

LEGAL CHALLENGES RELATING TO SPACE TOURISM

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ABSTRACT

Space tourism is essentially commercializing the experience of space flight for civilians. The advancement of technology is critical to sending more tourists to space, and a few key trends will define the future of space tourism and our growth both on and off our home planet. The present international framework is insufficient to address the significant issues raised by this endeavor. Since the current legal regime is designed to address only governmental involvement in space exploration, there is a need to evaluate the potential dangers of space tourism and the subsequent establishment of regulations to protect "tourists," as well as private companies. In the end, the formation of international laws is necessary to address these difficulties, reinforced by national laws. The growth of space tourism operations will be hampered by ambiguity in the absence of a clear set of widely agreed international norms. Clear international legal rules governing space tourism must be developed, with requirements prescribed for the authorization and monitoring of commercial space activities and the interests of states, passengers, and private actors balanced to the greatest extent possible.

INTRODUCTION

Even after the first artificial satellite, Sputnik 1, was launched in 1957, the notion of commercial space tourist flights seemed unthinkable. Because of space's strategic and political importance, the space powers were hesitant to let civilian players explore it. Furthermore, the enormous costs and technological hazards involved have limited private investment in space ventures. However, a significant shift may be witnessed now that civilian space travel for pleasure is a reality, and the market for such services is expanding. Only a few people can afford space travel. Denis Tito, a multimillionaire from the United States, paid Roscosmos, Russia's space agency, \$20 million for a trip to space in 2001. Tito, an aeronautical engineer, became the first space tourist when he spent six days in orbit as an International Space Station crew member. Other travelers would follow Tito in the years that followed, notably Mark Shuttleworth, Charles Simonyi, and Guy Laliberté, among others who recreated the adventure. These millionaires spent between \$20 and \$40 million for a short journey into space. Anousheh

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Ansari, an Iranian-American who became the first female space tourist in 2006 after spending nearly ten days in orbit, is worth highlighting. Space tourism laws are not yet established under international space law. The first country to directly mention "space flight participants" in its national space legislation was the United States. Claims of sovereignty in outer space are not permitted under international law. In principle, outer space is "free" for use—tourist activities in outer space do not require prior approval from any sovereign State.

CURRENT STATUS QUO

Commercial spaceflight reached a new level in July of 2021 when Virgin Galactic and Blue Origin took to space. With his Virgin Galactic employees, Sir Richard Branson flew on a SpaceShipTwo-type rocket plane named V.S.S. Unity. A seat on a Virgin Galactic flight cost \$200,000 when it first started accepting applications, but it has now risen to \$450,000. Nine days later, Blue Origin completed its first consumer flight with founder Jeff Bezos on board the New Shepard rocket. Blue Origin subsequently launched two more flights, with American actor William Shatner aboard one of them, making him the oldest person to visit space at the age of 90. Also aboard the first Blue Origin flight was Oliver Daeman, who became the youngest person to travel to space at 18, and whose seat cost \$28 Million. This difference in price between the Virgin Galactic and Blue Origin flights arises due to significant differences. Blue Origin flights fly above the Von Karman line, i.e., 100 km, whereas Virgin Galactic flies over 50 km. Moreover, New Shepard is a rocket, whereas V.S.S. Unity is a high-altitude airplane. SpaceX launched four tourists into space, led by American billionaire Jared Isaacman. A seat on the Inspiration4 mission reportedly cost \$55 million. These missions will continue since there is an increasing interest in space flights. In 2019, Swiss investment firm UBS produced a report estimating that this market may be worth \$3 billion by 2030. Apart from space flights, there are plans to open a luxury space hotel called Voyages Station by 2027, which could accommodate 280 guests and 112 crew members.

LEGAL ISSUES AND CHALLENGES

WHAT IS SPACE?

