

# Changing Responsibility for a Changing Environment: Reevaluating the Traditional Interpretation of Article VI of the Outer Space Treaty in Light of Private Industry

CHRISTIAN JOSEPH ROBISON <sup>†</sup>

## ABSTRACT

In recent times, private industry has made great advancements in the commercialization of outer space. Such advancement represents a monumental shift from a period in which outer space activities were the business of national governments. However, the traditional interpretation of Article VI of the Outer Space Treaty still assigns responsibility for private space activities to States despite private industry’s increased ability to conduct outer space activities without government involvement or assistance. Ultimately, the blanket application of State responsibility associated with the traditional interpretation of Article VI may be unworkable or inequitable as private industry becomes a dominant force in outer space. Therefore, this Article evaluates the shortcomings of the traditional interpretation of Article VI and proposes a solution based on the customary law of State responsibility in order to ensure that both private and public actors in outer space are unhampered by an overly broad interpretation of Article VI.

## KEYWORDS

*Liability; State Responsibility; Outer Space; Attribution; Private Industry*

## TABLE OF CONTENTS

Introduction . . . . .	2
1. State Responsibility and Article VI . . . . .	5
1.1 State Responsibility . . . . .	5
1.2. History and Formation of Article VI . . . . .	7
1.3. Structure and Traditional Interpretation of Article VI . . . . .	9
2. Difficulties of Applying the Traditional Interpretation of Article VI . . . . .	12
2.1. Plain Ambiguity – National Activities and The Appropriate State . . . . .	12
2.1.1. National Activities . . . . .	12
2.1.2. The Appropriate State . . . . .	16
2.2. Further Complication - Private Industry . . . . .	17
3. Path Forward . . . . .	19
3.1. A Viable Solution . . . . .	20
3.2. Control and the Outer Space Treaty . . . . .	23
3.3. Implementing Control – Domestic Legislation . . . . .	25
Conclusion . . . . .	26

---

<sup>†</sup> Christian J. Robison is an attorney for the United States Air Force. Mr. Robison specializes in government contracts and procurement and resolves legal matters revolving around the development and commercialization of outer space technology. Mr. Robison holds both a J.D. and LL.M. from the University of Mississippi (U.S.).



## INTRODUCTION

Since the inception of the Outer Space Treaty, mankind's means of exploring and utilizing the resources of outer space has rapidly evolved. Not only are more countries able to develop robust space programs, but also more private entities are able to develop their own spacecraft and launch vehicles without government assistance. Pioneering companies such as SpaceX, Blue Origin, and Boeing have made significant monetary gains by winning lucrative contracts to further the interests of the United States government.<sup>1</sup> However, these same entities have contracted with other non-space faring companies to carry out private interests in outer space,<sup>2</sup> and have continued to develop technology that will hopefully allow for affordable space travel for the average citizen<sup>3</sup> and the extraction of valuable resources from asteroids and other celestial bodies.<sup>4</sup>

Despite great advances in the private commercialization of outer space, many space activities have been, and still are, propelled by the work of large government agencies such as NASA and Roscosmos.<sup>5</sup> Of course, this can be interpreted as the result of the historical formation of the Outer Space Treaty. When the Treaty was originally drafted, the exploration and use of outer space were almost exclusively occupied by the governments of the United States and the former Soviet Union.<sup>6</sup> Consequently, many of the basic premises found within the Treaty itself are centered upon a series of

---

<sup>1</sup> In 2016, Both SpaceX and United Launch Alliance (a joint venture between Boeing and Lockheed Martin) have provided launches for key missions for the United States government and the International Space Station. See, *OSIRIS-REx Asteroid Sample Return Mission at the Launch Pad*, NASA (Sep. 8, 2016), <http://www.nasa.gov/image-feature/osiris-rex-asteroid-sample-return-mission-at-the-launch-pad> (detailing mission in which United Launch Alliance launched spacecraft that will intercept an asteroid and transport samples back to Earth); *Completed Missions*, SpaceX, <http://www.spacex.com/missions> (listing SpaceX launches including those that have transported resupply payloads to the International Space Station).

<sup>2</sup> For prime example, SpaceX was to launch a satellite for Facebook that would have provided internet access to a large portion of sub-Saharan Africa. Though the rocket and payload were destroyed during a static engine test, such a mission demonstrates a commercial space company's financial ability to transact with large private entities rather than depending upon government contracts. See Brian Fung, *That SpaceX Explosion Blew Up One of Facebook's Most Ambitious Projects*, WASH. POST (Sept. 1, 2016), <https://www.washingtonpost.com/news/the-switch/wp/2016/09/01/that-spacex-explosion-blew-up-one-of-facebooks-most-ambitious-projects/>.

<sup>3</sup> Both SpaceX and Boeing have revealed plans to transport private citizens to Mars. See Nicky Woolf, *SpaceX founder Elon Musk plans to get humans to Mars in six years*, THE GUARDIAN (Sept. 28, 2016), <https://www.theguardian.com/technology/2016/sep/27/elon-musk-spacex-mars-colony>. Julie Johnsson, *Boeing CEO Vows to Beat Musk to Mars*, BLOOMBERG (Oct. 4, 2016), <https://www.bloomberg.com/news/articles/2016-10-04/boeing-ceo-vows-to-beat-musk-to-mars-as-new-space-race-beckons>.

<sup>4</sup> See, *Asteroids*, PLANETARY RESOURCES, <http://www.planetaryresources.com/asteroids/#asteroids-intro> (detailing Planetary Resources goals of extracting resources from asteroids).

<sup>5</sup> See *Launch Services Program – Earth's Bridge to Space*, NASA (2012), [https://www.nasa.gov/sites/default/files/LS\\_P\\_Brochure\\_508.pdf](https://www.nasa.gov/sites/default/files/LS_P_Brochure_508.pdf) (describing NASA's directorate that is in charge of launching expendable launch vehicles that satisfy both commercial and governmental interests).

<sup>6</sup> See *infra* note 34 and accompanying text.

compromises based upon the conflicting political ideologies of the two nations.<sup>7</sup> While the democratic and entrepreneurial United States foresaw the eventual private commercialization of outer space, the Soviet Union desired space activities to be under the control of national governments.<sup>8</sup> The resulting compromise from these competing ideologies can be seen in Article VI of the Outer Space Treaty which requires States to “bear international responsibility for *national activities* in outer space, including the [M]oon and other celestial bodies, whether such activities are carried on by governmental agencies or by *non-governmental entities* . . . .”<sup>9</sup>

In short, the traditional interpretation of Article VI attributed the activities of private actors in outer space to the State itself, thus obliging States to ensure that its space activities did not violate the Outer Space Treaty or rules of international law; if a private actor breaches these international obligations, then potential liability for such a breach is imputed to the State. Such an interpretation is ratified by the registration requirements contained in the component outer space treaties,<sup>10</sup> the long history of government activity in outer space, the regulation of outer space through domestic legislation and national space agencies, and the continued use of private space companies for governmental interests.

But, as stated previously, private entities have been able to make leaps and bounds in the arena of space exploration and have already begun to pursue endeavors without government involvement. Such a trend has also coincided with the rise of transnational corporations that are not necessarily tied to one national jurisdiction, but are rather subject to multiple arenas of jurisdiction. These continuing trends, with a potential to soon be the norm in commercial space efforts, begs the question: under what circumstances are States responsible for the potentially unlawful activities of private actors in outer space under Article VI of the Outer Space Treaty?

As private commercial endeavors in outer space continue to rapidly develop, it may become inefficient and inequitable to broadly assign State responsibility for private activities centered upon the basic schemas of State jurisdiction as enforced by the outer space agreements.<sup>11</sup> Indeed, not only have certain space companies been able to garner

---

<sup>7</sup> See *infra* note 35 and accompanying text.

<sup>8</sup> See *infra* notes 37-40 and accompanying text.

<sup>9</sup> Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies art. VI, Jan. 27, 1967, 610 U.N.T.S. 205 (emphasis added) [hereinafter Outer Space Treaty].

<sup>10</sup> That is, the Liability and Registration Conventions. See Convention on the International Liability for Damage Caused by Space Objects, Mar. 29, 1972, 961 U.N.T.S. 187 [hereinafter Liability Convention]; Convention on Registration of Objects Launched into Outer Space, Jan. 14, 1975, 1023 U.N.T.S. 15 [hereinafter Registration Convention].

<sup>11</sup> See *infra* notes 59-98 and accompanying text.

enough monetary resources to pursue completely private projects, but have also expanded across international borders becoming much like the traditional transnational corporation.<sup>12</sup> This evolution essentially blurs the lines of what constitutes a “national activity” or the “appropriate State” for the purposes of State responsibility, and thus calls for a more detailed analysis based upon the international law surrounding conduct attributable to the State.

