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New Space and the Old Problem of Delimitation: Another Chance for the Mesospace Theory

INTRODUCTION

The purpose of this paper is to introduce and develop a method for the delimitation of the near space, while considering how this special zone could be regulated. In my opinion, defining where near space starts and ends is the first step in the very timely law-making process of the delimitation of space. The aim of such law-making is to increase predictability and reduce uncertainty by providing appropriate legal rules for the interests of both the operators and beneficiaries of near-space or high-altitude vehicles and objects operating in or temporarily entering near space, as well as for the general public. After analysing the attempts that have been made to regulate near space, I came to the conclusion that it is not necessary to devise entirely novel methods to satisfy the demands for regulations in this New Space Age, since the law of the sea, having evolved for several hundred years, is already applicable to this area as a legal regime. The law of the sea has many similarities to the situation prevailing in near space, therefore, its legal tools and examples can easily be taken into consideration when regulating near space, either by analogy or by applying them during the law-making process. My research method was the traditional comparative analytical method during which, by analysing and comparing the existing ideas, I drew my own conclusions and made suggestions in relation to the problem of the lack of the delimitation of near space.

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WHY NEAR SPACE MATTERS

The 21st century has witnessed a rapid and exponential growth of commercial and civil activities in unconventional territories, including the high seas and outer space. However, a significant risk is inherent in the commercial, private use of territories which have *res communis omnium usus* status without clear and enforceable legal rules. Both the high seas and outer space have such a legal status. Commercial human activities in these areas were not usual before the 21th century, hence these activities are not appropriately regulated.

Looking at either international or national space law, the need for reform is obvious in this area. The basic space law rules were laid down in five international treaties that were concluded under the umbrella of the United Nations during the 1960s and 1970s. None of them deals with delimitation issues, not to mention near space. Regulating that area of space is becoming increasingly necessary as a consequence of the intensification of sub-orbital human activities. The region of near space, which is beyond the altitude used by civil aviation, is used by near-space vehicles, including suborbital planes, high-altitude balloons and drones.

In this New Space Age a major challenge of space law legislation is how to apply the already existing space law principles to the new commercialisation-induced space activities that have not been addressed before. One of the emerging issues is the lack of the delimitation of outer space. Predictability is clearly a very important condition for commercial space activities. Until it is clearly defined where airspace ends and where outer space begins, neither jurists nor commercial stakeholders know in what cases and on what basis the legal rules and regulations, which are obviously different to those for airspace and for outer space, shall apply.

It is worth considering a real life example from the high seas, which is also a *res communis ominum usus* territory, which illustrates how unregulated human activities can pose great dangers, underlining the necessity of appropriate regulation.

On the 18th of June 2023 a submersible named *Titan* – an underwater vehicle with limited capabilities for manoeuvre – imploded with its pilot and four civil human passengers on board. Its owner and operator, OceanGate, an American company, was providing exploration and tourism services by means of crewed submersibles for scientific services. In 2021, the company made its service available for commercial purposes, as a result of which they launched commercial dives to visit the wreck of the *Titanic* in the North Atlantic Ocean. The *Titanic* sunk on 15 April 1912 and its wreck was discovered on 1 September 1985. Over the last four decades personal damage or death has never occurred during or related to any scientific or commercial expedition to the wreck. In its fourteenth trip, however, the submersible *Titan* operated by OceanGate, with one of its founders and CEO, as well as a scientist and three other persons on board, imploded during its descent, before reaching its destination (probably at a depth of around 3,500 metres). *Titan* lost contact with its mother ship approximately 1 hour and 45 minutes after its descent. After the tragedy, OceanGate immediately suspended its commercial operations and to date has not indicated that it is planning to resume its activities, and certainly there has been no news about offering any similar services again. OceanGate had previously been subject to a significant amount of criticism based on the lack of appropriate safety of its submersibles. This distrust and uncertainty was related to the new technology it employed connected to the shape and material of the body of the vehicle.[1] Indeed, neither independent experts nor any officially recognised authentication or certification body have confirmed the safety of those newly applied technologies or the vehicles themselves.

