

TRACKING THE EVOLUTION OF CUSTOMARY RULES IN INTERNATIONAL SPACE LAW

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ABSTRACT

The established United Nations space treaties have become insufficient to tackle existing space-related problems. Moreover, there is minimal political will to create a new treaty. As a result, there is a shift from binding treaties to non-binding legal instruments in space law. This trend may also change the role of custom in space law. With the evidence of State practice and of *opinio juris*, these non-binding legal instruments may have attained the status of custom. As a consequence, space law instruments that are not binding initially may eventually become binding. Custom currently plays a marginal role in space law. Some provisions of the Outer Space Treaty, with the participation of sufficient evidence of State practice and of *opinio juris*, have eventually attained the status of customary international law (CIL).¹ Non-binding space law instruments may be strong candidates to become CIL. With the absence of binding modern legal instruments, the CIL potential of non-binding instruments will likely have important effects on the future of space law.

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¹ See generally Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, Jan. 27, 1967, 18 U.S.T. 2410, 610 U.N.T.S. 205 [hereinafter Outer Space Treaty]; Ram Jakhu & Steven Freeland, *The Relationship Between the Outer Space Treaty and Customary International Law*, 59 PROC. INT'L INST. SPACE L. 183 (2016).

I. INTRODUCTION

Customary rules play an important role in public international law as a source of law. International custom is one of the law sources listed in Article 38 of the Statute of the International Court of Justice² (ICJ). International custom is also listed in international conventions, the general principles of law recognized by civilized nations, judicial decisions and the teaching of the most highly qualified publicist of the various nations, as subsidiary means for the determination of rules of law.³

Space activities are conducted within a framework of international law that includes multilateral, regional and bilateral treaties, as well as customary international law (CIL). United Nations General Assembly (UNGA) principles, resolutions and guidelines have also played an important role in international space law since the beginning of the space era, despite their non-binding nature.⁴ Apart from the international law framework, many States have national legislation governing space-related activities.⁵ The role of custom has always been limited and controversial in space law.⁶ Provisions of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space⁷ (OST) non-binding legal documents such as UNGA principles, resolutions, guidelines and codes of conduct have been subject to CIL analysis.⁸ National legislation, along with *travaux préparatoires*, claims, statements, correspondence and domestic judicial decisions may become relevant to international space law due to their potential to constitute elements of customary international space law.

² Statute of the International Court of Justice art. 38, Jan. 26, 1945, 59 Stat. 1055, 33 U.N.T.S. 933 [hereinafter Statute of the ICJ].

³ *Id.*

⁴ *Id.*

⁵ UNITED NATIONS OFFICE OF OUTER SPACE AFFAIRS, National Space Law, <https://www.unoosa.org/oosa/en/ourwork/spacelaw/nationalspacelaw/index.html> (last visited Oct. 15, 2022).

⁶ Sergio Marchisio, *Space Law and Governance*, Keynote speech at the 10th U.N. Workshop on Space L., at 10 (Sept. 2016).

⁷ Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, Jan. 27, 1967, 18 U.S.T. 2410, 610 U.N.T.S. 205 [hereinafter OST].

⁸ See e.g. Marko Divac Öberg, *The Legal Effects of Resolutions of the UN Security Council and General Assembly in the Jurisprudence of the ICJ*, 16 EUR. J. INT'L L. 879 (2006).

This paper consists of three main sections. Part II introduces custom as a source of public international law. Before delving into customary international space law, the reader will be familiarized with the concept of custom and the formation of CIL within the light of ICJ decisions. In addition, the features of CIL, such as its universal applications, and the relation between customary rules, treaty provisions and UNGA resolutions are examined. Part III deals with custom in space law. In this section, the role of custom in space law and the CIL status of selected elements of the OST, such as space freedoms, the non-appropriation principle and peaceful purposes will be discussed. Lastly, in the Part IV, the prospective role of custom in space law, with specific focus on the CIL potential of non-binding legal instruments in and outside of the UN system is examined.