To that end, the responsibility for private conduct is evaluated on a narrower scale when compared to the basic structure of Article VI and the outer space regime. In general, responsibility for private conduct, regardless of whether that private entity is tied to the State by some means of national jurisdiction, may only be attributable to the State if that conduct is somehow linked to the State’s national government. In short, wrongful private actions not associated with carrying out governmental authority or functions cannot automatically impute liability to the State without further analysis. Ultimately, considering the shift of space activities from national governments to private enterprise, as well as the inherent difficulties of assigning the appropriate state for the purposes of responsibility under the Outer Space Treaty, Article VI should not be interpreted in an overly broad manner that prevents a more detailed analysis that is based upon the foundations of State attribution.

Such a bold proposition may seem like a call to abrogate or amend Article VI of the Outer Space Treaty and question the obligations of authorization and supervision contained therein, but such a criticism is not the case; a focus on international norms of State responsibility for breaches of obligations that span beyond the traditional notions of national jurisdiction does not require treaty amendments. Rather, an interpretation of Article VI that gives credence to international law surrounding State responsibility is not only consistent with the Treaty itself, but may allow private commercial efforts in outer space to flourish as national governments are not automatically burdened with potential liability based upon the basic principles of jurisdiction. Nonetheless, an interpretation that focuses on State attribution rather than national jurisdiction must be propelled via international law making mechanisms, specifically domestic legislation.

Therefore, Part I of this Article will recount the main legal principles behind State responsibility, and in turn, describe how these principles are relevant to the current interpretation and application of Article VI of the Outer Space Treaty – an interpretation that automatically attributes responsibility for any private space activity to the State. Part II will discuss the problems posed by this current interpretation and application of Article VI, especially in light of the evolving private nature of the space

---

<sup>12</sup> See *infra* notes 88-98 and accompanying text.

industry. Consequently, Part III will focus on how more detailed and narrow State attribution analysis that is specifically based on an evaluation of government control can provide a better framework in assessing responsibility. This Part will discuss international law-making mechanisms, particularly the use of domestic legislation, that may push States to accept an interpretation of Article VI that narrows State responsibility for activities in outer space.

## 1. STATE RESPONSIBILITY AND ARTICLE VI

The Outer Space Treaty is considered the foundational document of the space law regime. Its content establishes the key tenants of space law such as the prohibitions against sovereignty<sup>13</sup> and nuclear weapons in outer space.<sup>14</sup> The Treaty also establishes the basic structure of State responsibility via Article VI. In order to assess the application of Article VI, we first must understand the legal principles behind State responsibility. After such analysis, we may explore the history and formation of Article VI and how its structure interacts with the basic foundations of customary international law.

### 1.1 STATE RESPONSIBILITY

“Responsibility” in the legal sense “applies in particular to a person’s answerability for compliance with his or her legal duties, and for any breaches thereof.”<sup>15</sup> Thus, as many could presume, a State is legally responsible, and thus liable, for conduct in breach of its international obligations, regardless of what source of international law those obligations derive.<sup>16</sup> Consequently, it should be noted that “responsibility” and “liability” are different concepts, but are yet intertwined by the potential results of wrongful conduct. That is, States have a responsibility, or a duty, to comply with obligations under international law; a breach of that duty is of course considered to be wrongful conduct.<sup>17</sup> But generally, liability becomes relevant only when a breach of that duty results in damage.<sup>18</sup>

<sup>13</sup> See Outer Space Treaty, *supra* note 9, at art. II.

<sup>14</sup> See *id.* at art. IV.

<sup>15</sup> Bin Cheng, *Article VI of the Outer Space Treaty Revisited: “International Responsibility,” “National Activities,” and “The Appropriate State,”* 26 J. Space Law 7, 9 (1998) (citation omitted).

<sup>16</sup> See ANTHONY AUST, *HANDBOOK OF INTERNATIONAL LAW* 378 (2d ed. 2010).

<sup>17</sup> See Cheng, *supra* note 15, at 9.

<sup>18</sup> See *Factory at Chorzów (Ger. v. Pol.)*, Judgment, 1928 P.C.I.J. (ser. A) No. 17, at 47 (Sept. 13) (“reparation must, as far as possible, wipe out all the consequences of the illegal act and re-establish the situation

The law that further expounds upon this basic premise of State responsibility is encapsulated by the International Law Commission's articles on the Responsibility of States for Internationally Wrongful Acts.<sup>19</sup> The articles, and the large amount of legal commentary that accompanies each provision, are generally accepted as a codification of customary international law.<sup>20</sup>

To that end, Articles 1, 2, and 3 provide that an internationally wrongful act of a State entails its international responsibility, but the particular action of the State is wrongful only when (a) the conduct is attributable to that State under international law and (b) the conduct constitutes a breach of international obligation of that State.<sup>21</sup> As the central focus of this Article is that of State responsibility for private activities in outer space, much of our attention will be focused on how exactly the conduct of private actors may be attributed to the State.

Now of course, a private entity like a human individual or a corporation may be held solely responsible for wrongful actions under international law.<sup>22</sup> But, there are several avenues in which a State can be held responsible for such wrongful actions.<sup>23</sup> First and most obviously, an entity's wrongful actions can be attributable to the State if that entity is considered to be an "organ" of the government, that is a direct arm of the government itself, or an agent of the government (i.e. "an entity acting under the direction, instigation or control" of a State organ).<sup>24</sup> This also includes individuals or entities that are empowered by a State's internal law to exercise elements of governmental authority.<sup>25</sup> Second, the conduct of a private entity may be attributable to

---

which would, in all probability, have existed if that act had not been committed."). The exact definitions of responsibility and liability can differ with language or treaty construction. This particular nuance is central to tenants of responsibility and liability in the Outer Space Treaty as the Treaty is recorded in English, Russian, Spanish, French, and Mandarin. In French for example, there is only one word for "responsibility" and "liability." Cheng, *see supra* note 15, at 10.

<sup>19</sup> G.A. Res. 56/83, annex, Responsibility of States for Internationally Wrongful Acts (Jan. 28, 2002) [hereinafter State Responsibility].

<sup>20</sup> *See e.g.*, *Gabčíkovo–Nagymaros Project (Hung.v Slov.)*, Judgment, 1997 ICJ Rep. 7, ¶ 39 (Sept. 25) (demonstrating how the International Court of Justice allowed the Article's provision on necessity control a dispute between Hungary and Slovakia).

<sup>21</sup> State Responsibility, *supra* note 19, at art. 2(b).

<sup>22</sup> *See e.g.*, Alien Tort Statute, 28 U.S.C. § 1350 (2012) (The district courts [of the United States] shall verify original jurisdiction of any civil action by an alien for a tort only, committed in violation of the law of nations or a treaty of the United States) (alteration to original).

<sup>23</sup> *See infra* notes 24-31 and accompanying text.

<sup>24</sup> *See* AUST, *supra* note 16, at 379 (citing State Responsibility, *supra* note 19, at art. 4(1)(The conduct of any State organ shall be considered an act of that State under international law, whether the organ exercises legislative, executive, judicial or any other functions, whatever position it holds in the organization of the State, and whatever its character as an organ of the central government or of a territorial unit of the State)).

<sup>25</sup> *See* State Responsibility, *supra* note 19, at art. 5 (The conduct of a person or entity which is not an organ of the State under article 4 but which is empowered by the law of that State to exercise elements of the governmental authority shall be considered an act of the State under international law, provided the person or entity is acting in that capacity in the particular instance).

a State if it was acting on the State's instruction, control, or direction.<sup>26</sup> "Most commonly, cases of this kind will arise where State organs supplement their own action by recruiting or instigating private persons or groups who act as 'auxiliaries' while remaining outside the official structure of the State."<sup>27</sup> Finally, if the conduct is not attributable to the State under the aforementioned avenues, a State may still be held responsible for the actions of a private entity if the State unequivocally acknowledges and adopts the conduct as its own.<sup>28</sup> This can be done by strongly endorsing and perpetuating particular private actions after such actions have occurred,<sup>29</sup> or, more basically, by assuming direct responsibility for certain actions via international agreements.<sup>30</sup>

Such avenues of State attribution can be collectively categorized as "direct" State responsibility as the private actions would be considered acts of the State itself. Some have held that direct responsibility is distinguishable from "indirect" responsibility in which a State always has a duty to ensure that all actions within its jurisdictional control do not violate the rights of other States.<sup>31</sup> "However, since the international wrong consists in reality in governmental officers failing to fulfil the State's international duty of protection and not in the initial acts of the individuals . . . so-called indirect responsibility . . . resolves itself into a case of direct State responsibility."<sup>32</sup> In other words, because a State always has a duty to not violate the rights of other States, a breach of an international obligation is a direct violation of its duty under international law.