From a legal viewpoint, there is no clear definition of space. No distinction has been made between air space and outer space. With the increasing advent of sub-orbital flights, this distinction is necessary to determine the applicability of air and space laws. Firstly, let's understand the attempts made to define space. At its 53rd meeting in Buenos Aires in 1968, the

International Law Association accepted a resolution defining the lowest perigee obtained by any artificial satellite as the beginning of outer space to interpret the phrase "outer space" in the Space Treaty. The Soviet Union, at the 18th Session of the United Nations Committee on the Peaceful Uses of Outer Space, proposed that the area over 100 kilometers above the Earth's sea level be recognized as outer space and the recognition of a boundary between air space and outer space at the proposed demarcation. According to general State practice, outer space begins at 100 or 110 kilometers above the Earth's surface since this is the lowest perigee reached by any orbiting spacecraft thus far. As a matter of customary international law, it is now agreed that the height of 100 kilometers above sea level (the Von Karman line) might be regarded as the legally significant "edge of space." This means that actions carried out and items put more than 100 kilometers above sea level are considered space activities and space objects. The Von Karman line is the general region where the atmosphere is so thin that aircraft wings cannot create enough lift for flying, and spacecraft cannot orbit due to high atmospheric drag. When space tourists are launched from Earth (or in the air) and return to Earth, the voyage will undoubtedly include both air and outer space. The delimitation of air space and outer space has significant ramifications for the problem of culpability for damages incurred by space tourism operations since such liability may be based on either air law or space law. There is yet to be an agreement on the criteria to determine the relevant legal system. In this regard, several theories have been established. According to the spatialist viewpoint, the appropriate legal regime will be determined by the spacecraft's position, i.e., whether it is in the air or space. However, this idea is of little use because of the current confusion over the delimitation of outer space. In specific ways, the spatial approach provides better clarity about the appropriate legal framework, notably for the rules of navigation controlling regularly utilized air space. Nonetheless, determining where airspace stops and outer space starts has perplexed scientists and lawyers for decades. The functional theory, on the other hand, concentrates on the nature of the activity. Space law will apply if the aerospace vehicle is built for missions in orbit and when the vehicle goes through air space. Even if the spacecraft does not reach orbit after launch, space law will still apply because the flight is considered a space activity. In other words, this strategy disregards the vehicle's location and concentrates on its function. Although suborbital space tourism might be defined as a space activity, the distinction with other forms of suborbital trips, such as stratospheric balloons, is not as obvious.

LEGAL STANDING OF SPACE TOURISTS

Space tourism in general and Space tourists in particular, find no mention in the Outer Space Treaty. According to the Treaty, astronauts are regarded as 'envoys of mankind.' The 'crew' and 'space flight participants are defined under the FAA rules. Moreover, only the Moon agreement recognizes any individual on the moon as an astronaut. In the Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, more commonly known as the Rescue Agreement, the provision of aid to astronauts in the case of an accident, crisis, or emergency landing, the fast and safe return of astronauts, and the return of objects launched into outer space are all expressly addressed. The Rescue Agreement's title and preface refer to "astronauts," although the body of the Agreement uses the broader phrase "personnel of a spacecraft." However, it is unlikely that the phrases "astronaut" and "space personnel" in the Rescue Agreement include space tourists because none of these categories is (officially) defined in any of the outer space treaties or domestic legislation. Space tourism was not contemplated at the time of the drafting of the outer space treaties, and the treaties were written with astronauts' interests in mind. This issue raises the question of whether nations have a duty to rescue space tourists who are passengers (rather than astronauts or workers) on a spaceship. In a purely literal sense, it appears that space tourists cannot be considered astronauts or even crew members of a spaceship because they are not educated as experts on a space mission, and their primary goal is personal enjoyment rather than contributing to the greater good. It may be claimed that because space tourists do not undertake activities related to the operation of the spaceship during their relatively brief stay in space, they cannot be called spacecraft crew. However, it can also be said that because the Rescue Agreement is "prompted by sentiments of humanity," it should be considered to extend to all personnel participating in a space tourism voyage. This irregularity poses a considerable threat to the legal status of space tourists and poses the question of whether the States are obligated to rescue such tourists.