II. CUSTOM AS A SOURCE OF PUBLIC INTERNATIONAL LAW

A. *The Concept of Custom*

States conduct their activities in the international community in accordance with certain rules, which gradually, or sometimes quickly, become accepted as practice.⁹ As States tacitly agree upon these rules, such practices become legally binding customary rules in the international community.¹⁰

Since the adoption of the Statute of the ICJ, the definition of international custom has been the subject of debate.¹¹ The definition provided by Article 38(1)(b) of the Statute of the ICJ is “international custom, as evidence of a general practice accepted as law.”¹² Based on this description, international custom is comprised of two elements: State practice and *opinio juris sive necessitates* (*opinio juris*).¹³ The ICJ has frequently affirmed these two elements. In the *North Sea Continental Shelf* cases, the Court stated that:

⁹ HUGH THIRLWAY, *THE SOURCES OF INTERNATIONAL LAW* 17 (2d ed. 2019).

¹⁰ *Id.*

¹¹ *Id.* at 11.

¹² Statute of the ICJ, *supra* note 2, art. 38(1)(b).

¹³ Frederic L. Kirgis Jr., *Custom on a Sliding Scale*, 81 AM. J. INT'L L. 146, 149 (1987).

Not only must the acts concerned amount to a settled practice, but they must also be such or be carried out in such a way as to be evidence of a belief that this practice is rendered obligatory by the existence of a rule of law requiring it. The need for such a belief, i.e., existence of a subjective element, is implicit in the very notion of the *opinio juris sive necessitates*. The States concerned must therefore feel that they are conforming to what amounts to a legal obligation.¹⁴

The Court reaffirmed this statement in later decisions by referring to *North Sea Continental Shelf*.¹⁵

There is a relatively new adopted approach to the formation of CIL, which is instant customary international law.¹⁶ According to this approach, long-established State practice is not a requirement for the development of CIL and a rule of CIL can be established in a short period of time, even overnight.¹⁷ However, in both *North Sea Continental Shelf* and, the subsequent case, *Military and Paramilitary Activities In and Against Nicaragua*, the notion of instant custom was rejected.¹⁸ In *North Sea Continental Shelf*, although the ICJ recognized a very short period of time to establish CIL, it still referred to the passage of time as an indispensable requirement.¹⁹ In the *Nicaragua Case*, the importance of State practice in the development of CIL is highlighted and the mere *opinion juris* was not regarded as satisfactory to develop CIL.²⁰ Moreover, the International Law Commission (ILC) rejected the notion of instant custom and declared that a lapse of some time, even short, is necessary for the development of a rule of CIL.²¹ However, as shown in the above cases, a rule of CIL can be established in a considerably shorter

¹⁴ *North Sea Continental Shelf*, (Ger. v. Den.; Ger. v. Neth.), Judgement, 1969 I.C.J. 3, 44, ¶ 77 (Feb. 20).

¹⁵ *Military and Paramilitary Activities in and Against Nicaragua* (Nicar. v. U.S.), Judgement, 1986 I.C.J. 14, 108, ¶ 207 (June 27). See *Jurisdictional Immunities of the State* (Ger. v. It.: Greece Intervening), Judgement, 2012 I.C.J. 99, 122-23, ¶ 55 (Feb. 3).

¹⁶ E.g., Roozbeh Baker, *Customary International Law in the 21st Century: Old Challenges and New Debates*, 21 EUR. J. INT'L L. 173 (2010).

¹⁷ *Id.* at 181.

¹⁸ *North Sea Continental Shelf*, 1969 I.C.J. at 43, ¶ 74; *Nicaragua Case*, 1986 I.C.J. at 97, ¶ 184.

¹⁹ *North Sea Continental Shelf*, 1969 I.C.J. at 43, ¶ 74.

²⁰ *Nicaragua Case*, 1986 I.C.J. at 97, ¶ 184.