## 1.2. HISTORY AND FORMATION OF ARTICLE VI

As mentioned previously, the Outer Space Treaty was drafted during the height of the Cold War in which the United States and the former Soviet Union were heavily engaged in space

---

<sup>26</sup> See *id.* at art. 9 (The conduct of a person or group of persons shall be considered an act of a State under international law if the person or group of persons is in fact acting on the instructions of, or under the direction or control of, that State in carrying out the conduct).

<sup>27</sup> *Report of the International Law Commission to the General Assembly*, 2 Y.B. Int'l L. Comm'n, pt. 2, at 47 (2001), U.N. Doc. A/CN.4/SER.A/2001/Add.1 (Part 2).

<sup>28</sup> See State Responsibility, *supra* note 19, at art. 11 (Conduct which is not attributable to a State under the preceding articles shall nevertheless be considered an act of that State under international law if and to the extent that the State acknowledges and adopts the conduct in question as its own).

<sup>29</sup> For example, in the *Tehran Hostages* case, the International Court of Justice held that the infamous student-led siege of the US Embassy in Iran was attributable to Iran because the government endorsed and perpetuated the actions of the students. See *U.S. Diplomatic and Consular Staff in Tehran (U.S. v. Iran)*, Judgment, 1980 I.C.J. Rep. 3 (May 24).

<sup>30</sup> Responsibility qualified via international agreement is especially pertinent in discussing the interpretation of Article VI of the Outer Space Treaty. See *infra* notes 52 and accompanying text.

<sup>31</sup> See Cheng, *supra* note 15, at 12 n. 10.

<sup>32</sup> *Id.* at 12.

activity.<sup>33</sup> As many know, these two nations were diametrically opposed when it came to matters of governance, and as a result, many sections of the Treaty were “drafted in such a way that allows [the Treaty] to bend to political ideology.”<sup>34</sup> Article VI is no exception. The Article as it stands today states:

States Parties to the Treaty shall bear international responsibility for national activities in outer space, including the [M]oon and other celestial bodies, whether such activities are carried on by governmental agencies or by non-governmental entities, and for assuring that national activities are carried out in conformity with the provisions set forth in the present Treaty. The activities of non-governmental entities in outer space, including the Moon and other celestial bodies, shall require authorization and continuing supervision by the appropriate State Party to the Treaty. When activities are carried on in outer space, including the Moon and other celestial bodies, by an international organization, responsibility for compliance with this Treaty shall be borne both by the international organization and by the States Parties to the Treaty participating in such organization.<sup>35</sup>

In sum, the assignment of State responsibility for both governmental and private space activities is a direct result of conflicting political views. That is, the United States, a democratic nation with a mixed economy, supported involvement of private entities in outer space activities.<sup>36</sup> However, this proposal was opposed by the Soviet Union, an authoritarian communist regime, which wanted only States to undertake space activities.<sup>37</sup> As seen above, Article VI “was drafted to allow private activity in outer space on the condition that the appropriate State exercises authorization and continuing

<sup>33</sup> See Joanne Irene Gabrynowicz, *Space Law: Its Cold War Origins and Challenges in the Era of Globalization*, 37 SUFFOLK U.L. REV. 1041 (2004).

<sup>34</sup> P.J. Blount & Christian J. Robison, *One Small Step: The Impact of the U.S. Commercial Space Launch Competitiveness Act of 2015 on the Exploitation of Resources in Outer Space*, 19 N.C. J. L. & Tech. (2016) (discussing the impact of the American-Soviet dynamic on the formation of Article II) (alteration to the original).

<sup>35</sup> Outer Space Treaty, *supra* note 9, at art. VI.

<sup>36</sup> See Rand Simberg, *Property Rights in Outer Space*, THE NEW ATLANTIS, <http://www.thenewatlantis.com/publications/property-rights-in-space> (last visited Oct. 26, 2016).

<sup>37</sup> See Paul Stephen Dempsey, *National Laws Governing Commercial Space Activities: Legislation, Regulation, & Enforcement*, 36 NW. J. Int'l L. & Bus. 1, 6 (2016) (citing Comm. on the Peaceful Uses of Outer Space, Rep. of the Legal Subcomm. on the Work of Its First Session, U.N. Doc. A/AC.105/C.2/L.2, at 4 (1962); Comm. on the Peaceful Uses of Outer Space, Rep. of the Legal Subcomm. on the Work of Its Seventeenth Session, U.N. Doc. A/5181, annex 3, at 8 (1962)).



supervision over its non-governmental entities.<sup>38</sup> [Therefore,] [t]he State [was] made responsible for its national activities, even those by private parties.”<sup>39</sup>

Despite this straightforward compromise of State responsibility, the changing nature of the space industry itself has left Article VI fraught with ambiguity. In other words, it may have been relatively simple to assign responsibility for space activities to States as such activities were predominated by direct State activity, but as the private space industry has developed, key phrases such as “national activities” and “the appropriate state” places into question as to exactly *which State* is responsible for *what specific* endeavors in outer space.<sup>40</sup> Nonetheless, many have held onto a traditional interpretation and application of Article VI that may be overly broad despite the immense progress of the private commercial actors in outer space.

### 1.3. STRUCTURE AND TRADITIONAL INTERPRETATION OF ARTICLE VI

All things considered, the traditional interpretation of Article VI holds that States must take responsibility for all activities in outer space. Specifically, by establishing responsibility, States party to the Outer Space Treaty take upon the duties of (a) assuring that State activities in outer space comply with the Treaty;<sup>41</sup> (b) assuring that non-governmental activities in outer space with a State’s jurisdictional control comply with the Treaty;<sup>42</sup> and (c) to subject those non-governmental space activities to authorization and continuing supervision.<sup>43</sup> Many States have chosen to fulfill these duties through extensive licensing and compliance regulations.<sup>44</sup>

With that said, there is no controversy in regards to States imposing various laws and regulations to ensure that both governmental and non-governmental actors comply with their international obligations – the State is of course in the business of lawmaking. Consequently, the only possible controversy surrounding Article VI is what type of private space activities are States responsible for in the case of a breach of an obligation found in the Outer Space Treaty or elsewhere in international law.

<sup>38</sup> The U.S.S.R. agreed it would be possible to consider the question of not excluding from the declaration the possibility of activity in outer space by private companies, on the condition that such activity would be subject to the control of the appropriate State, and the State would bear international responsibility for it. *Id.* (citing Comm. on the Peaceful Uses of Outer Space, Rep. of the Legal Subcomm. on the Work of Its Twenty-Second Session, U.N. Doc. A/AC.105/PV.22, at 23 (1963).

<sup>39</sup> Dempsey, *supra* note 37, at 6 (citation omitted).

<sup>40</sup> *See infra* §. II-A-B.

<sup>41</sup> *See* Outer Space Treaty, *supra* note 9, at art. VI.

<sup>42</sup> *Id.*; *see also supra* note 39 and accompanying text.

<sup>43</sup> *See* Outer Space Treaty, *supra* note 9, at art. VI.

<sup>44</sup> “At least 26 States - about 14% of the members of the United Nations - regulate space activities.” Dempsey, *supra* note 37, at 15-16.

The plain text of Article VI would relay that only non-governmental “national activities” would be imputed to the “appropriate State.” Though there is no exact working definition of “national activities” or the “appropriate State,”<sup>45</sup> the great compromise between the world’s two leading space faring nations has led many noted scholars and publicists to conclude that all “non-governmental national space activities are assimilated to governmental space activities.”<sup>46</sup> Essentially, a “[State is responsible for a thing that is done by such non-governmental entities and] is deemed to be an act imputable to the State as if it were its own act, for which it bears directly responsibility. Thus a breach of any provision of the Space Treaty by such a non-governmental entity involves immediately the State’s direct responsibility, as if it were a breach by the State itself.”<sup>47</sup>

This particular interpretation of Article VI, an interpretation that could be supported by the plain text of the provision and the intent of the drafters,<sup>48</sup> divorces the Outer Space Treaty from the more analytical avenues of State responsibility as outlined above.<sup>49</sup> Indeed, the same authors who have held fast to the *lex specialis*<sup>50</sup> nature of the outer space regime in interpreting Article VI have provided certain interpretations of key terms that are consistent with the notion that States have directly assumed responsibility for the potential breaches of its private actors.<sup>51</sup>

<sup>45</sup> See *id.* at 7 n. 22.

<sup>46</sup> Cheng, *supra* note 15, at 14.