How is the tragedy of *Titan* relevant to space law? With the intensification of space activities, it is undoubtedly time to prepare for an increase in sub-orbital activities including both space tourism and other private or military activities that do not necessarily reach orbit, but which take place high enough that

[1] According to the company's management, *Titan's* pressure vessel, made of carbon fibre and titanium, was designed with NASA and the University of Washington during a pre-voyage tour, although it later transpired that the institutions referred to were only providing the facilities for tests without any contribution or approval of *Titan*.

the legal regime of air law is not to be applied. In parallel with the growing involvement of private actors in the space industry and the significant reduction of costs of launching vehicles to altitudes above the area where aircraft operate, space travel is becoming accessible to civilian and private individuals. However, there is still a lack of specific rules, whether they be safety standards or permissions for operation. Tommaso Sgobba, the Executive Director at the International Association for the Advancement of Space Safety (IAASS) and former head of spaceflight safety at the European Space Agency (ESA) remarked in an interview with *Space.com* that: "In fact, we have a sort of an analogue here. You have a technology that goes into an extreme environment for the purpose of pleasure that doesn't give much chance to people to survive if something goes badly wrong."[2] Although there is no legal definition of near space, the term usually refers to altitudes which are too high for traditional aircraft to operate. At the same time, space objects cannot stay in orbit in this altitude range either, because the gravity is too strong for them and they cannot reach a sufficient speed to keep them in orbit, which is why this region cannot be termed outer space. This layer of the Earth's atmosphere can be used by special flying objects, namely lighter-than-air or high-altitude balloons, weather surveillance balloons, navigation balloons, drones, suborbital rockets and, according to the newest information, by hypersonic weapons. It is not necessary to explain why special attention needs to be paid to the military aspects of the use of hypersonic weapons and spy balloons in near space. Almost a year ago a statement in a Chinese media outlet referred to near space as a new battlefield, and this rhetoric alarmed security experts.[3] In addition, using the state-of-the-art technology, balloons or drones operating in near space can easily be equipped with high-resolution imaging and telecommunication equipment that can be used for gathering information, for example for weather forecasting, or for communication. One advantage of using vehicles in near space is that the costs of these activities are much lower than those involved in launching and operating satellites in orbit. Another advantage is that, because the objects in

[2] Pultarova 2023.

[3] Connolly 2023.

near space are much closer to the earth, the images or data they capture can be more accurate and of better quality. In addition, from a technical point of view such objects are easier to manoeuvre, as opposed to satellites which once in orbit are difficult to alter in terms of both their activity and their movements.

Coming back to the legal relevance of the example just cited: in case of the *Titan* submersible, the non-compliance of the vehicle with the safety requirements or the lack of any official licence or even registration did not raise legal issues before the tragedy happened, because Titan was not considered to be a vehicle, but instead it was regarded as an object, that was transported via land and sea, and later dropped into the ocean close to the wreck of the *Titanic*. Since the operation happened on the high seas, the safety or other regulations of coastal states were not applicable.[4] I would like to highlight the parallel between the non-regulated activities of submersibles, like the Titan, and the operations of near-space vehicles. It is unquestionable that as the number of such vehicles increase, so too the risk of a tragedy grows. Enacting appropriate laws, either at international or national level, would significantly lower such a risk. Therefore, it is important to proceed with making laws to regulate near space, and a logical starting point for this is the delimitation of near space.

In order to identify what rules are lacking, it is worth reviewing what regulations are already in place in both air law and space law.

DELIMITATION IN AIR LAW

International air law does not define the upper limit of airspace. The reason why this issue has been left open for a very long time was that making a definite decision on this was not of practical relevance to the international community. Air law deals with aviation, i.e. with the aeronautical uses of the airspace.[5] However, distinguished scholars have indicated the necessity of precisely demarcating the limits of airspace in the near future, due to the fact that the technological

[4] Balogh 2023.