²¹ Draft Conclusions on Identification of Customary International Law, with Commentaries, at Concl. 8, Comment. 9 (Dec. 20, 2018), https://legal.un.org/ilc/texts/instruments/english/commentaries/1_13_2018.pdf [hereinafter Draft Conclusions].

period of time than the past to adapt to the fast pace of current development and meet the need for legal framework.²²

B. The Formation of Customary International Law: Two Element Theory

i. State Practice

As previously introduced, the two elements theory states that CIL is formed by the presence of State practice and *opinion juris*.²³ In this section, the material element of custom, State practice, will be discussed first.

What forms of behavior constitute State practice is a controversial issue.²⁴ It is widely accepted that the actual practice of States, such as actively seizing foreign vessels or sending satellites into orbit, qualify as State practice.²⁵ It is also widely accepted that the legislative acts of States and their legal practices generally may constitute State practice.²⁶ However, whether statements or claims alone may qualify as State practice is more controversial.²⁷ D'Amato and Wolfke are of the view that only acts, not statements or claims, are considered as State practice for the support or opposition of the development, maintenance or change of an existing customary rule.²⁸ Furthermore, the ICJ has highlighted the importance of actual practice.²⁹ Contrarily, Thirlway considers claims and other statements as State practice as long as they are made in the context of some concrete situation and not solely *in abstracto*.³⁰ A more broadly held view is that national laws, domestic judicial decisions, claims, correspondence and statements in general may

²² Tullio Treves, *Customary International Law*, in MAX PLANCK ENCYC. OF PUB. INT'L L. ¶ 25 (2006).

²³ Kirgis, *supra* note 13, at 149.

²⁴ MARK E. VILLIGER, COMMENTARY ON THE 1969 VIENNA CONVENTION ON THE LAW OF TREATIES 4-5 (2009).

²⁵ JAN KLABBERS, INTERNATIONAL LAW 28 (2013).

²⁶ *Id.*

²⁷ *Id.*

²⁸ MICHAEL BYERS, CUSTOM, POWER AND THE POWER OF RULES: INTERNATIONAL RELATIONS AND CUSTOMARY INTERNATIONAL LAW 134 (1999); ANTHONY A. D'AMATO, THE CONCEPT OF CUSTOM IN INTERNATIONAL LAW 88 (1971).

²⁹ Continental Shelf (Libyan Arab Jamahiriya v. Malta), Judgement, 1985, I.C.J. 13, 29, ¶ 27 (June 3).

³⁰ HUGH THIRLWAY, INTERNATIONAL CUSTOMARY LAW AND CODIFICATION 58 (1972).

constitute State practice as an element of CIL.³¹ Moreover, the ICJ has taken statements, diplomatic correspondence, objections and similar manifestations into account as State practice in its other decisions.³² For instance, in *Gabcikovo-Nagymaros Project*, the ICJ confirmed that State practice also includes official pronouncements, statements and other similar verbal or written acts.³³ In another case, the ICJ has attached equal importance to the exercise of diplomatic asylum and the official views on various occasions.³⁴ Therefore, along with actual practice, written or verbal acts may constitute the material element of CIL.

Besides forms of State practice, the duration, consistency, repetition and generality of State practice are some points to be considered in regarding the nature of State practice.³⁵ So much uncertainty, contradiction, fluctuation and discrepancy in the exercise and official views expressed on various occasions prevent actions from becoming State practice within the meaning of the material element of CIL.³⁶ The ICJ further decided that State practice must be constant and uniform to evolve as a rule of CIL.³⁷ Despite that, perfect consistency is not required.³⁸ In the *Nicaragua Case*, the ICJ concluded that, in order to decide whether a particular rule is established as CIL, “the conduct of States should, in general, be consistent with such rule and that instances of State conduct inconsistent with a given rule should generally have been treated as breaches of that rule, not as indications of the recognition of a new rule.”³⁹

³¹ James R. Crawford, *The Sources of International Law*, in BROWNLIE'S PRINCIPLES OF PUBLIC INTERNATIONAL LAW 24 (8th ed. 2012); MARTIN DIXON, TEXTBOOK ON INTERNATIONAL LAW 26 (1996).