<sup>47</sup> *Id.*; see also P.J. Blount, *Renovating Space: The Future of International Space Law*, 40 DENV. J. INT’L L. & POL’Y 515, 530-31 (2011). (“By creating an affirmative obligation to authorize and supervise non-governmental actors in space in addition to making states responsible for the activities of these entities, Article VI makes it a high risk activity for a state to allow commercial actors to operate in the space environment. In the past legislation has been written so as to help states effectively fulfill Article VI obligations. Traditionally this has been through licensing regimes for nongovernmental actors.”); see also MANFRED LACHS, *THE LAW OF OUTER SPACE: AN EXPERIENCE IN CONTEMPORARY LAW-MAKING* 122 (Sijthoff 1972) (“States bear international responsibility for any activity in outer space, irrespective of whether it is carried out by governmental agencies or non-governmental entities. This is intended to ensure that any outer space activity, no matter by whom conducted, shall be carried on in accordance with the relevant rules of international law, and to bring the consequences of such activity within its ambit. The acceptance of this principle removes all doubts concerning imputability . . . States are under obligation to take appropriate steps in order to ensure that natural or juridical persons engaged in outer space activity conduct it in accordance with international law. States have taken upon themselves the explicit obligation that such activity will require their ‘authorization and continuing supervision’”).

<sup>48</sup> See Vienna Convention on the Law of Treaties arts. 31-32, May 23, 1969, 1155 U.N.T.S. 331 (outlining method of general and supplemental treaty interpretation).

<sup>49</sup> See *supra* notes 24-31 and accompanying text.

<sup>50</sup> *Lex specialis* is a Latin phrase which means ‘law governing a specific subject matter’ (emphasis added). *Lex Specialis Law and Legal Definition*, USLEGAL, <http://definitions.uslegal.com/l/lex-specialis/>. Of course, international space law is a prime example of a *lex specialis* regime. Article 55 of the Articles on State Responsibility make it clear that an international agreement such as the Outer Space Treaty can qualify or preclude the application of the methods of assigning responsibility to the State. State Responsibility, *supra* note 19, at art. 55. But as we will discuss later, the Outer Space Treaty in itself does not preclude the use of international custom in order to interpret the remaining ambiguities of the Treaty.

<sup>51</sup> See *infra* notes 59-98 and accompanying text.

For example, and as we will extensively discuss later in this Article, Bin Cheng, Frans G. von Der Dunk, and several others have retained that national activities are tied to the core means through which a State may assert jurisdiction.<sup>52</sup> In short, national activities and the appropriate state may be linked to (1) the registration requirements of the Registration Convention, (2) the liability associated with launch activities as evinced by the Liability Convention, or (3) the state or nationality of the entities involved.<sup>53</sup> Regardless of how a particular non-governmental space activity is associated with a certain State, it is clear that the assertion of absolute State responsibility for activities in outer space is tied to the main agreements of the outer space regime.

All things considered, the *lex specialis* nature of United Nations outer space agreements has allowed authors to assert narrow definitions of key treaty provisions based upon plain language and drafter intent. Therefore, the traditional interpretation of Article VI is not invalid. In fact, this interpretation has indeed been functional for activities in outer space as a great majority of such activities have had clear ties to national governments or have been identified by a distinct nationality.<sup>54</sup> Moreover, the requirements of the Registration Convention and schemas of liability contained within the Liability Convention are relatively straightforward, though of course subject to further interpretation.

Nonetheless, and as alluded to numerous times over, the nature of activities in outer space has dramatically changed in recent years, and will only continue to evolve. Though a direct assumption of State responsibility for space activities may have once been “revolutionary,”<sup>55</sup> it may soon be time for us to recognize the innovative nature of the Outer Space Treaty<sup>56</sup> and look to the more analytical legal foundations of State responsibility in order to better interpret and apply Article VI.

---

<sup>52</sup> See *id.*

<sup>53</sup> See *id.*

<sup>54</sup> See e.g., *U.S. Private Space Companies Plan Surge in Launches This Year*, REUTERS (Feb. 23, 2016), <http://www.reuters.com/article/us-space-launches-idUSKCN0VC2G7>.

<sup>55</sup> See Cheng, *supra* note 15, at 15.

<sup>56</sup> See *supra* note 34 Blount & Robison (“[I]nnovation can be said to be a specific value that is embedded in international space law . Indeed, the Outer Space Treaty itself is an example of legal innovation”).

## 2. DIFFICULTIES OF APPLYING THE TRADITIONAL INTERPRETATION OF ARTICLE VI

Again, the traditional interpretation of Article VI is not necessarily incorrect. However, as more countries and individuals are able to conduct space activities unhampered by the ideological battle of the Cold War, a battle that directly influenced the formation of the Outer Space Treaty, the application of Article VI may become inefficient. Indeed, as will be discussed here, this interpretation of Article VI has only led to more questions especially when more countries have participated in outer space activities. Difficulties associated with more actors in outer space are only exacerbated with the monumental shift of space activities from the hands of government to the hands of private space companies that are quickly spanning across the globe. Therefore, with this section, we will examine the current difficulties of applying the traditional interpretation of Article VI, and subsequently, the potential difficulties of applying the traditional interpretation to private actors.

### 2.1. PLAIN AMBIGUITY – NATIONAL ACTIVITIES AND THE APPROPRIATE STATE

The same authors that directly assign State responsibility to all space activities surprisingly concede that there are ambiguities within the text of Article VI that may make their broad interpretation of the provision difficult to apply. These ambiguities center mainly around two key phrases: “national activities” and “the appropriate state.”<sup>57</sup> Though necessarily does not exist any patent ambiguity within these terms, the shifting nature of the space industry and the increased ability of multiple nations to conduct space activities does in fact create difficulties in its application. For simplicity, we will discuss each phrase in turn by exploring their application within the context of the traditional Article VI interpretation, and subsequently, demonstrate how such traditional applications is difficult, and will continue to be difficult to apply within the environment of a progressive space industry.

#### 2.1.1. NATIONAL ACTIVITIES

As explicitly stated above, the meaning behind “national activities” is relatively straightforward within the context of the traditional interpretation of Article VI

---

<sup>57</sup> See *supra* note 9 Outer Space Treaty, at art. VI.

considering that all space activities are to be imputed to the State.<sup>58</sup> Nonetheless, there are multiple proposed avenues in which a certain space endeavor may be considered a “national activity” for the purposes of State responsibility, thus giving way to more uncertainty surrounding the meaning of Article VI. The first method of assigning State responsibility falls directly within the confines of the *lex specialis* space law regime as reflected by the requirements of the Registration and Liability Conventions.<sup>59</sup> Specifically, under Article II of the Registration Convention, “[w]hen a space object is launched into Earth orbit or beyond, the launching State shall register the space object by means of an entry in an appropriate registry which it shall maintain. Each launching State shall inform the Secretary-General of the United Nations of the establishment of such a registry.”<sup>60</sup> According to Article I of the same agreement, a “launching state” is a State which launches a space object, a State that procures a launch, a State from whose territory a space object is launched, or a State from whose facility a space object is launched.<sup>61</sup> Such a definition is reinforced by Article I of the Liability Convention, and as we have briefly mentioned, the interplay of responsibility and liability contained within international space law is crucial to our central question.<sup>62</sup>

This method of identifying the “national” space activities via registration is of course tied to quasi-territorial jurisdiction.<sup>63</sup> But the plain text of these provisions pose a particular problem in light of the broad application of State responsibility in outer space. Specifically, a component provision of the Registration Convention requires that “[w]here there are two or more launching States in respect of any such space object, they shall jointly determine which one of them shall register the object in accordance with paragraph 1 of this article . . . .”<sup>64</sup> Thus, it is possible for States and private entities alike to “forum shop” among bankrupt or less-regulated States for the malicious convenience of evading responsibility.<sup>65</sup> Though the drafters of the Registration Convention did not intend this possibility, simple registration cannot be the only criterion in determining “national activities” for the purposes of Article VI.<sup>66</sup>

The second method of identifying national activities concerns itself with the nationality of individuals involved. Indeed, this interpretation could be supported by

<sup>58</sup> See *supra* notes 48-49 and accompanying text.

<sup>59</sup> See Frans G. von der Dunk, *The Origins of Authorisation: Article VI of the Outer Space Treaty and International Space Law*, Space and Telecommunications Law Program Faculty Publications, Paper 69, at 7 (2011), available at <http://digitalcommons.unl.edu/spacelaw/69>.

<sup>60</sup> Registration Convention, *supra* note 10, at art. II.

<sup>61</sup> *Id.* at art. I.

<sup>62</sup> See *supra* notes 16-17 and accompanying text.

<sup>63</sup> See AUST, *supra* note 16, at 43.

<sup>64</sup> Registration Convention, *supra* note 10, at art. II(2).

