

Do laws apply in outer space?

As a matter of fact, the enquiry as to whether there is law in outer space, exists and continues to, among both the legal community at large, and non-legal professionals. Indeed, as wide and multiples the branches of law are, so are the paths of the specialists involved. While the multifaceted sphere of law stands on threads intrinsically connected, the bound between Property Law and Space Law, for instance, is not a conspicuous one, depending on the observer's viewpoint. *De facto*, Space Law is far from reaching a broad audience, except for individuals either interested in or participating in space prospects.

However, a *Corpus juris spatialis* has been implemented, regrouping the founding treaties regulating the outer space, that bears a considerable impact. The earliest and paramount one, the Outer Space Treaty, has been signed in 1967, and ratified by 110 members as of 2020¹, enacted ten years after the Russians launched the first artificial satellite, Sputnik. In the setting of a Cold War, the agreement was primarily bolstered by a main objective, preventing the militarization of outer space. Hence, in order to attain this ambition, the Treaty prohibits the placement in orbit of “any object carrying nuclear weapons” and their installation on celestial bodies.² Indeed, if in 1958 already, the United States of America (hereinafter U.S.) were planning the detonation of a nuclear bomb on the Moon, a mission that was later abandoned, Elon MUSK considered a project to terraform Mars by using fusion nuclear devices.³ Consequently, both public and private actors have a potential in influencing the fate of outer space and the international treaties implemented are essential.

Furthermore, the Outer Space Treaty provides for the freedom of exploration and use of the outer space by all States members of the Treaty, designating the area a “province for all mankind,” and granting the freedom of access to celestial bodies, without discrimination.⁴

Subsequently, the Treaty prohibits “national appropriation” of the outer space, a provision opening countless writings as to its interpretation.⁵

In essence, these guarantees are interdependent since outlawing national appropriation of the outer space safeguards the freedom of access, use and exploration. Nonetheless, “national appropriation” remains an elusive concept, even more considering that the framers of the Treaty only envisioned public involvement in space activities, and not private undertakings ones. No wonder why the practice of selling plots of the Moon has grown, and while it might appear trivial, it does come with legal consequences. Effectively, Dennis HOPE engaged in the sale of titles of ownership on portions of the Moon or even whole planets, as he declared himself holder of all the planets. His argument relied on the assertion that “national” could not encompass private actors.⁶ Nevertheless,

¹ United Nations Office for Outer space Affairs, *Status of international agreements relating to activities in outer space as at 1 January 2020*, January 2020 [viewed 30 April 2020], available from <https://www.unoosa.org/documents/pdf/space-law/treatystatus/TreatiesStatus-2020E.pdf>

² *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies*, Art. IV, January 27, 1967, Vol. 610, U.N.T.S., No. 8843.

³ HERRON Thomas J., *Deep Space Thinking: What Elon Musk's Idea to Nuke Mars Teaches Us about Regulating the Visionaries and Daredevils of Outer Space*, p. 566, 2016, Columbia Journal Environmental Law, Vol. 41.

⁴ *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies*, Art. I, January 27, 1967, Vol. 610, U.N.T.S., No. 8843.

⁵ *Id* at Art. II.

⁶ Lunar Embassy, *What is the Lunar Embassy's legal basis for selling extraterrestrial properties?* [viewed 4 May 2020], available from <https://lunarembassy.com/buying-land-on-the-moon-faq-lunar-embassy/#collapseOne2>

the company has eventually been fined and its license suspended by the Chinese Courts, on the basis of the Outer Space Treaty, which legally, does apply to citizens and corporations.⁷

If such considerations compel a far lengthier commentary, this instance is satisfactory enough to illustrate how Space Law is, as a matter of fact, not an abstract concept remote from the earthly economic reality. Legitimately, prospects of space mining, to exploit and discover essential minerals, of space tourism, or touristic space flights are one step ahead, yet likely, and necessarily must abide by the law.

Having said that, if in the bipolar world of the Cold War founding space treaties have been adopted broadly among Nations, the *New Space* Era instigates their questioning, even more peculiarly as to the Outer Space Treaty and the aforementioned non-appropriation principle. The *New Space* refers to the Era replacing the *Old Space*, since the end of the 1990s and the beginning of the 21st century. A multiplicity of phenomena allowed this development, the central ones based on the growing disengagement of States in the financing of space activities, thus fostering an exponential rise in private investment. Therefore, the space industry is experiencing a prodigious advancement through this conjunction which, concomitantly with technological progress, is opening to previously unseen projects.

Subsequently, the ambiguous interpretation of these treaties, specifically the one of 1967 formulated in general terms, is a source of debates, hence of insecurity for investors. Accordingly, the *New Space* also bears laws authorizing nationals to exploit and own mineral resources harvested in outer space, beginning by the Space Act of 2015 in the U.S., followed by an analogous enactment in Luxembourg two years later.⁸ Whilst the United Arab Emirates announced a similar policy for 2020, the American President Donald TRUMP signed on April 6, 2020, an executive order, “Encouraging International Support for the Recovery and Use of Space Resources.”⁹ The Order advocates for the conclusion of bilateral and multilateral agreements with the objective of involving “commercial entities to recover and use resources, including water and certain minerals, in outer space.”¹⁰ Moreover, the President utterly rejects any binding effect on the country that the so-called Moon Agreement, one of the five treaties of the *Corpus Juris Spatialis*. Indeed, the U.S. did not ratify this Treaty, to which none of the other major space-faring nations are part of, thus only totaling 18 Members.¹¹ Interestingly, the reason of such a refusal is that the Moon Agreement prohibits the acquisition of natural resources in outer space, but without a significant ratification, the Treaty fails to reach its objective, and above all, effectiveness.

In conclusion, the Space Act and the Luxembourg legislation constitute the sole effective legal protection for space investors, and one cannot overstate the importance of Space Law, both

⁷ JAKHU Ram S., PELTON Joseph N., NYAMPONG Yaw O.M., *Space Mining and its Regulation*, p. 123, 2017, Springer.

⁸ 51 U.S. Code § 51303 (Amended by Law 114—90 of 25 November 2015 on the competitiveness of commercial space launches) and Law n° 674 of 28 July 2017 on the exploration and use of space resources, Art. 1, Official Journal of the Grand Duchy of Luxembourg, Memorial A-674 of July 28, 2017.

⁹ The White House, Executive Order on Encouraging International Support for the Recovery and Use of Space Resources, 6 April 2020, [viewed 4 May 2020], available from <https://www.whitehouse.gov/presidential-actions/executive-order-encouraging-international-support-recovery-use-space-resources/>

¹⁰ *Id.*

¹¹ United Nations Office for Outer space Affairs, *Status of international agreements relating to activities in outer space as at 1 January 2020*, January 2020 [viewed 4 May 2020], available from <https://www.unoosa.org/documents/pdf/spacelaw/treatystatus/TreatiesStatus-2020E.pdf>

economically and politically. Such protection appears essential in order to encourage and support private investors, who will only be able to commit substantial financial resources with the certainty that they will be capable of exploiting commercially the fruits of their unpredictable undertakings.

Space Law also plays a critical role in terms of security issues, as nations are extremely dependent on their efficiency in outer space (in our daily lives and in military, strategic, political or economic matters), as space terrorism is far from a chimera. The potential risks may be both unintentional (collisions in outer space) and decided (data capture by cyber-hackers, for instance), while bearing negative environmental outcomes (space debris, dangers to the Earth and outer space, space traffic management).

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