³² *Gabcikovo-Nagymaros Project* (Hung. v. Slov.), Judgement, 1997 I.C.J. 7, 33 & 49, ¶¶ 37, 64 (Sept. 25); *Colombian-Peruvian Asylum* (Colom. v. Peru), Judgement, 1950 I.C.J. 266, 273 (Nov. 20); *North Sea Continental Shelf*, 1969 I.C.J. at 25, ¶ 27; *Rights of Nationals of the United States in Morocco* (Fr. v. U.S.), Judgement, 1952 I.C.J. 176, 200 (Aug. 27).

³³ *Gabcikovo-Nagymaros Project*, 1997 I.C.J. at 33, 49, ¶¶ 37, 64.

³⁴ *Colombian-Peruvian Asylum*, 1950 I.C.J. at 277; Michael Akehurst, *Custom as a Source of International Law*, 1975 BRIT. Y.B. INT'L L. 1, 2.

³⁵ MALCOLM N. SHAW, INTERNATIONAL LAW 56 (8th ed. 2017).

³⁶ *Colombian-Peruvian Asylum*, 1950 I.C.J. at 277.

³⁷ *Id.* at 276.

³⁸ *Id.* at 277.

³⁹ *Nicaragua Case*, 1986 I.C.J. at 98, ¶ 186.

Although the passage of time supports the generality and consistency of the State practice, there is no time limit for the usage to constitute the material element of CIL.⁴⁰ The existence of a customary rule is not only a game of numbers, the practice of States whose interests are specially affected can have a disproportionate effect on the formation of a particular CIL rule.⁴¹ Examples of these impacts are the United States' (US) and United Kingdom's (UK) role in the development of a regime for the continental shelf or the US' and Soviet Union's (USSR) effect on early space law.⁴² Moreover, in the *Continental Shelf* case, the ICJ ruled that the exclusive economic zone turned into a rule of CIL due to claims of significant maritime States.⁴³

Understandably, States which were pioneers or actively participate in an area have more tendency to devote resources to thinking about and developing the applicable law in that area. However, the development of CIL in a field should not be left only to such States, since rules of CIL have universal application on all States, except for persistent objectors. Persistent objectors are not bound by a specific CIL rule due to their clear demonstration that they persistently object to that rule from the early stages of its formation.⁴⁴ Thus, it is the author's opinion that statements, claims, objections and official pronouncements of States that are not pioneers or do not actively participate in a particular area have become more relevant to CIL due to the possibility that such States may become persistent objectors.

ii. *Opinio Juris*

The second element that comprises CIL is the subjective element of *opinio juris*, which is the legal sense of obligation that States should act in accordance with the substance of the alleged customary rule.⁴⁵ If States believe they are legally obliged to act in accordance with a specific practice, such practice can be regarded

⁴⁰ See *North Sea Continental Shelf*, 1969 I.C.J. at 43, ¶ 74.

⁴¹ *Id.* See Michael P. Scharf, *Accelerated Formation of Customary International Law*, 20(2) ILSA J. INT'L & COMPAR. L. 305, 315 (2014).

⁴² Scharf, *supra* note 41, at 316.

⁴³ *Continental Shelf*, 1985 I.C.J. at 32,33, ¶¶ 31, 34.

⁴⁴ Draft Conclusions, *supra* note 21, Concl. 15; See discussion *infra* Section III.C.

⁴⁵ VAUGHAN LOWE, INTERNATIONAL LAW 38 (2007).

as “accepted as law.” For example, when heads of States are on official visits abroad, there is a well-established State practice that they enjoy immunity from prosecution and arrest.⁴⁶ This immunity stems from the conviction that there is a legal obligation to uphold this immunity.⁴⁷ Therefore, such practices can be regarded as State practice which stems from the *opinio juris* that States are conforming with an international obligation. However, State practice also encompasses a large set of behavioral patterns, such as actions stemming from principles of morality, which are not legally binding.⁴⁸ For example, there are many international acts, which are motivated only by considerations of courtesy, convenience or tradition and not by any sense of legal duty.⁴⁹ Therefore, as these actions are not undertaken from the position that States are legally bound to do so (i.e. *opinio juris* is absent), they do not constitute CIL. It is necessary to distinguish State practice constituting customary rules from these patterns of behavior. At that point, the psychological element of custom, which is *opinio juris*, takes its place to make that distinction.