<sup>65</sup> See Cheng, *supra* note 15, at 22.

<sup>66</sup> *Id.*

Article IX of the Outer Space Treaty which refers to “activity or experiment planned by it or its nationals in outer space,”<sup>67</sup> or by the simple international principles that allow States to have jurisdiction over its nationals abroad.<sup>68</sup> This notion is even reflected in national space laws of the United Kingdom which claims jurisdiction over British nationals, whether they be individuals or corporations.<sup>69</sup> But much like the first method of identifying national activities, this method also has its shortcomings. The main pitfall of this interpretation is that it excludes the possibility of assigning responsibility by territory whether that be by a certain national being in another State’s physical territory or on a space vehicle bearing another State’s flag or registration.<sup>70</sup> Not only does this method possibly exclude those that should be responsible for space activities, but it also may unduly assign responsibility to multiple actors, thus possibly causing much confusion in the case of liability.

The third and final method of determining what constitutes a national activity falls under the coined concept of “jurisdiction” – a legal theory derived from interplay of “overriding” jurisdictions.<sup>71</sup> Jurisdiction in itself is defined as “the internationally recognized competence of a State concretely to set up machinery to . . . physically to exercise the functions of a State.”<sup>72</sup> This competence is derived solely from the elements of territorial, quasi-territorial, or personal jurisdiction.<sup>73</sup> However, each form of jurisdiction is weighted against the other, with pure territorial jurisdiction being superior to both quasi-territorial jurisdiction and personal jurisdiction based on nationality.<sup>74</sup> For example, a national of State A travelling on a ship flying the flag of State B commits an internationally wrongful act in a port belonging to State C. In this scenario, State C would have the sole ability to arrest and prosecute the national for the internationally wrongful act. If the ship was traversing international waters while A engaged in illegal conduct, State B would have the power to act considering that the ship’s quasi-territorial jurisdiction is superior to that of the personal jurisdiction of State A. Applying the basic premise of jurisdiction to the interpretation of national activities under Article VI is a deceptively effective method of determining State responsibility in outer space. By allowing certain forms of jurisdiction having priority over the other, the “responsible” State can be readily identified. Nonetheless, proponents of applying the

<sup>67</sup> Outer Space Treaty, *supra* note 9, at art. IX (emphasis added).

<sup>68</sup> See Aust, *supra* note 16, at 43-44.

<sup>69</sup> Outer Space Act, c. 38 §§ 1-2 (1986).

<sup>70</sup> See *supra* note 64 and accompanying text (briefly describing quasi-territorial jurisdiction).

<sup>71</sup> See GBENGA ODUNTAN, SOVEREIGNTY AND JURISDICTION IN THE AIRSPACE AND OUTER SPACE: LEGAL CRITERIA FOR SPATIAL DELIMITATION 92 (2012).

<sup>72</sup> Cheng, *supra* note 15, at 24.

<sup>73</sup> See ODUNTAN, *supra* note 71, at 92.

<sup>74</sup> See *id.*

premise of jurisdiction to State responsibility in outer space concede that “[e]ffective jurisdiction is when and where a State’s jurisdiction is not overridden by that of any other State, and may actually be exercised.”<sup>75</sup>

The need to come to effective jurisdiction when applying the theory of jurisdiction creates several shortcomings in the realm of outer space. First, because territorial and not extraterritorial jurisdiction is the supreme form of jurisdiction, there may be an undue emphasis on the “State from whose territory”<sup>76</sup> a space object is launched when identifying a national activity.<sup>77</sup> Though this scenario can be limited, or possibly cured, by other means of identifying a launching State under the Liability Convention,<sup>78</sup> it would be inequitable to assign liability for a potential disaster to the State from whose territory a space object is launched when the fault of disaster may lie with another State’s spacecraft which the launching State sent into orbit (i.e. quasi-territorial jurisdiction) or with another State’s national (i.e. personal jurisdiction). This inequitable assignment may be assuaged when a space object reaches outer space,<sup>79</sup> but then again, the system of jurisdiction may unduly assign liability based upon the quasi-territorial jurisdiction derived from a certain spacecraft’s nationality when fault may be actually lie with a foreign national operating the spacecraft. As one can see from these scenarios, the theory of jurisdiction becomes extremely difficult to apply when multiple States are involved in one single space activity.

All in all, the main methods of determining whether a space activity is the “national activity” of one particular State fail to account for the fact that multiple States are often involved in an outer space mission. These methods may have been workable during a time in which many space activities were unilateral affairs under the direction of national governments, but such methods applied to the current nature of the space industry runs the risk of inequitable assignments of liability. The insistence upon assigning State responsibility to fit the initial interpretation that a State is always responsible for activities in outer space is only furthered when trying to interpret the term, “the appropriate state.”

<sup>75</sup> Cheng, *supra* note 15, at 24 (emphasis added).

<sup>76</sup> Liability Convention, *supra* note 10, at art. I(c)(ii).

<sup>77</sup> Indeed, “bias” in favor of territorial jurisdiction has, in the past, been instrumental in shaping international law. “However, increasing trends have challenged the effectiveness of territorial jurisdiction, thus making a system of jurisdiction increasingly unworkable in the modern world. For more information on this trend, especially in relation to its effect on transnational corporations”, see generally Larry Cata Backer, *Private Actors and Public Governance Beyond the State: The Multinational Corporation, the Financial Stability Board and the Global Governance Order*, 18 *IND. J. INT’L L.* 751 (2011).

<sup>78</sup> See Liability Convention, *supra* note 10, at art. I(c)(i).

<sup>79</sup> *Id.* at art. III.

### 2.1.2. THE APPROPRIATE STATE

Unlike “national activities,” the ambiguous “appropriate State” has not been analyzed to a great extent in relevant academic literature. However, questions surrounding this term create similar difficulty in the application of Article VI. The most visible question is contained within the Treaty text itself, as the “appropriate State” is singular.<sup>80</sup> This may suggest that there could only be one appropriate State for responsibility, especially since Article II of the Registration Convention allows for a choice of registration when two or more countries launch a space object.<sup>81</sup> However, one can easily determine that such an interpretation would be unjustified as this would once again induce forum shopping and more importantly, unduly qualify State responsibility when multiple countries are involved in a single space mission.

Therefore, another approach within the strict confines of the traditional interpretation of Article VI has been to separate registration requirements from jurisdictional requirements. That is, a space object could be registered in one country, but there could be separate agreements or other means of assigning State responsibility.<sup>82</sup> However, this particular method would wrongfully remove registration as a means of quasi-territorial jurisdiction by divorcing registration requirements from “jurisdiction and control” under Article VIII of the Outer Space Treaty.<sup>83</sup> Ultimately, any singular notion of the appropriate State or a method that would allow for selective responsibility would be a dubious application of Article VI.

Considering these practical failures of shortsighted interpretations of “the appropriate State,” it has been proposed that one should reference the Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space - the precursor to the Outer Space Treaty.<sup>84</sup> Contained within the Principles appears the phrase “the State concerned” in regards to State responsibility.<sup>85</sup> In fact, it is possible that this term could replace the “appropriate State” considering that, as we have extensively discussed, more than one State can be involved in space activities. But

<sup>80</sup> See von der Dunk, *supra* note 59, at 8.

<sup>81</sup> See also Registration Convention, *supra* note 10, at art. II.

<sup>82</sup> See Cheng, *supra* note 15, at 27; von der Dunk, *supra* note 59, at 12-13.

<sup>83</sup> See Outer Space Treaty, *supra* note 9, at art. VIII. (“A State Party to the Treaty on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such object, and over any personnel thereof, while in outer space or on a celestial body”).

<sup>84</sup> See von der Dunk, *supra* note 59, at 3. (citing G.A. Res. 1962 (XVIII), Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space (Dec. 13, 1963) [hereinafter Resolution 1962]).

<sup>85</sup> See Resolution 1962, *supra* note 84, § 5 (“The activities of non-governmental entities in outer space shall require authorization and continuing supervision by the State concerned”).



alas, there could be just as many interpretations for the “State concerned” as there are for the “appropriate State” or “national activities.”

## 2.2. FURTHER COMPLICATION - PRIVATE INDUSTRY

As we can see, it becomes extremely difficult to apply the provisions of Article VI when it comes to multiple actors. These difficulties are only increased when we factor in private actors. Though the traditional interpretation of Article VI would hold that such a factor is irrelevant, its increased presence in the space faring world calls us to reevaluate the broad application of State responsibility in outer space. The beginnings of certain multinational projects such as the Sea Launch Company best illustrates how the difficulties of designating a “national activity” and determining the “appropriate State” are only exacerbated with the presence of multiple private actors.

