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***Dispute, when agreement is needed. The impact of discrepancies between  
national and international space law on current and future industrial  
endeavours***

Streszczenie rozprawy doktorskiej przygotowanej w Katedrze  
Prawa Międzynarodowego i Stosunków Międzynarodowych pod  
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nauki prawne.

One could start a summary of a dissertation concerning legal rules on the utilization of outer space by reminding the reader about importance of the outer space in today's politics and economy, while underlining the speed at which activities conducted in outer space develop. This, while being absolutely true, gives little understanding as to how does the system in question work, let alone offer any insight into the development of rules of public international law when faced with new technological reality, as well as their adoption into national regimes. Following dissertation is an attempt at precisely that, that is providing the general audience with an insight into how public international regulations concerning outer space, were adopted and introduced into domestic regimes of *corpus iuris spatialis* state parties'.

The *corpus iuris spatialis*, a set of five treaties that govern states' access, rights, obligations, and responsibilities in outer space, was developed under the auspices of UN in the late 1950s and 1960s. Most importantly, it provided framework governing access to outer space, the issue of appropriation of outer space, registration of objects launched into outer space and responsibility for activities performed in outer space. However, the legal regime was created basing solely on the experience of a handful of states, which at that time, had the technical and economic capacity to enter into the space race. This lead to a situation in which the regulations introduced could not foresee nor encompass each and every future utilization of outer space, potentially leading to a discrepancy between the contents of the treaties and national regulations translating them into domestic legal regime. This analysis will be performed by scrutinizing the practice of the most active space fairing states, their domestic legislations regarding outer space endeavours vis a vis provisions of *corpus iuris spatialis*. The dissertation is divided into 10 chapters.

The first part provides a brief of overview of the crucial parts of the UN-drafted treaties on outer space, in order to provide the reader with the political, historical and legal context of the domestic regulations adopted by the state parties. Firstly, a short history of the legal considerations taking place before humanity ever begun to venture into outer space is presented, with a particular emphasis being placed on works of Vladimir Mandl, featuring many of the same concepts and solutions later adopted by the UN. Subsequently the analysis turns to the first of the *corpus iuris spatialis* component parts, i.e. Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies. After a brief description of the drafting process, the attention is shifted to the

core provisions of the treaty, including but not limited to peaceful utilization of outer space, non-appropriation principle, province of all mankind principle as well as provisions concerning registration, state responsibility and liability for operations conducted in outer space.

The next three chapters provide a brief overview of Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, Convention on Registration of Objects Launched Into Outer Space and Convention on International Liability for Damage Caused by Space Objects. Their aim is to provide further context on the development of the rules of public international law within their respective areas of interest. The Agreement Governing the Activities of States on the Moon and Other Celestial Bodies reinforce the free and unobstructed access to outer space simultaneously excluding any possibility of a state claiming exclusive rights over any part of the outer space. This extends not only to incorporating a part of outer space into state's territory, but also extending its jurisdiction over it, as well as creating circumstances which for all practical intents and purposes exclude the possibility of any other state operations in a given theatre. As space mining and permanent bases on celestial bodies are no longer a theoretical possibility, but became more of a plan of a group of states that signed the Artemis Accords, the practice of states, currently limited to legislative endeavors, is of utmost importance in order to determine how does the international society plan on ensuring effectiveness of rights defined in the mid 20<sup>th</sup> century, in light of the planned actions of the 21<sup>st</sup> century. The Convention on Registration of Objects Launched Into Outer Space predominantly concerns the issue of registration of launched space objects. In order to ensure the effectiveness of rules contained in *corpus iuris spatialis*, state parties had to be equipped with a link between their terrestrial jurisdiction and the space object traversing jurisdiction-free outer space. This link was created in the form of national registration. Much like maritime law, the outer space regime requires the states to register their space objects – both nationally and internationally – in order to retain jurisdiction over them, as well as facilitate international cooperation. Ultimately, this obligation proves to be exclusively reliant on passing of domestic legislations by *corpus iuris spatialis* state parties. The last of the treaties subject to a brief review is Convention on International Liability for Damage Caused by Space Objects. The chapter features, much like the previous ones an analysis of liability and responsibility regime tied to the outer space operations, regardless of whether they are being conducted by governmental or non-governmental entities, while attempting to provide a comprehensive breakdown of the existing regulations concerning liability for outer space activities, as well as measures adopted

by states to – on one hand – alleviate the financial risk accompanying the space exploration, and on the other provide the industry with necessary guarantees.