Within the meaning of Article 38(1)(b) of the Statute of the ICJ, the State practice must be “accepted as law” in order to constitute international custom.⁵⁰ The ICJ has held that State practice must “[b]e carried out in such a way, as to be evidence of a belief that this practice is rendered obligatory by the existence of a rule of law requiring it.”⁵¹

The ICJ has also held that the frequency or habitual characteristics of activities are not sufficient alone for being considered as customary rules. In the *S. S. “Lotus”* and the *Right of Passage over Indian Territory* cases,⁵² even though there had been uniform and widespread State practices, such practices were not considered

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ *See id.*

⁴⁹ North Sea Continental Shelf, 1969 I.C.J. at 44, ¶ 77.

⁵⁰ Statute of the ICJ, *supra* note 2, art. 38(1)(b).

⁵¹ North Sea Continental Shelf, 1969 I.C.J. at 44, ¶ 77.

⁵² *S. S. “Lotus”* (Fr. v. Turk.), Judgement, 1927 I.C.J. (ser. A) No. 9, at 28 (Sept. 7); *Right of Passage Over Indian Territory* (Port. v. India), Judgement, 1960 I.C.J. 6, 42-42 (April 12).

legally binding to States because of the absence of *opinio juris* in the view of the ICJ.⁵³

C. Universal Application of Custom

One of the main distinguishing features of CIL is its universal application. Principally, CIL applies to all States, while a treaty is only applicable to its party States.⁵⁴ Professor Kelly states that the UN provides a forum that makes universal codification of international law possible and therefore, custom seems to have become a less important source of law.⁵⁵ However, despite the existence of a global forum, a universally accepted treaty is still rare. Although the universal application does not establish a priority for custom over treaty law, it is still an important distinguishing characteristic of CIL.

However, the non-binding effect of CIL on persistent objectors constitutes an exception to the universal application of custom. If a State or a group of States do not consent to the establishment of a specific customary rule, they may be exempted from the application of this new customary rule.⁵⁶ In other words, a State or a group of States may manifest their opposition to a practice before it has become a rule of CIL.⁵⁷ Consequently, that objecting State opts out from the application of the new rule of CIL.⁵⁸ The ICJ has recognized and applied the persistent objector rule in several cases.⁵⁹ In the *Fisheries Case*, the ICJ stated that “[i]n any event the ten-mile rule would appear to be inapplicable to Norway, inasmuch as she always opposed any attempt to apply it to the Norwegian coast.”⁶⁰

⁵³ Rein Müllerson, *On the Nature and Scope of Customary International Law*, 2 AUSTRIAN REV. INT'L & EUR. L. 341, 345 (1997).

⁵⁴ J. Patrick Kelly, *The Twilight of Customary International Law*, 40, VA. J. INT'L L. 449, 451-52 (2000).

⁵⁵ *Id.* at 452.

⁵⁶ See THIRLWAY, *supra* note 30, at 17.

⁵⁷ Scharf, *supra* note 41, at 317.

⁵⁸ *Id.*

⁵⁹ *Id.*; *Fisheries Case (U.K. v. Nor.)*, Judgment, 1951 I.C.J. 116, 131 (Dec. 18).

⁶⁰ *Fisheries Case*, 1951 I.C.J. at 131.

