private corporations can set drawbacks.

C. The Future of Corporations in Space Technology

The future for corporations in space seems particularly promising as many technologies are paving the way for new opportunities. Some of the many new innovations include space tourism and resource extraction. These developments have the potential to revolutionize industries on Earth and create entirely new markets.

With the emergence of the private space travel industry, space will no longer be considered the exclusive domain of astronauts and scientists. Some corporations are aiming at creating a potential market for civilians to take flights into outer space. Space Adventures, Inc. began this venture a decade after the Cold War ended with around 10 flights to the International Space Station through the course of 10 years and cost tens of millions of dollars for each tourist. The companies that followed were SpaceX and Blue Origin in 2021 but their trips were considerably shorter and mainly aimed at providing a view of Earth from space with the feeling of weightlessness. The past 4 years have carried more people as space tourists than the past 3 decades after the emergence of the idea.

These advancements contribute to the broader space industry by driving down the costs of space travel and fostering technological innovation that could be vital for long-term space exploration goals. Reusable rockets and other space technologies, crucial for future Moon or Mars missions, are now being developed faster thanks to the collaboration but also competition between these companies.

However, the growth of space tourism and space industry in general calls for new international standards and regulations with the emergence of many new fields. This can be around matters such as congestion in outer space, carbon emissions, and the safe operation of private trips.

IX. Legal and Ethical Considerations

An era of space exploration marked by the growing role of private corporations demands a thorough assessment of how legal and ethical issues must be approached. As the industry grows, the law must also evolve comprehensively to address the complexities of corporate activities and emerging technologies. At the same time, there exists a thrilling possibility for collaboration between governments and private enterprises; yet, as we advance space exploration, both opportunities and challenges need to be carefully examined to enhance the potential of sustainable and equitable growth.

A. International Space Law

When the initial treaties of space were drafted amidst the Cold War as the framework of international space law, it was for the purpose of regulating state space activity. In more recent years with the role that private companies play in space exploration, those laws will have to be built upon in order to encompass all space activity.

As a foundational legal document, the **Outer Space Treaty of 1967** sets forth principles such as the non-appropriation of outer space by any nation, the peaceful use of outer space, and the prohibition of placing weapons in orbit. Since its creation, however, the Treaty has also had a major flaw: It does not cover non-state participants, but instead holds nations accountable if the enterprise operates under their government.

The **Moon Agreement of 1979** is meant to turn all jurisdiction of the Moon and other celestial bodies to participant countries, thus complying with international law, including the United Nations Charter. However, the main countries and entities that participate in space activities such as the United States, Russia, or China have not ratified the agreement so it does not hold any real significance in international law. Additionally its use to govern corporate activity like mining resources and commercial operations remains in discussion.

With private companies taking on more ambitious initiatives like mining asteroids, establishing lunar colonies, and colonizing Mars, the current legal structure needs to adapt to these new realities. These include establishing regulations for determining who owns resources taken from celestial planets and who can profit off of them, making sure space technologies are used peacefully, and guarding against pollution and deterioration of the space environment. Furthermore, in order to guarantee adherence to international space law, national governments' roles in licensing and overseeing the operations of private enterprises in space will be crucial.

B. Exploitation and Environmental Consequences

While the aerospace industry grows, a number of ethical concerns come into question. Corporate responsibility in space is of utmost importance; the future of humanity's presence in space could be shaped by what private companies do. Profit motives have to be weighed against greater ethical obligations on the part of business enterprises not to advance the exploitation of the resources of space in a way that benefits only a privileged few, with possible harm to others.

The environment is another major concern due to the use of space. Launching into space, though crucial to develop space technology, causes atmospheric pollution and depletion of the ozone layer. Additionally, proliferation of satellites and other space debris creates more chances for the collision in orbit, which may trigger cascading damage to space infrastructure-what is known as the Kessler syndrome. Thus, ethical considerations should guide the development of sustainable practices in space exploration, including reduction of space debris, use of environmentally friendly propulsion systems, and responsible use of resources.

The issue of equity in access to space technology is also of concern. The pace at which private corporations are moving in building advanced space technologies is such that, if left unregulated, only wealthy nations and individuals might benefit from this technological development, thereby increasing existing global inequalities. This leads to a

need to ensure that developing nations receive due access to space technology and the benefits resulting from it for the advancement of humankind. This equitable access includes the participation of space exploration through partnerships, technology transfer, and capacity-building initiatives.

X. Challenges and Opportunities

The involvement of private corporations in space exploration puts forth many opportunities but also has its own set of challenges. Tackling these challenges and reaping maximum benefit out of the opportunities requires careful planning, international cooperation, and strategic innovation.

A. Technology and Finance Barriers

Among the key challenges that private corporations face in their search for involvement in space are the high cost of developing space technology. Due to the huge investments, only wealthy entities are capable of participating in these activities. Additionally, the high cost stirs a number of concerns over commercialization; space might fall into the hands of some profit-motivated individuals who would prioritize activities deemed more lucrative at the expense of those more beneficial to all humanity.

The other major obstacle is the issue of intellectual property. When companies develop innovative technologies for the exploration of space, a number of issues arise on technology ownership and distribution. While it is important to protect intellectual property in order to incentivize innovation, this needs to be balanced against cooperation and knowledge sharing in order to spread the efforts of space explorations internationally. The tension will surely be a point for careful negotiation and clear legal frameworks to protect interests by corporations on one hand, while fostering international collaboration on the other.

The situation is further complicated by differences in technological capabilities among countries. While countries like the United States and China have advanced programs in space, other countries lack technological resources to meaningfully contribute to space explorations. The consequences of such are seen within the inequity in space exploration benefits; this may also drive a wedge in international collaboration on issues that range from space debris management to planetary defense. With this in mind, tech transfer, capacity building, and international collaboration in the future will be required to reduce these disparities, so that humankind fully benefits from space exploration

B. International Cooperation

With these challenges also comes an unprecedented amount of opportunity in terms of international cooperation and innovation due to private corporations' ventures into space exploration. This could be assisted by international partnerships between corporations and governments, accelerating innovation while making access to space less expensive. For instance, the cooperation between NASA and SpaceX within the Commercial Crew Program allowed the United States not only to resume launching astronauts from American territory but also to continue the work on reusable rocket technology-the key to making space access cheaper.

In light of this, it is very important to strengthen the tie between government agencies and private corporations for the good of the public in many aspects. UNOOSA has the potential of assisting in bridging the gap between the developed and developing countries through full and inclusive participation in space exploration, undertaking management of space debris, and ensuring that space activities are conducted in the interest of all countries. By fostering dialogue and cooperation, UNOOSA could very well ensure that space continues to be a frontier for peaceful exploration and prosperity for all.

It is, however, the innovations driven by corporate involvement that could facilitate our journey into space. For instance, private players like SpaceX and Blue Origin have managed to bring down the cost of launching spacecrafts into orbit considerably by

developing reusable rockets, making space exploration affordable for all parties. Investment in space tourism, satellite networks, and lunar exploration missions is also forcing corporations to make crucial improvements in several critical areas involving spacecraft design, life support, and resource utilization.

In essence, space research by corporations is enveloped by a multi-dimensional and complex legal and ethical environment, as well as one of strategy. Though important challenges persist, especially regarding legal regulation, ethical responsibility, and gaps in technological capabilities, there are tremendous opportunities for cooperation and innovation that comes along with it. The international community, by finding solutions to these challenges and capitalizing on strengths within the realms of both public and private sectors, can assure a future that is equitable in sustainability and benefits for all nations and citizens on the global scale.

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