THE PRIVATE SECTOR, THE MOON, AND OTHER CELESTIAL BODIES: THE CASE FOR A CHANGE IN NATIONAL SPACE LAW

NURAH GHANIE
College of Arts and Letters
Florida Atlantic University

Abstract

The United States' recent plan to return to the Moon is comprised of the Artemis Program and affiliated *Artemis Accords*, with private companies now being included, despite the lack of support from the international community and international space law–not even abiding by the *Outer Space Treaty* (foundational legislation all countries must abide by lest one gains supremacy over another). This means that there must be a thorough re-evaluation and change of national space law for a policy that rightly understands why international space law exists–for the sake of the international community in its entirety. Many figures have written on this subject, particularly with respect to international law, including members of the United Nations, but the stances of national law, especially of the United States, are antagonistic. In order to solve this apparent conflict, there should be a truly international, cooperative practice that unites all people of the world. This paper discusses the need for this change, as well as the past and present legislation that must be changed and why.

Introduction

It has been more than half a century since humanity's 'one giant leap for mankind' on July 20, 1969. It could not have been achieved without

nationwide public support–the Apollo program and Space Race[1], as a whole, financially supported by public funding–serving as one of the reasons people felt represented in space exploration. Although the world was immensely divided along political, national, and cultural lines, this was a time for celebration. It symbolized hope, a zenith of our achievements, and an everlasting perseverance for learning more about our universe. Yet *now*, over *fifty* years later, the private sector is beginning to replicate the achievements leading up to this decisive moment in human history in the name of 'innovation.' The privatization of space exploration is well underway, despite it posing many safety and security risks and being in direct opposition to the demands of foundational space law and earlier space travel. This article will focus primarily on the latter.

The Moon is the latest of private companies' endeavors, the domain in which private companies and their exploitative whims aim to run free. This is something indicated in the recent *Artemis Accords*,[2] formally the *Agreement Governing the Activities of States on the Moon and Other Celestial Bodies*, said to have been a recent proposal for United States commercial interests. Generally, it has served as an attempt to define and narrow down prior standards for international space law, with emphasis on 'international,' as that is the primary nature of space law, as it stands, as what one country does outside of their airspace ultimately affects others. International space law was created mainly to keep peaceful relations between nations in space because, without it, it would necessarily lead to the exacerbation of conflicts on Earth. According to space law, such as the *Outer Space Treaty* (formally the

[1] The Space Race was the Cold War-era rivalry between the United States and the Soviet Union over supremacy in space exploration. It was initiated with the Soviet Union's launch of Sputnik 1 in October 1957.

[2] Formally known as the *Agreement Governing the Activities of States on the Moon and Other Celestial Bodies*,is a recently signed set of statements by twenty-three U.N member states and one territory as of December 2022, all of whom will be associated with the Artemis Program. *See infra* note 11.

Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies), "[t]he exploration and use of outer space . . . shall be carried out for the benefit and in the interests of all countries . . . , and shall be the province of all mankind."[3] This means that one member state should not gain supremacy over another in the realm of space exploration.

Outer space, like the oceans and the continent of Antarctica here on Earth, is considered 'res communis,' meaning the common heritage of mankind. This is why it is especially important that the concerns of other countries are carefully considered, as there are no borders among the cosmos, since "[o]uter space, including the moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means."[4] This is antithetical to the consequences of privatization, as it prioritizes private ownership and profit for a few individuals over all else. The *Outer Space Treaty* was the genesis which all space law derives from, so it is important that all member states abide by these standards, not only out of concern for preventing violations of space law, but also to remember why they were passed in the first place.

Issue

The main issue concerning the current state of international space law, including that of the Moon, is the recent shift toward privatization. Reasons this shift occurred in the first place have to do with the fact that such companies and their supporters took advantage of the vague terminology of the *Outer Space Treaty*, citing that it did not overtly

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[3] United Nations Office for Outer Space Affairs, G.A. Res. 2222 (XXI), Art. I (Dec. 19, 1966), https://www.unoosa.org/oosa/oosadoc/data/resolutions/1966/general_assembly_21st_session/res_2222_xxi.html, (last viewed April 3, 2023).

