

The Geopolitics of the International Space Station and Space Conflict

As we continue to navigate and explore our way through space, and the unknowns of the Solar System, there is one question that emerges: who will own space, and what will this mean for current and future relations between countries?

As a student who has developed a passion for geopolitics, this topic that I have chosen has allowed me to discover the geopolitical situation of the International Space Station and how it may change in the future. Currently, five space agencies dominate the ISS: NASA, Roscosmos, JAXA, the CSA and the ESA which form a synergy to excel within the space industry and provide a home for astronauts up in space collecting and researching data. A synergy is where two or more corporations work as a combined effort to produce a result greater than that which solely one corporation would produce. Evidently so, we have seen how this synergy has created multilateral relationships and has further enhanced our global scientific knowledge, research and discovery of new celestial bodies as well as giving us an insight into the undiscovered expanses of space we may uncover in the future. However, what stands in the way of this is a new emerging space race. Though the US and Russia share the ISS between them, which is a surprising relation given the context of the tense 1960's space race, it seems a new race has emerged, where both countries are competing for hegemony (dominance) of space. Relating to my research, though the US currently uses Russian Soyuz rockets to transport American astronauts to the ISS, NASA's collaboration to join with Elon Musk's privatised company Space X will allow the United States to independently transport American astronauts there. This thus demonstrates the geopolitical power countries may have with dependence on domestic private companies in order to excel within the space competition.

Despite this, another problem arises- China's exclusion from the ISS via the American Constitution for the reason of 'national security' now poses a threat to the US. In 2017, it was estimated that China's investment into the space field was 6 to 11 billion dollars, which would improve telecommunications and manufacturing access as well as many other factors so that China could compete with the US for selling access to broadband to other countries as an example, which promotes China to a higher ranking. Despite this geopolitical influence, the US in 2018 upped their budget to 20 billion dollars for NASA. Thus, these rises in expenditures indicates the tensions of a new space race and the economic power these countries are demonstrating to compete. However, one of the most threatening aspects of a space race is militarization of space. Previously there was mostly commercial competition for space and claiming 'space firsts' such as the US's win of landing humans on the Moon in 1969, but with the emergence of the space elite comes the power of anti satellite weapons. These weapons are designed to destroy any satellites, for reasons of defence or threat to sovereignty.

However, the question remains of whether there could be a conflict to emerge from abuse of power, as well as the debris created that threatens the ISS itself. Recently, India became the newest country to complete its test launch of an anti satellite weapon, that though was of low threat to other space bodies as it was in low orbit Earth, 24 pieces of debris remained above the ISS which potentially could have caused physical damage. If more countries gain access to anti satellite weapons and more tests are to be carried out in the future, what will become of the ISS? Furthermore, with military power becoming crucial to many countries, space forces are being created to defend countries, such as under Trump's administration, this year, the "Space Force" came into effect as a branch of the US Armed Forces, and now Macron has declared a space command for France too, with a 36 billion Euro investment from 2019 to 2025. Though this militarization provides the opportunity of becoming part of the space elite and a country protecting their sovereignty, for others it is a threat to sovereignty. Lastly, we all know of the desire for humans to land and eventually live on Mars, but asteroid belt mining has become a recent topic of exploration within space. With our current non renewable

sources running out such as water, we need to find a new source to sustain this industry. This may be possible, as Japan was the first country to land a spacecraft (Hayabusa 2) on an asteroid belt and collect samples from it to return to Earth. One component of asteroid belts is the platinum group of metals known as achondrites which will be essential for precious metal mining, while more importantly chondrites contain water within them which will thus increase access to use of water and chances of living in space, as well as reducing costs of sending water to space crafts: it costs between \$9000 to \$43,000 dollars to send a water bottle up into space!

Its clear to see that with the emergence of this new space race, multilateral relations between countries may evolve significantly, due to dependence on new players such as private companies and asteroid belt mining industries respectively such as Space X and Planetary Resources. Furthermore, with the aspect of militarization of space, rights to sovereignty of countries are bound to be threatened especially by those countries which are considered the space elite, and so the question is who will win this space race and when?