D. Interrelation Between Treaties and Customary International Law

International custom and treaties have been primary sources of international law which interact with each other. There are three types of interaction between treaties and CIL in doctrine: (1) a treaty can be the codification of existing rules of CIL, (2) a treaty can create new rules of CIL and (3) a treaty can shape the process of CIL rules.⁶¹

As a further explanation for the first type of interaction, if the drafters of a treaty provide a rule which has already existed as a custom, the treaty provision is an articulation of the existing custom and may have a declaratory effect on the CIL rules.⁶² Article 1 of the Paris Convention on Aerial Navigation, major portions of the Vienna Convention on the Law of Treaties (VCLT) as well as of the United Nations Law of the Sea Convention are examples of this case.⁶³

Turning to the second type of interaction, treaty provisions can be a prelude to the creation of new CIL rules.⁶⁴ In this way, treaty provisions have passed into CIL.⁶⁵ Therefore, even if party States withdraw from a treaty, they cannot withdraw from its application of the rule of CIL. As a logical consequence, third States which have not ratified the treaties will also be bound by these customary treaty provisions.⁶⁶ Some provisions of the OST, including Articles I, II, III, VI and VII will be evaluated under this kind of interaction in the next Part III.

Lastly, treaty provisions may have a crystallizing effect on the development of the CIL rule.⁶⁷ In this case, a rule had almost been developed as custom; however, there are still some doubts about its

⁶¹ Draft Conclusions, *supra* note 21, Concl. 11; ROBERT KOLB, *THE LAW OF TREATIES* 260 (2016).

⁶² Draft Conclusions, *supra* note 21, Concl. 11, Comment. 5.

⁶³ Convention Relating to the Regulation of Aerial Navigation, Oct. 13, 1919, 11 L.N.T.S. 173, at art. 1. *See generally* Vienna Convention on the Law of Treaties, May 23, 1969, 1155 U.N.T.S. 331 [hereinafter VCLT]; U.N. Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 397.

⁶⁴ Draft Conclusions, *supra* note 21, Concl. 11, Comment. 6.

⁶⁵ *Id.*

⁶⁶ *See* VCLT, *supra* note 63, art. 38.

⁶⁷ Draft Conclusions, *supra* note 21, Concl. 11, Comment. 7.

existence and extension.⁶⁸ A provision of a new treaty can also eliminate the development of custom by formalizing a rule which is contrary to the alleged custom. For instance, during the Hague Codification Conference of 1930, it was clarified that the three-mile limit of the territorial sea was not sufficiently accepted as a rule of CIL.⁶⁹ Alternatively, a provision of the new treaty may articulate this doubted rule, which indicates States' consensus on that rule and eliminates doubts.

E. Interrelation Between UNGA Resolutions and Customary International Law

The UNGA may make recommendations to the UN member States.⁷⁰ In the same vein, Article 14 of the UN Charter states that UNGA may recommend measures for the peaceful adjustment of any situations.⁷¹ Thus, UNGA resolutions generally are considered to be non-binding. UNGA resolutions which are related to the budget and allocation of expenses of the organization have binding force, which constitute an exception to this recommendatory nature.⁷²

When it comes to the effects of the UNGA resolutions as law-making, ICJ Judge Rosalyn Higgins stated that “[t]he Assembly certainly has no right to legislate in the commonly understood sense of the term. Resolutions of the Assembly are not *per se* binding: though those rules of general international law which they may embody are binding on member States, with or without the help of the resolution.”⁷³

She assessed that the legal status of the UNGA resolutions is associated with the general law-creating process of CIL.⁷⁴ Professor Falk echoed the quasi-legal effect of UNGA resolutions, which entails that they do not have true legislative status but, instead, serve

⁶⁸ See KOLB, *supra* note 61, at 260.

⁶⁹ Jesse S. Reeves, *The Codification of the Law of Territorial Waters*, 24 AM. J. INT'L L. 486, 491 (1930).

⁷⁰ U.N. Charter art. 10.

⁷¹ *Id.* at art. 14.

⁷² *Id.* at art. 17, ¶ 2.

⁷³ ROSALYN HIGGINS, *THE DEVELOPMENT OF INTERNATIONAL LAW BY THE POLITICAL ORGANS OF THE UNITED NATIONS* 9 (1963).