The Sea Launch Company is a multinational spacecraft launch service that uses a mobile maritime launch platform for equatorial launches of commercial payloads on a Russian launch vehicle.<sup>86</sup> The Company itself was founded as limited duration company incorporated in the Cayman Islands, a British Crown colony.<sup>87</sup> The initial activities of the Company were supported by four different corporations, all from different countries: (1) RSC Energia of the Russian Federation; (2) the Boeing Company of the United States; (3) Kvaerner A.S. of Norway; and (4) NPO Yuzhnoye of Ukraine.<sup>88</sup>

The initial organization of the Sea Launch project clearly demonstrates inconsistencies in the blanket application of Article VI. That is, all methods of determining “national activities” and the “appropriate State” as outlined above would impute the actions of the Company to the United States, Russia, Norway, Ukraine, the country or company which may purchase the Company’s services, and possibly, the

<sup>86</sup> See *About Sea Launch*, SEA LAUNCH, <http://www.sea-launch.com/about/11398>.

<sup>87</sup> See Armel Kerrest, *Launching Spacecraft from the Sea and the Outer Space Treaty: The Sea Launch Project*, 1997 INT’L INST. SPACE LAW PROC. 264, 265.

<sup>88</sup> *Id.* In the beginning stages of the venture, the companies listed above came together to form a partnership that varied in shares and responsibilities. Kvaerner provided the launch platform and the Assembly and Command Ship (20%); RSC Energia supplied the third stage of the launch vehicle (and some parts of the first and second stages) and conducted launches (25%); NPO Yuzhnoye supplied the first and second stages of the launch vehicle (15%); and Boeing led the team, furnished the home port, some parts of the launcher and payload accommodation, and commercialized the launches via licensing in the United States (40%). *Id.* Unfortunately, the Sea Launch Company has not conducted a launch since 2014 due to reorganization of the company’s corporate structure. See *Sea Launch Platform Stripped of Foreign Equipment, Ready to Leave US for Russia*, SPACE DAILY (Oct. 9, 2019), [http://www.spacedaily.com/reports/Sea\\_Launch\\_platform\\_stripped\\_of\\_foreign\\_equipment\\_ready\\_to\\_leave\\_US\\_for\\_Russia\\_999.html](http://www.spacedaily.com/reports/Sea_Launch_platform_stripped_of_foreign_equipment_ready_to_leave_US_for_Russia_999.html). More specifically, it appears that involvement from the United States will discontinue, while the Russian Federation assumes leadership. See *id.* Nonetheless, the Sea Launch Company still exists and stands as poignant example of multinational involvement in singular space activities.

United Kingdom.<sup>89</sup> This application does not take into account the variety of activities each company performs, the amount of ownership each company may have in the venture, or the relationship each country may have with a national government. Rather, the methods outlined above would simply look to basic notions of territorial, quasi-territorial, or personal jurisdiction, especially in regards to identifying the launching State.<sup>90</sup>

Ultimately, this lack of consideration for the level of involvement leads to potential consequences that further complicate the Article VI schema of State responsibility. For example, without considering the level of involvement in a space activity, liability resulting from a breach of an international obligation may not be fairly apportioned by joint and several liability requirements of Liability Convention Article IV.<sup>91</sup> Of course, such an occurrence could be controlled by the finding of fault,<sup>92</sup> but even this analysis could unfairly force the burden of responsibility onto one State and allow another State to suffer little consequence. For instance, Planetary Resources, an entity recently acquired by ConsenSys, Inc., is a pioneering American company planning to exploit natural resources from asteroids.<sup>93</sup> The government of Luxembourg invested a large sum of money in the Planetary Resources venture.<sup>94</sup> Though the government of Luxembourg benefits from the activities of the company, it is the burden of the United States to license, monitor, and shoulder the potential mistakes of Planetary according to the traditional means of assigning State responsibility in outer space.<sup>95</sup>

<sup>89</sup> See Kerrest, *supra* note 87, at 267-68.

<sup>90</sup> See *supra* notes 61-76 and accompanying text.

<sup>91</sup> See Liability Convention, *supra* note 10, at art. IV.

<sup>92</sup> See *id.* arts. I, II.

<sup>93</sup> See *Company*, PLANETARY RESOURCES, <http://www.planetaryresources.com/company/#timeline>. (Planetary Resources should not be confused with Deep Space Industries. Deep Space Industries is a Luxembourgish company that places some of its operations in the United States.) See *Deep Space Industries Congratulates Luxembourg on Their Bold Legislative Action to Facilitate the Space Resources Industry*, NEWSWIRE (Nov. 16, 2016), <https://www.newswire.com/news/deep-space-industries-congratulates-luxembourg-on-their-bold-legislative-action>. As noted above, Planetary Resources was recently acquired by ConsenSys, Inc. (a.k.a. ConsenSys Space) in late 2018. See *ConsenSys Acquires Planetary Resources*, Planetary Resources (Oct. 31, 2018). Since the acquisition, it does not appear the ConsenSys has eradicated the original mission of Planetary Resources or divested itself of investment provided by the government of Luxembourg. See also Alan Boyle, *Why in the Universe is a Blockchain Company Buying the Assets of a Formerly High-Flying Asteroid Miner?*, GEEKWIRE (Oct. 31, 2018), <https://www.geekwire.com/2018/consensys-blockchain-studio-acquires-planetary-resources-asteroid-mining-venture/>. (Though Planetary Resources has undergone significant corporate restructuring like the Sea Launch Project, the entity, and its associated capitalization, still remains as an excellent example of how the traditional interpretation of Article VI is challenged by the advent of outer space privatization. Please note that the name “Planetary Resources” is utilized throughout this article in place of “ConsenSys” for the sake of clarity).

<sup>94</sup> See David Z. Morris, *Luxembourg to Invest \$227 Million in Asteroid Mining*, FORTUNE (June 5, 2016), <http://fortune.com/2016/06/05/luxembourg-asteroid-mining/>.

<sup>95</sup> See *supra* notes 61-76 and accompanying text. (This particular fact may of course change with new domestic space legislation recently passed in Luxembourg. That is, Luxembourg could choose to shoulder responsibility for Planetary Resources activities depending on how exactly Luxembourg chooses to assert its jurisdiction). See also, DEEP SPACE INDUSTRIES, *supra* note 93.

But aside from difficulties associated with determining the correct State for responsibility, the main dilemma surrounding the application of Article VI is the refusal to depart from the antiquated notion that States themselves are the sole actors in outer space. As repeated throughout this article, space is becoming an arena for private actors that are fueled by commercial profitability or quite simply, a spirit for adventure.<sup>96</sup> Soon, transnational corporate activity in outer space may become just as common as transnational corporate activity on Earth. And like the actions of those transnational companies on Earth, the actions of those same entities in outer space should not automatically be imputed to the State. Therefore, reevaluation of the application of Article 6 is necessary not only to assuage the difficulties associated with multiple actors, but to also ensure the creation of a regime that allows private ingenuity to take on the future of outer space exploration.

### 3. PATH FORWARD

Simply put, the broad application of Article VI will become increasingly difficult to apply as multiple private actors become a dominant force in the commercialization and exploration of outer space. Consequently, there must be a solution that eases the burden of assigning State responsibility when several entities are involved in a single space operation, and more importantly, ensures that States are not unfairly called upon to rectify the international wrongs of purely private actors. This solution lies with careful and concentrated State attribution analysis as outlined by customary international law rather than selecting the aforementioned methods that are confined by the broad interpretation of Article VI. Therefore, in discussing this solution, we will first examine how such analysis is effective in determining State responsibility in outer space. We will then examine whether such analysis is consistent with the Outer Space Treaty, and subsequently, how States may support a more narrow interpretation of Article VI via of domestic legislation.<sup>97</sup>

---

<sup>96</sup> See *supra* note 3 and accompanying text.

<sup>97</sup> Though indicated above, this article does not propose a new international legal regime for the governance of private outer space activities. Rather, this article simply provides a more modern and equitable method in assessing State responsibility and liability that still preserves the current Outer Space Treaty regime.

### 3.1. A VIABLE SOLUTION

We have extensively discussed the numerous consequences that come with attempting to apply the traditional interpretation of Article VI in a modern and continually evolving space industry. But a viable solution to this dilemma is ironically a traditional one rooted in customary international law. In fact, each method of equating private actions with actions of the State under customary international law can prove effective in fairly assigning State responsibility.