The second part's focus is turned to the domestic regulations of USA, France, Australia, New Zealand, Netherlands, Finland and proposed Polish act on space activities. In each instance, the analysis is focused on the issues highlighted during the review of *corpus iuris spatialis* components.

Chapter 5 presents an overview of USA's legislation on outer space activities. The analysis is divided into two parts. Firstly, the dissertation offers a description of early attempts at drafting a national legislation. The description of the earliest attempts at creating a national legislation, called the the pre Commercial Space Launch Act era, is focused on providing the reader with necessary insight into reality of business and legislative outer space activities of the late 1980s. Subsequently, the attention is turned to providing an overview of the Commercial Space Launch Act provisions, with the focus being shifted to its provisions concerning authorization and licensing of outer space activities, insurance and liability, as well as unique features of USA's outer space law and policy concerning military utilization of outer space and space mining. The chapter is concluded with an analysis of a cooperation between the USA and New Zealand, which enables entities located in the USA easier access to obtaining New Zealand's licenses and authorizations.

Chapter 6 is devoted to the French legislation. Similarly to the approach adopted in the case of USA's legislation, the analysis begins with an outline of the historical development of both the French space industry itself, as well as the corresponding legislation. Given the fact that France was in the unique position as one of the select few European countries having reliable access to facilities that enabled actual access to outer space, it jumpstarted development of the outer space industry in Europe, enabling introduction of international endeavours, effectively paving the way for what we now know as European Space Agency. This resulted in a somewhat different development of the domestic legislation, than in the USA, as initially it has been focused on the international and industrial part of the outer space exploration. Subsequently, the analysis is turns to reviewing the current state of French outer space regulation. Having in mind the ever important role of France as the launch services provider, the chapter in question focuses on the authorizations and licensing types as well as insurance obligations.

Chapter 7 concerns national legislation of Australia. While it repeats much of the structure of the previous chapters, it is mainly focused on peculiarities of Australian authorization regime. Unlike previous regulations, Australia's legislative has opted for diversifying authorization and licensing regimes basing on the characteristics of the launch vehicle and space activity itself, introducing different regimes for launch facilities, launches and high power launches, also affecting the rules on liability for connected activities.

Chapter 8 & 9 concern Dutch and upcoming Polish legislation respectively. The main focus of the analysis of the Dutch act on outer space activities concerns its rather novel approach to the issue of registration of space objects, with the Dutch legislative opting for creating two separate registries, in order to satisfy both the Outer Space Treaty as well as Registration convention requirements. This approach is further analyzed in light of the views presented by the doctrine, especially whether it can be considered to constitute a circumvention of the treaty obligations. The Polish draft of law on the outer space activities is the subject of the penultimate chapter of the presented thesis. The main point of focus in respect to it is not only how well does it incorporate the provisions of public international law in terms of obligations incumbent upon state in respect to outer space activities, but also how was it affected by the aforementioned legislations, in terms of licensing, authorization, insurance obligation and liability.

The last chapter is devoted not to a legislation of a single state, but rather to a rather new endeavor which is the Artemis Program, and more specifically its legal part called Artemis Accords. As much as the program itself is advertised as a major shift in international exploration of outer space, with emphasis being put on the projects like return to the crewed Moon missions, its legal part has caused a certain amount of controversy. In itself, the Artemis Accords are not a treaty, nor do they have a binding legal power over its participants and can be best described as a "gentleman's agreement" between participating space agencies, aimed at enabling a coherent cooperation in the Artemis program. To achieve that, some controversial issue had to be addressed – even if in a non-binding way – such as the issue of outer space mining, access to outer space and the non-appropriation principle. As much as the Artemis Accords are not legally binding their impact on the development of state practice can be quite significant.

The thesis is concluded with a summary of the analyzed legislations emphasizing the issues identified in regards to the key areas of the domestic outer space regimes, i.e. liability for damages caused in connection to outer space activities, authorization and licensing regimes and registration of outer space objects, as well as findings concerning future of international cooperation in outer space.