⁷⁴ *Id.*; Richard A. Falk, *On the Quasi-legislative Competence of the General Assembly*, 60 AM. J. INT'L L. 782, 785 (1966).

a law-creating role.⁷⁵ UNGA resolutions cannot, of themselves, create rules of CIL.⁷⁶ However, conduct in connection with resolutions adopted by an international organization or at an intergovernmental conference can be considered as a form of State practice,⁷⁷ as well as evidence of acceptance as law (*opinio juris*).⁷⁸ Thus, the provisions of these documents are strong candidates for becoming a form of international custom. As a result, they may be considered as having normative value. For example, in the *Nicaragua Case*, the ICJ considered UNGA Resolution 2625, the Declaration of Principles of International Law concerning Friendly Relations and Cooperation among States,⁷⁹ as a resolution that developed CIL.⁸⁰ The Court also stated that:

The effect of consent to the text of such resolutions cannot be understood as merely that of a “reiteration or elucidation” of the treaty commitment undertaken in the Charter. On the contrary, it may be understood as an acceptance of the validity of the rule or set of rules declared by the resolution by themselves.⁸¹

Moreover, the ICJ, in the Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons, recognized that UNGA resolutions may sometimes have normative value.⁸²

On the other hand, Professor Cheng stated that the *opinio juris* requirement may be fulfilled among all or some members of the UN, by referring to the *Asylum* case and the *Right of Passage over Indian Territory* cases.⁸³ He considered UNGA resolutions “as the law that is generally accepted in the United Nations,” if they proclaim principles and are adopted unanimously.⁸⁴ Regarding instant custom potential of UNGA resolutions, he stated that *opinio juris* may grow in a very short time period among all or some members

⁷⁵ Falk, *supra* note 74, at 782.

⁷⁶ Draft Conclusions, *supra* note 21, Concl. 12.

⁷⁷ *Id.* at Concl. 6.

⁷⁸ *Id.* at Concl. 10.

⁷⁹ G.A. Res. 2625 (XXV) (Oct. 24, 1970).

⁸⁰ *Nicaragua Case*, 1986 I.C.J. at 99-100, ¶ 188, and at 106-107, ¶ 202.

⁸¹ *Nicaragua Case*, 1986 I.C.J. at 99-100, ¶ 188.

⁸² *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, 1996 I.C.J., 226, 254, ¶ 70 (July 8).

⁸³ BIN CHENG, *STUDIES IN INTERNATIONAL SPACE LAW* 139 (1997).

⁸⁴ *Id.*

of the UN.⁸⁵ UN States may also “use UNGA resolutions to positivize their new common *opinio juris*.”⁸⁶ However, as discussed in subsection A above, the ILC rejected the notion of instant custom. In the author’s opinion, UNGA resolutions may only have normative value or declarative effect in terms of CIL.

III. CUSTOM AS A SOURCE OF INTERNATIONAL SPACE LAW: GENERAL REMARKS

A. *The Current Role of Custom in Space Law*

The role of custom has been always limited in space law.⁸⁷ At the beginning of the space era, only two countries, the US and the USSR, conducted space activities. As previously discussed, State practice must be widespread and consistent to constitute the material element of CIL.⁸⁸ Therefore, the practice of only two States was insufficient to establish CIL. One can doubt that the lack of protest by States, whose territories were being overpassed by satellites, would constitute State practice.⁸⁹ Although the identification of early space flights was rather apparent; as Professor Koplow stated, the lack of protest might have derived from unawareness of the potential rights of States and insufficient focus on the nature of a new legal realm.⁹⁰ Therefore, the combined fact that launching States did not seek permission to overfly other States’ territory and that the overflown States did not protest might be considered sufficient to create the principle of free use of outer space. However, there was insufficient evidence to consider these practices as CIL at that time.

There was a minor view that fundamental principles laid down in the OST had already been developed as rules of CIL before adoption of the OST.⁹¹ According to this view, these rules of CIL are

⁸⁵ *Id.*

⁸⁶ *See id.*

⁸⁷ *See* Marchisio, *supra* note 6.

⁸⁸ Colombian-Peruvian Asylum, 1950 I.C.J. at 276.

