



LEGAL CHALLENGES OF SPACE TOURISM

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Abstract

Space tourism basically denotes any commercial activity that offers customers direct or indirect experience with space travel. Such activities have many different designs, ranging from long-term stays in orbital facilities to short term orbital or suborbital flights, and even parabolic flights in an aircraft exposing passengers to short periods of weightlessness. This practice began after Dennis Tito, a private citizen, travelled to space aboard the Russian Soyuz capsule in 2001. Since then, the increase in the development of suborbital space travel and the rise in the public interest have encouraged the growth of this venture. Now, in order to provide a more accessible service, companies have made efforts to reduce the price of such trips.

However, the current legal regime is not designed to address these new commercial activities; it was solely drafted to assist in the progress of governmental and exploration of outer space. As a result, number of legal concerns arises for this big commercial venture. So, it is necessary to assess whether the current legal framework can deal with any shortcomings of this new Endeavour or not, particularly in regard to vital issues such as the legal status of space tourists, the potential conflict between air law and space law, and the liability regime for damage caused to states, tourists and any third parties.

In the light of above stated research methods researchers would like to attain a conclusion that now is the high time for the concerned authorities, legal professionals, a jurists and general mass to discuss about it and come out with solutions which is most probably new legislation or better enforcement of existing provisions for ensuring the fact that the state is primarily responsible for taking care of all the aspects of space tourism and ancillary issues.

With space tourism and law it is a typical situation. Basically 'space tourism' denotes any commercial activity that offers customers direct or indirect experience with space travel. Such activities have many different designs, ranging from long-term stays in orbital facilities to short term orbital or suborbital flights, and even parabolic flights in an aircraft exposing passengers to short periods of weightlessness. This practice began after Dennis Tito, a private citizen, travelled to space aboard the Russian Soyuz capsule in 2001. Since then, the increase in the development of suborbital space travel and the rise in the public interest have encouraged the growth of this venture. Now, in order to provide a more accessible service, companies have made efforts to reduce the price of such trips.

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Seeking legality of space tourist

A big question arises that whether the tourist can be treated as astronauts when there is no legal definition there to differentiate them from one another. From a legal standpoint, defining an astronaut should consist of two main considerations: training and altitude. Firstly, tourists undertaking this type of training are more likely than others to be considered astronauts. But, if training is considered to be an element of achieving the status of an astronaut, then an assessment of the longevity and the extent of the training may also be required. To illustrate, before a space tourist can visit the International Space Station, they are required to have at least six months of training. By contrast, Virgin Galactic customers undertake only one week of training and, in some cases, as few as three days of training. Regarding the second component, altitude, there is no recognised boundary of space under international space law. Several countries and organisations have, however, suggested various space boundary heights. It is important to note, however, that no limit is universally accepted. If commercial passengers satisfy these requirements of training and altitude, it is possible to argue that they hold the status of an astronaut and are entitled to relevant protection and immunity. However, as noted above, it is difficult to determine the extent of training

necessary for a passenger to be considered as ‘a person who has received professional training’, such as that of an astronaut. Moreover, the element of altitude is also difficult to determine and apply to space tourists due to the unresolved ambiguity between international regimes of both air and space law, and a need for further legal clarification on the issue.

Efforts to clarify the legal status of crew and passengers can be found in legal documents concerning space travel to the International Space Station (‘ISS’). For instance, the Inter-Governmental Agreement (‘IGA’) — an agreement reached between the space agencies participating in the ISS project — and the related Multilateral Crew Operations Panel Agreement (‘MCOP Agreement’) have divided crewmembers into two main divisions: space flight participants and professional astronauts or cosmonauts.

Liability regime

The current liability system thereby excludes space tourism and only extends to efforts by states or international non-governmental organizations sending equipment and astronauts into space for the purpose of exploration and scientific research. A No provision whatsoever sheds light on liability relating to private entities. In this regard, private entities have neither any recourse nor accountability under the Outer Space Treaty and Liability Convention. Thus, the current liability regime does not adequately address the issue of liability to space tourists, which is believed to be one major concern in space tourism. When considering space tourism from a legal perspective, addressing the issues and challenges of the current liability



regime of the *corpus iuris spatialis in iuri gentium* should be prioritised in terms of space development and regulation. Ever since the 1963 UN Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space, the OST, and the 1972 Liability Convention, regulating liability has been a crucial element in regulating space. When discussing liability, potential breaches will be worded in terms of state violations, as opposed to personal violations. The following sections will evaluate this aspect of liability by examining the state-oriented responsibility system under the OST, the dual liability system under the Liability Convention, and the applicability of these concepts under parallel regimes found in domestic law. It will also evaluate whether national legislation aids in the development of commercial space activities. It will do so by primarily evaluating the systems in the United Kingdom and the United States due to their well-established regimes. Due to the number of risks associated with space travel, there is a need to consider the implications of damage and injury that space tourists participating in commercial space activities could suffer. As discussed in Part II, the legal status of space tourists is still uncertain. Unless space tourists are given the status of an astronaut, the current space law regime does not provide sufficient regulation in relation to their rights and obligations. Nonetheless, it should be appreciated that in practice, it is a customary principle that governments are able to claim on behalf of their national corporations or individuals who are injured in space. Such claims must be brought forward through diplomatic channels within a year of the occurrence of the damage. In the event that a resolution is

not achieved through diplomatic channels, the process will need to operate under Article XIV of the Liability Convention, which provides that the matter shall continue via a Claims Commission established at the request of either party related to the conflict. This Claims Commission has the power to decide on both the procedure and the amount of the reparation on a majority basis. The Commission's decisions are reached and made public within a year of its establishment and are final and binding' in nature.