[5] Sipos 2023: 39.

development is at a phase when suborbital flights are already a reality.[6] The ICAO (International Civil Aviation Organisation), defines suborbital flight as a "flight up to a very high altitude which does not involve sending the vehicle into orbit". An example of a definition of suborbital flights can be found in national legislation. The U.K. Space Industry Act 2018 includes sub-orbital activities within its definition of "spaceflight activities", and although special rules apply to them, they are clearly defined and regulated by the provisions of the Space Industry Act. According to the Space Industry Act "sub-orbital activity" means launching, procuring the launch of, operating or procuring the return to earth of 1. a rocket or other craft that is capable of operating above the stratosphere; 2. a balloon that is capable of reaching the stratosphere carrying crew or passengers; or 3. an aircraft carrying such a craft, but does not include space activity.

Accordingly, sub-orbital activities carried out in near space are already starting to be regulated, which is a notable trend to be followed by other nations. However, this does not satisfy the demand for an international consensus to agree upon where exactly the near space starts and ends.

DELIMITATION THEORIES IN SPACE LAW

In international law there is no consensus about the definition of near space. Even the delimitation of space has not been clarified, although numerous theories exist about where airspace ends and outer space begins. The airspace that is above the territory of a state is under the sovereignty of the given state, but only until the boundary of outer space, which has a different legal status, the *res communis omnium usus,* as detailed above. Thus, the airspace above the territory of a state is exclusively and completely controlled by that state,[7] while

[6] ICAO Council, 175th Session, Concept of Sub-orbital Flights, Working Paper C-WP/12436, 5 May 2005.

[7] 1944 Chicago Convention on International Civil Aviation.

outer space may be explored or used freely by any state.[8] In national legislation some states have already stipulated what they accept as the boundary of space: 100 kilometres above sea level has been enacted as this limit in the national law of Denmark, Australia and Kazakhstan.[9] However, these theories have not been officially recognised at international level, therefore they can be relied upon only within their national jurisdiction.

Among the international theories, the most promising are those which are based on the spatialist or functionalist approach. Spatialist based theories operate by drawing a concrete line above Earth at a certain height, whether it is based on the laws of nature, for example on aerodynamics, such as the well-known Karman line at 100 km above the sea level or on a simple designation, as was used in the national legislation mentioned in the previous section. Functionality based theories argue that the delimitation should be carried out on the basis of the purpose of the flight: if the function of operating a vehicle in the air qualifies as an air flight then the air law regime should be applied, while in cases in which a flight aims to operate as a space flight, the space law regime shall apply.

Spatialist approaches include the interim zone theories, which will be dealt with in this paper, being both the most recent and the most developed theories. These conceptualisations are based on the delimitation defined in the international law of the sea. The idea behind these theories is that the demarcation of space is not a concrete line, but rather a zone between two levels determined by the given theory. In the law of the sea, the territory of the inland water and the coastal sea are under the exclusive sovereignty of the state to which it belongs, just like in case of the airspace above the territory of a state. Beyond that region there are historically and legally determined zones where the coastal state has certain sovereign rights without controlling those waters completely. These horizontal zones might be applicable vertically in space, creating a transitional zone between airspace and outer space. On the

[8] 1966 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies (the Outer Space Treaty).

[9] Bartóki-Gönczy – Sipos 2022: 42–43.

basis of this idea, several theories have been proposed which differ according to the start and end altitudes of the transition zone. One of the three most relevant theories regarding what near space means is the approach devised by Thomas Gangale,[10] who argued that the near space region should be placed between 31 and 81 km. Paul Stephen Dempsey and Maria Manoli placed the zone between 50 and 160 km, while Hao Liu and Fabian Tronchetti[11] argue for an altitude between 18 and 100 km. These theorists argue that near space should have similar legal status as the contiguous zone in the law of the sea, and as such, vehicles of third states should not require permission for passage. The safety of the public might be governed by the international civil aviation regulations and the military use of near space should be banned, except if permitted by the state concerned.[12]

In order to understand the background of the theory of interim zones and some possible reasons for its application for the delimitation of near space, in the following section I will outline the delimitation regime of the law of the sea from which the idea behind these theories originates.

