The Weaponization and Colonization of Space

The Space Law

As the name suggests, it's a law that is concerned with laws that regulate activities that are concerned with space. like all different forms of laws ie criminal law/money law etc, space law also comprises treaties & agreements. These agreements include but are not limited to international agreements that take place. Some of the topics that the space law deals with are:

1. Dealing with any damage that might be caused on earth due to any other object in space, for example an asteroid.
2. Rescuing astronauts that lose signal etc.
3. The usage of technology that is solely invented for purposes relating to outer space
4. Provide a guideline on what countries are and are not allowed to do in the space environment.

Space laws mainly came about as a result of the Cold War. In 1958, NASA was created by the US as a result of a space race which was ignited by the Soviet Union who sent out a rocket in 1957.

The Treaties of Space Law

1. The Outer Space Treaty

   The outer space treaty was the first treaty that came about and it laid down rules and regulations for the space law and supported space exploration. It has 17 articles in total that cover many major topics. It had space actors as well as non space actors and private space actors. It bans the usage of weapons of mass destruction in space.

2. The Expansion Treaty

   This treaty was drafted in order to impose laws that will ensure strict implementation of all the articles. It consists of many articles such as article v that is also known as the rescue treaty which ensures the protection of astronauts and objects from outer space. It also consists of spade regulation treaties.

3. The Failed Moon Treaty

   The main aim of this treaty was to deny rights to private space owners. However, other clauses in this treaty also were impossible and so this treaty failed but it is still valid in law.

Concerns of the States

Space has already been militarized as there are satellites in outer space and debris which pose a threat to many nations as it prevents the launch of rockets etc. a large number of nations are working to get rid of debris. However, many nations also believe that satellites could also pose a threat to international peace and security as they can gather confidential information on other countries. Over 60 states have their own satellites and they're working to ensure the protection of these.

Colonization of Space

The long-term habitation of the International Space Station by rotating teams of astronauts, scientists and medical professionals has provided us with a wealth of data to establish parameters for keeping humans alive and healthy for long periods in the harsh environment of space. Here on earth there have been several ambitious projects attempting to duplicate as closely as possible the conditions of off-world habitation to test the limits of human endurance.The colonization of space is barely possible as it will require astronauts to go to outer space but these astronauts will be faced by medical problems due to the low gravity level and high radiation and it will take up a large budget to even send them there. However, there is an organization space-x that works to sell satellites to let smaller nations develop and research in terms of outer space. According to NASA, ' there are many daunting challenges facing prospective space colonists such as protection from exposure to deadly radiation levels, the impact on the human body while living and working in cramped, low-gravity environments for extended periods of time and the psychological toll of isolation, confinement and separation from one's family and society. The benefits that await us as direct or incidental byproducts of space colonization could include advances in architectural design, alternative fuel production, 3D printing and low-gravity manufacturing to name but a few.'

Role of the United Nation

The United Nation is primarily responsible for the establishment of space treaties. The GA supports the prevention of arms in outer space under the treaty PAROS. In 2002 & 2008 Russia and China both presented/drafted treaties that talked about banning the use of weapons in space. The definition of weapons was 'if it orbits the Earth at least once, or follows a section of such an orbit before leaving this orbit, or is stationed on a permanent basis somewhere in outer space'. Efforts in the United Nations to maintain outer space for peaceful purposes began in 1957, months prior to the launch of the first artificial satellite into Earth's orbit. The UN General Assembly established the COPUOS in 1959. It was made to regulate the use and exploration of

all aspects of outer space for the greater good of humanity.Early proposals for prohibiting the use of space for military purposes and the placement of weapons of mass destruction in outer space were considered in the late 1950s and early 1960s by the United Nations. The Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies ("Outer Space Treaty") entered into force in 1967, after consideration by the Committee on the Peaceful Uses of Outer Space and the General Assembly. The Treaty provides the basic framework for international space law.

Stances of different countries

The prevention of an arms race in outer space (PAROS) is a critical issue on the UN disarmament and arms control agenda.