To that end, it would be relatively simple to assign State responsibility for space missions conducted by space agencies of national governments as such entities are clearly organs of the State.<sup>98</sup> In fact, as briefly mentioned before, the traditional interpretation of Article VI was quite viable and in little need of scrutinized interpretation during the early days of space exploration that was dominated by the United States and the former Soviet Union. Furthermore, the viability of the traditional interpretation of Article VI is also confirmed under the customary international law of State responsibility when a government contractor assists in furthering the interests of national governments in outer space.<sup>99</sup> In continuing this business custom, private government contractors like SpaceX or Boeing are under the direction of the national government that procures their services, and thus their actions are attributed to the contracting State party.<sup>100</sup> But as briefly mentioned, private space faring entities are gaining profit from other sources aside from still-lucrative government contracts.<sup>101</sup> This is where the traditional interpretation of Article VI fails to consider the varying corporate structures of a transnational space-faring company.

Fortunately, an application of the customary law surrounding State responsibility can allow us to consider corporate structure and government involvement when determining whether a private company's activities in outer space are justifiably attributable to the State. That is, by looking to Article 8 under the Articles on State Responsibility, we can look to whether the activity of a private entity in outer space is in fact a national space activity of the State via government control.<sup>102</sup> As we will discuss, this particular method of assigning State responsibility is broad enough to hold several States responsible for private activity, yet narrow enough to ensure that responsibility for such private activity is not unjustly imputed to national governments.

---

<sup>98</sup> See *supra* notes 5, 24 and accompanying text.

<sup>99</sup> See *supra* note 25 and accompanying text.

<sup>100</sup> *Id.*

<sup>101</sup> See *supra* notes 2-4 and accompanying text.

<sup>102</sup> See *supra* note 26.

As we may recall, Article 8 treats the actions of a private entity as actions of the State if it is found that a national government exercised a certain amount of “control” over the private action.<sup>103</sup> According to the Article Commentary, control can be exercised in a variety of ways such as allowing a private activity to be under the direction of a national government or allowing a certain business to become a State-owned entity.<sup>104</sup> Therefore, determining whether a national government exhibited the requisite amount of control needed for the actions of a private organization to be imputed to the State is, quite simply, fact-intensive.<sup>105</sup> As evidenced through several cases presented before several international tribunals, no particular method of attributing private conduct to the State is allowed to be absolutely dispositive in determining whether a national government asserted the requisite degree of control.<sup>106</sup> In fact, some international tribunals have gone as far as to separate individual actions of a private entity in order to fairly determine the extent of government control and liability.<sup>107</sup> Presumably, one might argue that not allowing any one factor to be dispositive in determining State responsibility is inefficient, and in the realm of space, no more useful than the variety of methods of assigning responsibility in accordance with the traditional interpretation of Article VI. However, the focus on government control allows us to assert a method of attributing conduct to the State that is neither overly broad nor narrow. Basically, though an emphasis on control allows one to focus on the facts of each individual case, an evaluation of such facts still rests upon the more concrete methods of attributing private conduct to the State that acts as the foundational rationale for control. For instance, in evaluating individual facts, we may look to how a particular corporation’s

---

<sup>103</sup> *Id.*

<sup>104</sup> See Report of the International Law Commission to the General Assembly, *supra* note 27, at art. 8.

<sup>105</sup> *Id.* (“[C]onduct [may be] nevertheless attributable to the State because there exists a specific factual relationship between the person or entity engaging in the conduct and the State”).

<sup>106</sup> See, e.g., *Hyatt Int’l Corporation v. Iran*, 9 Iran-U.S. Cl. Trib. Rep. 72 (1985). In this particular case, Hyatt International Corporation litigated breach of contract claims against Iran claiming that the contracting entity in Iran, The Foundation for the Oppressed, was a State-controlled. The tribunal explored a number of details to determine that the Foundation was indeed directly controlled by the Iranian government. The tribunal discussed various factors such as how the Foundation was established and the identity of its corporate officers and leaders.

<sup>107</sup> For example, in the *Military and Paramilitary Activities in and against Nicaragua* case, the [International Court of Justice] rejected the broader claim of Nicaragua that all the conduct of the [American-backed] contras was attributable to the United States by reason of its control over them. It concluded that: ‘[D]espite the heavy subsidies and other support provided to them by the United States, there is no clear evidence of the United States having actually exercised such a degree of control in all fields as to justify treating the contras as acting on its behalf.’ Thus while the United States was held responsible for its own support for the contras, only in certain individual instances were the acts of the contras themselves held attributable to it, based upon actual participation of and directions given by [the United States].

See, e.g., Report of the International Law Commission to the General Assembly, *supra* note 27, at art. 8(4). (citing *Military and Paramilitary Activities in and against Nicaragua (Nicar. v. U.S.)*, Merits, Judgement, 1986 I.C.J. Rep 14, ¶ 51 (June 27) (alterations to the original) (emphasis added).

structure is established in order to determine whether partial State ownership makes that particular corporation an organ of the State pursuant to Article 4.<sup>108</sup> Similarly, we can determine requisite government control by evaluating whether the activity of a private entity is exercising the authority of a national government pursuant to Article 5.<sup>109</sup>

This particular analysis can be especially useful, and should be applied in some capacity, in evaluating State responsibility for private activity in outer space. Let us return to our discussion of Luxembourg's direct investment in the American asteroid mining company, Planetary Resources.<sup>110</sup> According to the traditional interpretation of Article VI, we can see that the United States' responsibility for Planetary Resource's activities is exclusive, absent a different launching territory, because on the surface Luxembourg may not claim to have jurisdiction over the company by qualifying its amount of government ownership.<sup>111</sup> However, if we apply control analysis, we can abrogate the United States' responsibility for what is an objectively purely private commercial endeavor, while also ensuring that Luxembourg does not completely escape responsibility while reaping the benefits of Planetary Resources' activities. To that end, a certain number of factual scenarios in regards to the relationship between the company, the United States, and Luxembourg can be evaluated under the general guise of control.

For example, we can evaluate the basic corporate structure of Planetary Resources and determine whether the government of Luxembourg has significant control over the direction of the company.<sup>112</sup> On a similar note, we can also look to whether Planetary's services were directly procured or contracted for by either the Luxembourgish or American governments for a particular mission. But, in weighing

<sup>108</sup> See *supra* note 24.

<sup>109</sup> See *supra* note 25. Admittedly, looking to Article 5 alone would do little to cure the shortcomings of the traditional interpretation of Outer Space Treaty Article VI as the dispositive element of authority asks us to consider whether the activity of the private entity could be considered "governmental". See also Report of the International Law Commission to the General Assembly, *supra* note 27, at art.5.

In order to determine whether an act is governmental, the Commentary proposes to rely on the particular society, its history and traditions. According to an alternative approach, the assessment should be based upon a comparative standard and it should be determined from an objective point of view whether the act is normally regarded as governmental in a contemporary setting.

Michael Feit, *Responsibility of the State under International Law for the Breach of Contract Committed by a State-Owned Entity*, 28 BERKELEY J. INT'L L. 142, 147-48 (2010) (citations omitted). Therefore, considering these two approaches to identify a governmental activity, it might be difficult to determine whether a certain space activity is indeed governmental given the recent trend of the increased privatization of space. But nonetheless, this difficulty in determining whether a space activity is a government function is beneficial as this would deter one from focusing on one dispositive factor to determine requisite government control for the purposes of assigning State responsibility.

<sup>110</sup> See generally *supra* notes 96-98 and accompanying text.

<sup>111</sup> See *supra* notes 97 and accompanying text.

<sup>112</sup> See *supra* note 108.

these considerations, it is important to ensure that the analysis remains a fact intensive one focused on overall control and does not cling to one particular method of State attribution as dispositive of the ultimate determination of State responsibility.<sup>113</sup> Otherwise, our careful and meticulous analysis of State responsibility in outer space would be no different from the traditional interpretation of Article VI that directly assigns responsibility on the basic notions of jurisdiction.

Again, one might argue that looking to a myriad of non-dispositive factors associated with government control supported by the customary international law surrounding State responsibility has little to no advantage over the traditional interpretation of Article VI considering that the traditional interpretation of Article VI provides multiple avenues of assigning State responsibility. But as stated, those who continue to advocate for such an interpretation limit factors of responsibility strictly to territorial, quasi-territorial, or national jurisdiction while ignoring the unique situations that are posed by transnational space-faring entities such as Planetary Resources, and the fact that space activities are no longer a “special function” of national governments. All in all, the notion that all space activities are attributable to the State may be satisfactory from an academic point of view, but an attribution scheme based on a clear set of non-dispositive factors “may prove to be [more] helpful in the future to deal with the growing number of private space activities in many different circumstances.”<sup>114</sup>

### 3.2. CONTROL AND THE OUTER SPACE TREATY

Though we may have discussed a viable solution in correctly assigning State responsibility for outer space activities, we must discuss how such a solution may become integrated into the international space law regime. Therefore, we must first determine whether State attribution analysis that is consistent with customary international law is also consistent with the Outer Space Treaty.