THE LAW OF THE SEA ANALOGY

The international space legislation has a tradition of relying on the international law of the sea, or at least drawing upon it for inspiration. Delimitation is a very important aspect of the law of the sea, both from a political and legal point of view. Many conflicts over the last few centuries have arisen from differing interpretations of the delimitation rules concerning the high seas, which provides space lawyers with a vast pool of examples of the types of issues, which might occur in the case of potential conflicts of interest. The idea of establishing an interim, transitional zone for the near space thus derives, by analogy, from the delimitation regime of the international law of the sea.

[10] Gangale 2018.
[11] Liu–Tronchetti 2019
[12] Bartóki-Gönczy – Sipos 2022: 46.

Historical aspects

The freedom of the seas has been recognised by the international community as a basic principle since the end of the 18th century,[13] which has been confirmed in the 20th century both by political documents[14] and maritime treaties.[15] At the same time, no generally accepted customary law on maritime delimitation was recognised for centuries. For a long time, the principle determined in 1703 by the international lawyer Cornelis van Bynkershoek was followed, namely that the sovereignty of the coastal state extends as far as that state is able to exercise control over the territorial sea: in practice, the range at which foreign ships can be held back by a cannon placed on the coast. The boundary of the territorial sea was later suggested to be 3 nautical miles, which is 5,559 metres, away from the baseline (low water line), although doubts were expressed about this exact distance even during the negotiations at the relevant international maritime conferences in the mid 1990s, as well as in the relevant case law (International Court, English vs. Norwegian fishing case). The codification of the international law of the sea was finalised at the 1958 Geneva conference where four international treaties (one of them concerning the territorial sea and the contiguous zone, hereinafter referred to as the TSC[16]) were adopted. Political interests have subsequently questioned many of the achievements of that conference, including the lack of clarification of the extent of the territorial sea. Finally, the Montego Bay Convention[17] (hereinafter referred to as UNCLOS) concluded in 1982 managed to put an end to many outstanding and legally ambiguous issues by regulating many aspects of the law of the sea, for example maritime delimitation.

[13] Bruhács 2010: 104.
[14] 1918 President Woodrow Wilson's 14 Points, 1941 Atlantic Charter.
[15] 1958 Geneva Conventions on the Law of the Sea, 1982 United Nations Convention on the Law of the Sea.
[16] Published in Hungary by Statutory Decree No. 31 of 1964.
[17] United Nations Convention on the Law of the Sea.

Delimitation in the international law of the sea

On the basis of the TSC and the UNCLOS the principles of maritime delimitation define three zones that are relevant for my analysis: the territorial sea, the contiguous zone and the exclusive economic zone. The treaties not only stipulate the geographical extent of such areas but also the rights and obligations of the coastal states and the other actors of the international community.

According to the UNCLOS,[18] the sovereignty of the coastal state over the territorial sea[19] is limited only by the right to innocent passage. Under the right of innocent passage, foreign commercial ships are entitled to navigate through a state's territorial sea unhindered and with the sole purpose of crossing. Submarines and other underwater vehicles are required to navigate on the surface and to show their flag within another state's territorial waters.[20] Temporary suspension of this right might be allowed only in case of distress, force majeure or if it is incidental. The ships need to comply with the regulations of the coastal state and, of course, with the rules of international law. Passage is "innocent" so long as it is not "prejudicial to the peace, good order or security of the coastal state".[21] Passage is non-innocent, for example, in case of fishing, unauthorised scientific activities, collecting data and information, breaching the fiscal, customs or health regulations of the coastal state, environmental contamination, violence, manoeuvres with weapons, etc. If the passage of a vessel ceases to be innocent, the coastal state has the right to temporarily suspend the passage, and in the event of breaching the laws of the coastal state, the offender is rendered liable to prosecution.[22]

The jurisdiction of the coastal state has been extended, but only for special purposes, up to an additional 12 nautical miles to the zone contiguous to the

[18] Article 17 UNCLOS.