1. The United States:

   While as far as anyone knows there are currently no weapons deployed in space, the United States has invested in developing potential technologies, and both China and the United States have demonstrated anti-satellite capabilities in 2007 and 2008, respectively. In response to the potential threats of space weaponization, as well as perceived ballistic missile threats, the US is also developing a ballistic missile defense shield. While missile defense is presented as a defense of American and allied territories against a limited missile attack, it is in reality one more step towards full spectrum dominance. The United States' withdrawal from the Anti-Ballistic Missile Treaty in 2001 and the development of US ground- and sea- based "missile defenses" have already increased tensions with Russia and have led to increased missile proliferation.The deployment of these technologies or the development of space-based technologies will likely cause Russia, as well as the United States (in response to Russia), to make smaller and smaller reductions of their nuclear arsenals and to reject the development of new treaties to regulate nuclear weapons and their delivery systems.

2. Russia and China:

   China's and Russia's operational satellite fleets have grown by almost 70 percent over the past two years—by some 70 percent, according to a new Defense Intelligence Agency (DIA) report, in a sign that both U.S. adversaries have designs on the final frontier for wars of the future. The United States may have some catching up to do. "Slowly but surely, we are heading toward [militarization of space]," said Dmitry Rogozin, the head of Russia's state-owned space corporation. "Roscosmos has no illusions about this. Everyone is working on it." Beijing and Moscow are close to going level with the United States In many regards , in terms of space weaponization, according to a DIA report.

China has 262 intelligence, surveillance, and reconnaissance (ISR) satellites in space—nearly as many as the rest of the world combined, including the United States—and similar advantages in science and technology satellites. And beyond China's orbital landers that have gone to the far side of the moon and to Mars, both countries seem to show interest in developing their military capabilities in space.The U.S. Defense Department believes that China has launched several missiles that could destroy satellites, and Russia has similar counter-space technology. Both nations want to deploy jammers in space that could threaten U.S. communications, render the U.S. military's command and control helpless, or stop the flow of satellite imagery, which has proved a real-time thorn in the side of the Kremlin during its ongoing war in Ukraine. Russia launched an anti-satellite missile as recently as November and considers space as a place where it can begin to falterU.S. precision strike capability, which the Pentagon has held over the Kremlin since the 1991 Gulf War.

3. The European Union:

   The European Space Agency (ESA) is Europe's gateway to space. Its mission is to shape the development of Europe's space capability and ensure that investment in space continues to deliver benefits to the citizens of Europe and the world. European countries, individually or collectively, hardly approached space from an exclusively military angle. For a long time, Europe has restricted itself to purely civilian programs of a scientific character as the European Space Agency (ESA) was designed for only peaceful purposes, excluding any development of specific military space assets. However, it did not preclude any military program developed at a national level, whether individually or in corporations.

4. Other Countries:

   Most countries oppose the weaponization and militarization of space, since it goes against their interests. Many countries cannot afford to fund too many space projects and if warfare shifts towards space then they will be at a serious disadvantage compared to developed countries. Fear of the serious consequences that space warfare would have made these countries have a great deal of reservations.

Consequences of Space Militarisation

The weaponization of space will destroy strategic balance and stability, undermine international and national security, and disrupt existing arms control instruments, in particular those related to nuclear weapons and missiles. These effects will inevitably lead to a new arms race.The rise of globalization and ever-increasing global inter-connectivity has led to a dependence on space-based technology like the Global Positioning System (GPS) for everything from simple navigation to the coordination of military operations. Such a reliance has made the destruction of satellites a priority for military planners in the event of a conflict.

As the potential for space-based threats grows, more world leaders will move to protect against the potential destruction of their space-based assets by deploying the necessary technology to deter such an attack.Though the United Nations has advocated for a complete ban on the armament of space, it lacks the support of the United States in related Proposed Prevention of an Arms Race in Space (PAROS) resolutions. Since the U.S. has such a well-developed military, civilian, and commercial presence in space, it would be senseless to attempt to incur a treaty without U.S. participation, as other states would still feel the need to protect their interests

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Beyond the question of U.S. participation in any international conventions, a strong space-based arms control policy would still be difficult to implement. In space, almost anything can be used as a weapon. With enough speed in orbit, an object no larger than a rock can destroy a satellite. Simply put, even if something is not designed to be a weapon, it can be used as one in space. If policymakers cannot effectively identify what constitutes a weapon in space, weapons cannot be regulated or prohibited, making verification and enforcement close to impossible.