LIABILITY

From the standpoint of public law, the prospective enterprise of aerospace flying raises numerous significant liability difficulties. The most significant is the third-party responsibility that aerospace space vehicles pose to the entire planet, particularly in the early stages of development. In reality, there are no precise definitions of aerospace in international law, and aerospace vehicles combine aviation and space launch aspects. The United States is the only country that has previously conducted experimental flights using aerospace vehicles and has

enacted legislation governing aerospace flights. According to US law, the government will assume third-party liability for the first three years of operation of aerospace flights before considering a new structure. As a result, it is evident that the United States has opted to treat aeronautical vehicles as spacecraft and to apply the 1972 Liability Convention. The functioning of the 1972 Liability Convention shields the industry against foreign claims, and, as a result, the operator's State's government accepts the international claim. Any launch acquired by a private entity will be regarded as procured by the entity's home state or the State granting the license enabling the launch. Article VI of the Outer Space Treaty holds states internationally liable for activities carried out by either governmental or non-governmental agencies, in contrast to aviation law, which states that damage caused by the activities of any private entity, such as an airliner, cannot hold the government liable. Article VI continues to indicate that governments must maintain the adherence/safeguard of OST and international law requirements, and as previously stated, the State shall be held accountable for any such breach committed even by private companies. The resulting liability is addressed in the Draft Articles on State Responsibility for Internationally Wrongful Acts. Any violation of a state's international obligations under these articles is actionable on its own. It can be inferred that this convention requires member states to oversee private players ensure that no damage is caused. Such restrictions are unreasonable since the private interest in space tourism is ever-increasing, and their actions do not concern the State.

INSURANCE

There is no cap on compensation that can be sought under the liability convention's provisions. The states facing liability may seek reimbursement from the private company producing the harm in accordance with national legislation or based on license terms. This may stifle the expansion of commercial space programs and national programs, as nations may become concerned about the related financial risks. As space tourism evolves, insurance firms will have a huge potential to give risk coverage to individuals on board, similar to how they do for airline passengers. Such vast prospects in space tourism allow insurance companies to tailor their policies to the demands of space-related risks and provide full coverage for all hazards linked with space flight. However, the existing space insurance policy only protects the astronauts and crew of a ship and does not include any provisions for passenger responsibility for space tourists. With a dramatic increase in the prospects of space tourism, the insurance business faces a hurdle. The uncertainties surrounding a space tourist's legal status, the liability regime, and the rules and legislations pose a further threat to the insurance sector.

CONCLUSION

It can be understood that current space treaties and conventions are inadequate to answer the fundamental questions arising with the advent of space tourism. The current international legal framework should be expanded, or there is a need for a new one for this flourishing industry to answer the above questions and more. The effect of space tourism on the environment is another central question that remains unanswered. It has been predicted that space tourism spacecraft will someday become the world's top emitter of Carbon dioxide. The conservation of the natural environment of outer space is a critical component of the notion of the Common Heritage of Mankind. The international law of outer space has some reference to environmental preservation, although the requirements are neither precise nor stringent. Indeed, the principal environmental protection provision in the Outer Space Treaty (Article IX) is poorly defined and imposes minimal responsibilities on states. Another issue that is not addressed is that of space debris. Space debris poses a grave risk to any activity conducted in space, and technological advancements in this regard are needed. Clear international legal rules governing space tourism must be developed, with requirements prescribed for the authorization and monitoring of commercial space activities and the interests of states, passengers, and private actors balanced to the greatest extent possible. International bodies, such as the UNCOPUOS, should establish soft law guidelines that sovereign space-faring nations can use to frame their national space legislation. The full potential of space tourism will only be realized once such legislation is formed.