[19] The territorial sea is determined as the spatial ambit of the sea counted from the complexly configured baseline up to 12 nautical miles.

[20] Article 20 UNCLOS.

[21] Article 14(4) of the 1958 Convention.

[22] Shaw 2021: 488–491.

territorial sea. The reason behind this is to reserve some rights for the coastal states in order to prevent infringements of their customs, immigration or sanitary laws, or to conserve fishing stocks or other marine resources for the coastal state. This additional sea belt makes it possible to balance the different interests of the coastal states and other marine nations with special regards to their commercial interests. In the contiguous zone, the coastal state may 1. prevent infringement of its customs, fiscal, immigration or sanitary regulations within its territory or territorial sea; 2. punish infringements of the above regulations that are committed within its territory or territorial sea. The concept of the contiguous zone is somewhat vague, due to the fact that historically this zone belonged to the high seas, although with the development of the jurisprudence the contiguous zone now forms part of the coastal state's exclusive economic area.[23]

Traditionally the reason for craving out a more special zone, called the exclusive economic zone (EEZ), from the high sea was the issue of fishing rights. The 1958 Geneva Convention did not reach a conclusion as regards exclusive fishing rights in the contiguous zone, therefore, the economic interest groups of the coastal states, in relation to their fishing rights, attempted to achieve a 200-mile zone for that purpose. The 1982 Convention stipulated the right finally for those states that are in a situation of special dependence on coastal fisheries by establishing the legal regime of the exclusive economic zone. Under Article 56(1) of the 1982 Convention, the coastal state in its economic area has, inter alia, 1. sovereign rights for the purpose of exploring and exploiting, conserving and managing natural resources, whether living or non-living, of the waters superjacent to the seabed and of the seabed and its subsoil, and with regard to other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds; and 2. jurisdiction as provided for in the relevant provisions of this Convention with regard to: a) the establishment and use of artificial islands, installations and structures; b) marine scientific research; c) the protection and preservation of

[23] Shaw 2021: 496.

the marine environment. It is important to emphasise that the exclusive zone is not under the sovereignty of the coastal state but rather that the coastal state exercises sovereign rights in this area.

The rights and obligations of other states in this zone include the freedom of navigation, overflight and the right to lay submarine cables and pipelines. The states shall also have due regard to the rights and duties of the coastal State and shall comply with the laws and regulations adopted by the coastal State in accordance with the provisions of the UNCLOS and other rules of international law.[24]

APPLYING THE LAW OF THE SEA TO THE NEAR SPACE

As we can see from the above analyses, the international law of the sea has already clearly defined special delimitation rules in order to address conflicting economic and political interests. In my opinion – which is mainly based on the concept of the Exclusive Economic Utilization Space zone – the best solution would be to ensure the right of innocent passage to the vehicles or space objects of third states as well as to combine the rules of the contiguous zone and the EEZ and apply them accordingly to the near space zone. In near space, the rights of the coastal state in the contiguous zone and in the EEZ could be, by analogy, accorded to the state above which the region of near space is located. While the complete list of these rights needs to be elaborated by technical, legal and political experts in order to address all the necessary issues, it could certainly include the sovereign rights associated with exploring and using near space for economic purposes, for scientific research and for the protection and preservation of the environment. Appropriate safety and security rules should also be enacted in order to ensure the safety of both the crew of near-space vehicles, as well as members of the public who might be affected in the event of an accident or by any harmful emissions from such vehicles. It is also advisable

[24] Article 58 UNCLOS.

to ensure the right for states to punish infringements of these special rules, as has been established in the rules for coastal states in their contiguous zones.