[4] *Id.* at Art II.

prohibit their presence. Reference to the term "appropriation"[5] is usually cited for support, along with its possible definitions and interpretations. The reasoning follows that the word is merely used to refer to national claims and not resource extraction.[6] However, once those resources are extracted, they belong to a country's jurisdiction. Whether this is the result of a commercial or governmental entity matters little–it is to be used for the benefit of all mankind, and those who exploited the lack of clarity in the Outer Space Treaty cannot be trusted to operate within the intended purpose of the document.[7]

Although national laws allowing for private exploitation of outer space are being passed, they may be challenged and rejected by international law. This assumption ignores later treaties and legislation as well, with national legislation being passed without regard to international standards. One such legislation is the *Moon Agreement*, developed during the 1970s and finally ratified in 1984. It explicitly states that the exploration of the Moon and other celestial bodies should be explored with international support, which the *Artemis Accords* simply do not have.[8] *The U.S. Space Launch Competitiveness Act of 2015* is one example leading to the *Artemis Accords*' conception, though actions toward private presence in space exploration originated decades earlier. For one, it did not cite the *Outer Space Treaty*–not once in all of its

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[5] *Id.*

[6] John G. Wrench, *Non-Appropriation, No Problem: The Outer Space Treaty Is Ready for Asteroid Mining*, 51 CASE W. RES. J. INT'L L. 437 (Sept. 17, 2019), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3707815, (last visited April 3, 2023).

[7] Frans von der Dunk, *The Artemis Accords and the law: Is the moon 'back in business'?*, UNIV. OF AUCKLAND (June 2, 2020), https://www.thebigq.org/2020/06/02/the-artemis-accords-and-the-law-is-the-moon-back-in-business/, (last visited April 3, 2023).

[8] United Nations Office for Outer Space Affairs, G.A. Res. 34/68 (Dec. 5, 1979), https://www.unoosa.org/oosa/oosadoc/data/resolutions/1966/general_assembly_21st_session/res_2222_xxi.html, (last viewed April 3, 2023).

twenty pages.[9] This is demonstrative of a blatant disregard for the international laws meant to prevent individual countries from gaining supremacy over others, suggesting worse for the international community. These are precisely the sort of issues standards such as the *Outer Space Treaty* were created for and the primary rule all nations had and must continue to abide by.

Rules

Rules of space law were primarily created to preclude international issues from becoming as expansive as the universe itself. The Space Race, for instance, was a consequence of the Arms Race–the competition between the United States and the Soviet Union for nuclear supremacy during the Cold War. Space law was created in order to mitigate its effects. Since the *Outer Space Treaty* was passed in 1967, a mere two years before man set foot on the Moon, it is said that the emergence of private companies could not have been anticipated and, therefore, obsolete. However, private companies did exist then–only just nationalized soon after to ensure that they were held accountable in the public sphere. Similarly, the private companies that operate in outer space currently rely on funding from the public sector–that they should be similarly held accountable by it is only natural.

The main reason that private companies have gotten involved with such things has to do with speculation rather than actual profit; space exploration is currently not lucrative. One of the primary goals of business is to accrue profit–their success necessarily depends on this. The realm of outer space is no exception. "Popular literature and the statements of corporate executives gives the impression that unless companies can obtain ownership to space territory, they will not be able

[9] U.S. Commercial Launch Space Launch Competitiveness Act, H.R. 2262, 114th Cong. (2015), https://www.congress.gov/bill/114th-congress/house-bill/2262, (last visited April 3, 2023).

to invest in space activities profitably."[10] Regardless, space exploration should not be done for the purpose of profit, as detailed thus far. As mentioned before, the profit of a few individuals (i.e., the owners of private companies) is not representative of all mankind.

The work of NASA (National Aeronautics and Space Administration) and related agencies have resulted in innovations that benefit everyone– just because they are developed privately, as opposed to opting for publicity stunts, for instance, does not mean they are unimportant. Additionally, allowing for the infinite pursuit of profit in outer space ultimately means that global and economic inequalities will increase with it. According to the United Nations, space exploration must not be allowed to exacerbate economic and/or social inequality.[11] It is up to international space law to make sure that such statements are not mere platitudes, something emphasized in a resolution recently adopted by the United Nations General Assembly, stating the importance of preventing another arms race, at least in outer space.[12]

Analysis

There is a complete lack of consensus in the international community, with many considering the previously mentioned *Artemis Accords* as serving to prioritize American interests over those of other countries:

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[10] Henry R. Hertzfeld & Frans von der Dunk, *Bringing Space Law into the Commercial World: Property Rights without Sovereignty*, 6 CHICAGO J. INT'L L. 81, 91 (2005).