Space Insurance

Space insurance has been available for a couple of years, especially in the field of satellite launching activities.¹ Further development of space activities has called for more active involvement of private parties. However, a complete set of rules are still to be formulated to realize private financing for space programs. Reasonable space investors clearly know that they are dealing with a cutting-edge technology where there are inherent dangers. In view of the high risks in space activities, the availability of insurance has been a critical element for private parties. As one scholar rightly points out: Passengers are likely (at least in the early, pioneering days) to be required to sign comprehensive waivers of liability in favour of the operator. However, most developed legal jurisdictions are unlikely to enforce these in the event of negligence by the operator. Appropriate passenger liability insurance will therefore be essential. The probable socio-economic profile of early space passengers (who are

¹ Macauley & K. Molly, *Flying In The Face Of Uncertainty: Human Risk In Space Activities* 6 CHI. J. INT'L L. 131, 141-42 (2005).



likely as a group to be more than averagely wealthy and to have high earning capacities) indicates the potential liability exposures will be high.² In this regard, space insurance could provide effective relief for a whole range of liability risks currently associated with space activities, including space tourism. Two main types of space insurance exist for space activities: insurance of space objects and liability insurance (including third-party liability and product liability).³ Insurance of space objects can be further differentiated into: "(1) pre-launching insurance; (2) launch failure and initial operation insurance; and (3) insurance of the satellite itself."⁴

Advocating for an International Convention

The development of space tourism no doubt calls for a legal regime to better regulate the market as well as to offer clear guidance and expected outcomes. It has been widely argued that the existing international space treaties are inadequate for space commercialization.⁵ Among these inadequacies are the current liability regime, which does not provide reasonable recourse and accountability measures for private parties in outer space, and the registration regime with its cumbersome registration requirements.

The current space law regime is unable to bear the burgeoning space tourism industry as the backbone of international space law is too inflexible to be a stable basis for space tourism. This article has advocated for a new international convention, one which is dedicated solely to the regulation of commercial space travel, thereby eliminating uncertainties. Such a uniform instrument should take into account the provisions of the already-existing air law regime and consider the regime as a model, particularly in regards to issues of liability. The creation of a comprehensive legal policy in this regard is a key element of the overall development of the commercial aspects of space.

With the strong demand for space tourism, the development of a clear and predictable legal regime is essential before space tourism becomes affordable for the masses. As long as the space travel technology is mature, there are always business opportunities for space tourism.

On this basis, economic activity in space needs to be accompanied by the simultaneous implementation of a legal framework through which these activities will be regulated by an international organisation, with a view to gaining effective endorsement as a unilateral system.

Conclusion

The corpus of existing international space law represents an important base from which to develop the legal tools to properly regulate the next stage of space activities. Yet it is not sufficient even for present purposes, let alone for the coming decades. The advent of space tourism raises many unanswered legal questions and other legal

² Richard Gimblett, *Space Insurance into the Next Millennium* 25 J.SPACE L 168 (1997).

³ Ruwantissa Abeyratne, *Synergies and Problems in Outer Space Insurance and Air Transport Insurance* 30 TRANSP. L.J. 189, 191-94 (2003).

⁴ I.H. PH. DIEDERIKS-VERSCHOOR, AN INTRODUCTION TO SPACE LAW 114 (3rd ed., 2008).

⁵ Joanne Irene Gabrynowicz, *Space Law: Its Cold War Origins and Challenges in the Era of Globalization* 37 SUFFOLK U. L. REV 1041, 1056 (2004).



issues will also arise. As more space tourism (and other) activities take place, appropriate dispute resolution procedures must be agreed upon in order to deal with conflicts that will inevitably arise, both at the public and private international law level. Detailed traffic management systems must be developed. Also negligence standard should be adopted in the early stage of space travel. Limiting the carrier's liability will not necessarily deter potential space tourists since they can buy additional insurance, as is the case in aviation. The maximum damages payable to passengers should be well defined. An appropriate amount should be determined based on several factors, including the ultimate goal of promoting the development of space travel, the financial situation of the space travel industry, and the general background of space passengers in the early stage of space travel. The duration of liability should similarly be the period during which the accident takes place on board the space object or in the course of any of the operations of embarking or disembarking.⁴⁷ In this regard, space objects should similarly be considered an extension of the jurisdiction of the launching state, whose law prevails; 4 8 disputes over liability in space travel could be effectively resolved in national courts according to the above general international law and/or national laws.

Moreover, a comprehensive legal framework must be established at the international level to reflect the wishes of the wider (global) community and provide certainty. At the same time, however, the broader philosophical and ethical aspects of human activities in outer should be applied. The issues represent considerable challenges

as to how international law, incorporating the international legal regulation of outer space, will be able to cope with future activities in space, including the advent of commercial space tourism. The way in which the law is developed and adapted to meet the challenges will be important not only for outer space itself, but also for future generations living on Earth.

Outer space belongs to all of us. Our use of it should reflect underlying notions of cooperation and shared benefit, which must remain as the cornerstones in this next phase of human achievement. International law has a crucial part to play in this regard.