A similar approach has been followed by the International Association for the Advancement of Space Safety (IAASS), a non-profit organisation based in Noordwijk, The Netherlands that has drafted a proposal for an international treaty regulating near space called the Convention on the Regulation of Near Space. According to this draft treaty: "Near Space extends from 18 km above sea level up to 160 km above sea level", which is an obvious combination of the aforementioned theories in relation to the delimitation of near space. In 2020, an IAASS study was presented to the Legal Subcommittee of the United Nations Office for Outer Space Affairs and is being circulated among civil society.[25]

My suggestions are also based on the very useful and well-developed ideas of Liu Hao and Fabio Tronchetti. In 2019 they came up with the idea of an Exclusive Economic Utilization Space (EUS) zone and they suggested regulating it as such, following the example of the exclusive economic zone taken over from the law of the sea. As mentioned earlier, they defined near space as lying between 18 and 100 km above sea level. They mainly justified the necessity of the special regulation by reference to commercial interests, namely by the intensification of providing Internet, communication, navigation and sensing services by utilising near space. Arguing that the use of near space seems to be a highly profitable endeavour, offering excellent opportunities for startups and newcomers, while noting that high-altitude platforms are much cheaper to launch and operate than traditional satellites, special attention must be paid to it. The only criticism that this approach faced concerned its lack of focus on security concerns, which is, especially in the light of the famous Chinese spy balloon case, a serious issue to take into consideration.

The basic idea of the EUS, which I promote to be followed, is that it shall lie beyond the national sovereignty, although the affected states might retain certain sovereign rights over the EUS pertaining to their territory, as in the legal regime of the EEZ in the law of the sea. The lower limit of the EUS is

[25] Gupta–Sgobba 2022a; 2022b.

suggested to be set at 18 km, which is the altitude above which air flight is impossible due to the low density of the air. The upper limit of 100 km aligns with the demarcation line of the start of outer space which is, however, not recognised by international law, but many states have defined this altitude as the border of space. As we have seen from the previous sections of this paper, the legal status of near space is not clarified in international law. Two regimes, those of air law and space law are comparable in this regard, and the questions of near space are not determinable from the relevant international treaties. Only a very few national legislations have attempted to regulate near space or suborbital activities so far. One of these, already described above is the U.K. Space Industry Act and another example is the Outer Space and High-Altitude Activities Act of New Zealand from 2017. Unfortunately, neither of those Acts defines clearly what exactly near space means, or where it begins or ends, although both of them prescribe special conditions and licences for conducting activities in this zone. Taking into account the uncertainty in relation to both the legal status and the limits of near space, I agree with the reasoning of the EUS theory that defining and clarifying the special legal status of near space is necessary and timely.

Employing the EEZ as a reference model for near space is also justifiable. The sovereign rights of coastal states allow them to explore, exploit, conserve and manage the living resources of their respective EEZs, while also entailing an obligation for them to preserve fisheries and promote their optimal utilisation. The exploration and exploitation of non-living resources (minerals, hydrocarbons and energy) in the EEZ by the coastal state is unrestricted. The jurisdictional rights of coastal states include 1. the establishment and use of artificial islands, installations and structures, around which they have the right to establish safety zones, as well as the right to formulate sanitary, fiscal, custom, safety and immigration laws; 2. marine scientific research; 3. the protection and preservation of the marine environment. Freedom of navigation and freedom of overflight are somewhat restricted to the extent that the regulations of the