[11] *Outer Space Benefits Must Not Be Allowed to Widen Global Gap between Economic, Social Inequality*, United Nations, Meetings Coverage, General Assembly, Fourth Committee Concluding Debate on Item GA/SPD/562 (Oct. 17, 2014), https://press.un.org/en/2014/gaspd.doc.htm-0, (last visited April 3, 2023).

[12] *International Cooperation on the Peaceful Uses of Outer Space*, WORLD FEDERATION OF UNITED NATIONS ASSOCIATIONS (Oct. 22, 2021), https://wfuna.org/files/attachment/pdf/ga4_sg_report_-_international_cooperation_on_the_peaceful_uses_of_outer_space.pdf., (last visited April 3, 2023).

"The Signatories recognize that the development of interoperable and common exploration infrastructure and standards, including but not limited to fuel storage and delivery systems, landing structures, communications systems, and power systems, will enhance space-based exploration, scientific discovery, and commercial utilization."[13] Evidently, this means that private, commercial actors will be able to access the information and contents of documents formerly only available to government actors. These facilities, and proper conduct within them, are essential to space exploration, something that private companies have not prioritized thus far. However, it also states that scientific data will not be released to private companies, with one vital exception: where "such operations are being conducted on behalf of a Signatory to the Accords."[14]

As the United States is a Signatory, it will be able to give information to companies not as qualified as government entities to handle it, potentially leading to problems later on, especially in the international community. Other countries, for good reason, do not want certain information to become public, but with this section of the *Accords*, it could be this way without their permission. This is one of the reasons why so few United Nations members have approved of it–certain countries not trusting private entities they do not have direct authority over to have access to sensitive information about their missions. Worse, such actions could be taken as a threat to another country's sovereignty. The Space Race commenced and escalated over much less.

These things also raise questions concerning why governments are inherently averse to sharing vital scientific information with private companies. Although it may be argued that this lies in the fact that the Artemis Program is an American-led mission, it will still have to

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[13] *The Artemis Accords*, §5, NASA (Oct. 13, 2020), https://www.nasa.gov/specials/artemis-accords/img/Artemis-Accords-signed-13Oct2020.pdf., (last visited April 3, 2023).
[14] *Id.* at §8.

answer to the international community and ultimately get its permission for the *Accords* to pass in the United Nations Office for Outer Space Affairs–the primary authority concerning outer space activities (as national space law is subordinate to international space law). This is true for even countries that do not currently have a space program. According to the *Benefits Declaration* adopted in 1996:

> All States, particularly those with relevant space capabilities and with programmes [sic] for the exploration and use of outer space, should contribute to promoting and fostering international cooperation on an equitable and mutually acceptable basis. In this context, particular attention should be given to the benefit for and the interests of developing countries and countries with incipient space programmes [sic] stemming from such international cooperation conducted with countries with more advanced space capabilities.[15]

Countries that do not currently have a space program, let alone in the process of developing one, must, therefore, have a say in space law. So, the demands of countries with a space program do not take precedence in international space law and, thus, should not be in the realm of space exploration. Such demands were materialized through the Group of 77, a coalition of 134 developing countries in the United Nations, though not coming to pass in the *United Nations Committee on the Peaceful Uses of Outer Space* (despite being in accordance with the preceding international space law legislation–*Outer Space Treaty* and *Benefits Declaration*). In retrospect, although it ultimately failed, there is much to be learned from its effort, as we now find ourselves in a stalemate. All precautions should be taken to prevent national conflicts from

[15] United Nations Office for Outer Space Affairs, G.A. Res. 51/122 (Feb. 4, 1997), https://www.unoosa.org/oosa/oosadoc/data/resolutions/1966/general_assembly_21st_session/res_2222_xxi.html, (last viewed April 3, 2023).

permeating into outer space. If the United States wants to set an example, it should do so in a manner that is collaborative rather than adversarial.

Conclusion

As the efforts to include private or commercial entities will bring the international community to a stalemate in regard to space law and exploration, there needs to be a change in national policy. The United States needs to carefully consider and implement standards based on previous legislation and its underlying values, as well as consider the current position of other countries aligned with them. Commercial interests must not be allowed to take precedence over the interests of the rest of the world. A truly global regulatory framework must be created in the likeness of the *Outer Space Treaty*, the *Moon Agreement*, and the *Benefits Declaration*, as well as the efforts of over-exploited countries like the Group of 77, keeping in mind the political climate and material reality of their time. Indeed, we shall return with peace and hope for *all* mankind.