From our extensive discussion of the traditional interpretation of Article VI, we know that the proponents of this interpretation cling to the intent of the drafters and hinge the application of Article VI upon key terms of “national activities” and “the appropriate State.”<sup>115</sup> Many factors demonstrate that the traditional interpretation of Article VI is correct, but we must also remind ourselves that the *lex specialis* nature of the

<sup>113</sup> See AUST, *supra* note 16, at 380 (“The degree to which the State may be involved in an entity, such as owning or funding it, is not decisive”).

<sup>114</sup> Karl-Heinz Bockstiegel, *The Term “Appropriate State” in International Space Law*, 37th PROC. COLLOQUIUM L. OUTER SPACE 77, 79 (1994). Dr. Bockstiegel essentially supports a “functionalist view” in determining the “appropriate State”.

<sup>115</sup> See *supra* §. II-A-B.

outer space law regime does not completely exclude further consideration of the plain meaning of terms, and more importantly, the consideration of customary international law.<sup>116</sup>

In regards to basic treaty interpretation, we can see that the plain meaning of “national activities” in particular gives way to our proposed use of attribution analysis rooted in control. In the literal sense, “national” is an adjective used to describe an entity or function that is “of, relating to, or maintained by a nation as an organized whole or independent political unit.”<sup>117</sup> Such a definition is indeed consistent with State attribution analysis that focuses on whether a particular private activity is a governmental activity, as “national” can refer to actions carried out by the government. This notion is strongly reinforced by international custom not only through the Articles on State Responsibility, but through extensive use of this analysis in regards to private corporations which could operate in a number of countries.

To that end, contrary to the premise of the main outer space agreements, the Articles on State Responsibility fundamentally proscribes against using the jurisdiction of a State as the sole means of attributing private conduct to that State. It is this proscription that has led to a more detailed analysis of State attribution that has been used to evaluate the conduct of corporations associated with the State. In fact, decisions from international tribunals such as the International Centre for Settlement of Investment Disputes (ICSID), have used a basic test of “structure, control, or authority” to determine whether private conduct carried out by a private corporation is conduct attributable to the State.<sup>118</sup>

Though the Outer Space Treaty does allow for the use of international custom to further interpret its application, custom surrounding outer space activities may still regard such activities as governmental, and thus always attributable to a particular State, regardless of the changing nature of the private space industry in which government involvement or control may be variable.<sup>119</sup> Therefore, it is necessary that we consult

<sup>116</sup> See generally Outer Space Treaty, *supra* note 9, at art. III (“States Parties to the Treaty shall carry on activities in the exploration and use of outer space, including the Moon and other celestial bodies, *in accordance with international law*, including the Charter of the United Nations, in the interest of maintaining international peace and security and promoting international cooperation and understanding”) (emphasis added).

<sup>117</sup> *National*, Dictionary, <http://www.dictionary.com/browse/national?s=t> (last visited Dec. 1, 2016).

<sup>118</sup> See, e.g., *Maffezini v. Kingdom of Spain*, ICSID Case No. ARB/97/7, Award on Jurisdiction, 5 ICSID Rep. 396 (2000). In this case, the ICSID evaluated these factors in order to determine whether the actions of a State-owned entity were directly attributable to Spain in order to determine where the ICSID itself had jurisdiction over the investor dispute. Though this basic structure of “structure, ownership or control” would seem to lessen our emphasis on “control,” we must remind ourselves that structure and authority are basic rationales that provide deeper analysis under the general guise of control. See *supra* notes 110-11 and accompanying text.

<sup>119</sup> See *supra* note 111.



other particular mechanisms of international law making in order to qualify the traditional notion that space activities are always attributable to one particular jurisdictionally appropriate State.

### 3.3. IMPLEMENTING CONTROL – DOMESTIC LEGISLATION

The current nature of the space industry characterized by the rapid privatization of space may still not be enough to demonstrate that space activities should not be considered exclusive functions of the State. Thus, because we are dependent upon the principles of control to determine whether the conduct of a private space company may be considered the action of the State, we must find another international law-making mechanism that may give credence to our innovative interpretation of Article VI.

One such method that has gained ground in recent times as being instrumental in the development of international space law is that of incremental law making in which States “engage in the process of fulfilling their treaty obligations” via domestic legislation.<sup>120</sup> Essentially, “[t]his means that international law grows incrementally as States act and react within legal lacunae.”<sup>121</sup> This particular method of interpretation is particularly well-suited towards our proposed interpretation of Article VI as many States have implemented licensing and liability legislation in order to ensure that their private actors comply with international obligations imposed by the Outer Space Treaty.

Now, the institution of regulatory legislation for outer space activities is not an issue. States always have a duty to ensure that entities within its jurisdiction do not violate the rights of other States.<sup>122</sup> Rather, the main issue is that such legislation may be quite broad in order to conform the traditional interpretation of Article VI. In fact, the domestic space law of the both the United States and the United Kingdom assumes responsibility for any space activities in which it may assert its respective jurisdiction.<sup>123</sup>

But of course, calling for a sudden narrowing of domestic space legislation may cause controversy as such an action, if implemented too quickly, would amount to a State unfairly limiting its responsibility in case of breach of an international obligation by a private actor. Thus, because we have demonstrated concern mainly about the consequences of State attribution in case of a breach, we can focus upon the gradual

---

<sup>120</sup> See Blount & Robison, *supra* note 34.

<sup>121</sup> *Id.* For a more detailed description of the incremental lawmaking process, see W. Michael Reisman, *International Incidents: Introduction to a New Genre in the Study of International Law*, 10 YALE J. INT’L L. 1 (1984).

<sup>122</sup> See *supra* notes 32-33 and accompanying text.

<sup>123</sup> See 51 U.S.C. § 50101 (2012); Outer Space Act, c. 38 §§ 1-2 (1986).

narrowing of State legislation that focuses strictly on liability rather than legislation that deals with general licensing or registration procedures.

For example, both American and French law require that launching entities carry a certain amount of liability insurance when launching in their respective territories.<sup>124</sup> If the resulting damage exceeds the value of the required amount of liability, then the State government is required to pay the remaining value of damage in accordance with the outer space agreements' schema of responsibility.<sup>125</sup> In order to "push" the international community in viewing space activities as something other than a special government function, it could be possible for these States to vary amounts of liability coverage in order to not involve the State at all in case of damage. One might argue that such a method is inequitable or may reintroduce fears of forum shopping, but such a method only shifts responsibility for fault to a private party rather than automatically imputing fault to the State itself. Moreover, such shifting of reparation does not leave the violated party without relief – a party could seek relief in a domestic court of a State that has jurisdiction over a private space company or through international arbitration pursuant to a contract.<sup>126</sup>

All in all, no matter how exactly a State reforms its interpretation of Article VI, States must adopt a narrow interpretation of State responsibility for outer space activity in order to allow the foundational custom surrounding state responsibility to take hold. Put another way, States and other subjects of international law must begin to narrow the application of State responsibility for outer space activities in order to yield a more practical, equitable, and innovative, interpretation of Article VI.

## CONCLUSION

Despite the great advancements of private industry in outer space, we are still far from private space activity being a commonplace phenomenon. In retrospect, it has only been in this last century that private industry has become a formidable player in the realm of outer space. As conceded early on, many space projects are still under the direction of national governments who were, and still remain, the leaders of developments in outer

<sup>124</sup> See 51 U.S.C. § 50914 (2012); Law 2008-518 of June 3, 2008 on Space Operations, Official Gazette of France, available at <https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000020719167&dateTexte>.

<sup>125</sup> See Armel Kerrest, *Remarks on the Responsibility and Liability for Damages Caused by Private Activity in Outer Space*, 40th PROC. COLLOQUIUM L. OUTER SPACE 134, 137 (1997) (discussing the legal parameters of conducting launches from French Guyana).

<sup>126</sup> See *id.* at 136.

space. Despite this fact, we do know that private space faring companies are indeed the future of outer space exploration. Therefore, it is not too early to begin discussing a time in which missions in outer space are not the special projects of national governments, but rather a natural product of private endeavors.

Consequently, we must begin to look towards a simple, yet thoughtful, legal regime that accounts for the future. As demonstrated, a focus on government control in accordance with the international customary law of State responsibility is a broad yet sufficiently narrow analysis that is better suited towards assigning State responsibility for outer space activities. The traditional interpretation of Article VI may serve well to resolve past and present legal dilemmas, but the evolving nature of the space industry presents new dilemmas that are unaccounted for in the application of the traditional interpretation of Article VI. But ultimately, a focus on State responsibility can be revolutionary insomuch that it not only accounts for the challenges of the future, but also preserves the foundations of the Outer Space Treaty.