coastal states have to be respected if they have been adopted according to the UNCLOS. Following these rules, the proposal of the EUS is based on the following elements: a) the utilisation of the EEZ area for exclusively economic purposes; b) the promotion of the optimal use of resources; c) the sovereign right of the coastal state to manage and use its EEZ on a priority basis combined with the limited rights of other countries to participate in activities therein; d) the right of the coastal state to pass and enforce laws in relation to activities occurring within its EEZ and the right to enforce them; and e) the need to ensure safety, security and order within an EEZ. Based on these elements, Liu and Tronchetti's proposal is that the establishment of an EUS would not undermine the sovereignty of the underlying state in its national airspace; the underlying state would retain a priority right to use and administer the exclusive utilisation of space established above its territory and the underlying state would be entitled to regulate and enforce safety and security matters within the EUS established above its land territory and territorial sea. Additionally, the conditions for the deployment and operation of near-space vehicles within an EUS would be agreed upon between the underlying state and the operator prior to the commencement of operation and the underlying state would have the right to deny the deployment of foreign high-altitude vehicles in its EUS based on any perceived threat to its national security and safety interests. Third countries would be entitled to deploy their near-space vehicles in a foreign EUS subject to prior notification and approval by the underlying state, while third countries would also enjoy the right of overflight through a foreign EUS upon prior notification. Besides, the operators of foreign high-altitude vehicles would be obliged to apply for a licence from the underlying state to provide services in its EUS.[26]

In my opinion establishing a *sui generis* legal regime for near space at an international level would promote legal certainty and predictability. This is becoming more and more important in the New Space Age, because of the commercialisation and the intensification of near space activities. Predictability

[26] Liu–Tronchetti 2019: 103.

allows further technical development, encourages innovation, ensures a reliable framework for investors and contributes to the long-term sustainability of space activities.

The theory of the EUS, just like other interim zone theories, has the advantage of introducing the right of innocent passage, as a consequence of which states with smaller territories do not need to ask for permission or licence from all the third countries whose airspace is crossed during the launch of their space objects. The same advantage applies for any state as regards the re-entry of their space objects.[27] It also offers a solution to the ambiguity of legal considerations of commercial suborbital flights, because no matter how long the suborbital vehicle stays in the air, if it is within the limits of near space, it will not qualify as a space activity, and therefore the special rules for near space could be applied without any hesitation. Consequently, there would not be any hesitation or ambiguity around the legal status of such vehicles or activities, and in the event of legal conflicts, the jurisdictions would be determined more easily.

The argument against the necessity of the delimitation of space, which relies on the fact that, so far, no international dispute has arisen, is outdated, as I have demonstrated with the example of the *Titan* catastrophe that illustrates how not having rules for human activities in unconventional territories poses a huge risk.

CONCLUSION

If we look at the historical development of maritime delimitation and the delimitation (or rather the lack of it) of airspace, we might conclude that legal actions were and are always the reflection and consequences of the political and economic interests of the states concerned. International law might provide solutions for the emerging question of the delimitation of near space, and if lawyers want to give guidance to the political and economic dialogue, it is important to be able to demonstrate the possibilities and the legal instruments

[27] Bartóki-Gönczy – Sipos 2022.

that are already available and free to use by analogy. As this paper has shown, the time is here: suborbital flights are a reality, spy balloons, weather surveillance high-altitude vehicles and unmanned drones use the near space region, while at the same time no rules are being followed, which entails risk for their operation.

Considering the example of the *Titan* catastrophe, it may not be too late to learn the lesson from it, of why is it necessary to act and enact laws before any tragedy happens. We might not need to go so far as to prohibit the operation of any crewed vehicles or flights in the near space, but certainly it would be beneficial for both the commercial actors and for the society to enact the rules for delimitation of near space as well as to stipulate the conditions of exploiting and managing near space with the purpose of providing certainty and predictability. I have argued in this paper that the law of the sea has clear rules on the issue of delimitation which might be easily applicable to near space. In order to enact new legal tools for near space, it may be sufficient to rely, by analogy, on the existing ones in the field of the law of the sea, that will only need to be adjusted and formulated in a way which provides an appropriate balance between the different interests of the actors who are using or might use the zone of near space in the future.

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