⁸⁹ MICHAEL P. SCHARF, CUSTOMARY INTERNATIONAL LAW IN TIMES OF FUNDAMENTAL CHANGE: RECOGNIZING GROTIAN MOMENTS 128 (2013).

⁹⁰ David A. Koplow, *Asat-ishment: Customary International Law and the Regulation of Anti-Satellite Weapons*, 30 MICH. J. INT’L L. 1187, 1232 (2009).

⁹¹ Vladlen S. Vereshchetin & Gennady M. Danilenko, *Custom as a Source of International Law of Outer Space*, 13 J. SPACE L. 22, 25-32 (1985); Joanne I. Gabrynowicz,

codified by means of the OST. However, this view fails to meet both State practice and *opinio juris* elements. Moreover, the first significant step in the development of space law, namely the Declaration of Principles, is considered by ICJ Judge Lachs when he stated, “[i]t is difficult to regard the 1963 Declaration as a mere recommendation: it was an instrument which has been *accepted as law*.”⁹²

It is not possible to accept that, at the beginning of the space era, customary international space law had already developed because there was an absence of State practice and *opinio juris* elements. Early space activities were conducted through actual practice of only two States.⁹³ Therefore, there was not widespread and consistent State practice. Although the Declaration of Principles and the OST were adopted by consensus, the UN Committee on the Peaceful Uses of Outer Space (UNCOPUOS) had less than 30 member States at the time of adoption a number too small to qualify as evidence of *opinio juris*.⁹⁴

In *North Sea Continental Shelf*, the ICJ ruled that legal principles that are incorporated in treaties can become CIL.⁹⁵ Pursuant to Article 38 of the VCLT, a treaty rule becomes binding upon a third State as a rule of CIL, when recognized as such.⁹⁶ In *North Sea Continental Shelf*, the ICJ stated that there are some necessary factors “before a conventional rule can be considered to have become CIL.”⁹⁷ Such factors are (1) widespread and representative participation of States, including whose interests were specially affected, in the convention, (2) the lapse of time between the treaty’s entry into force and the time when CIL is alleged to have entered into existence and (3) extensive and virtually uniform State practice.⁹⁸

The Outer Space Treaty and Enhancing Space Security, in BUILDING THE ARCHITECTURE FOR SUSTAINABLE SPACE SECURITY, 113 (UN Conference Report, 2006); See Koplow, *supra* note 90, at 1233; Steven Freeland, *Peaceful Purposes? Governing the Military Uses of Outer Space*, 18 EUR. J. L. REFORM 35, 39 (2016).

⁹² MANFRED LACHS, THE LAW OF OUTER SPACE: AN EXPERIENCE IN CONTEMPORARY LAW-MAKING 128 (Tanja Masson-Zwaan & Stephan Hobe eds., 2010) (emphasis added).

⁹³ *But see* Müllerson, *supra* note 53, at 342.

⁹⁴ See UNITED NATIONS OFFICE OF OUTER SPACE AFFAIRS, Committee on the Peaceful Uses of Outer Space: Membership Evolution, <https://www.unoosa.org/oosa/en/our-work/copuos/members/evolution.html> (last visited Oct. 15, 2022) [hereinafter UNCOUOS Membership Evolution].

⁹⁵ *North Sea Continental Shelf*, 1969 I.C.J. at 28, ¶ 37.

⁹⁶ VCLT, *supra* note 63, art. 38.

⁹⁷ *North Sea Continental Shelf*, 1969 I.C.J. at 43, ¶ 73.

⁹⁸ *Id.* at 44, ¶¶ 73-74.

State practice should occur in a way as to reflect a general recognition that a legal obligation is involved.⁹⁹

As of January 2022, there are 112 States that are parties to the OST.¹⁰⁰ Twenty-three more States have signed the OST but have not ratified it yet.¹⁰¹ This means that there is wide participation in the OST and all major spacefaring countries are parties to the OST. State practice of State Parties to the OST shows a high degree of consistency. The *travaux préparatoires* of space treaties, official statements, national legislations, national Court's decisions are qualified to constitute State practice.¹⁰² Moreover, the accounts of UN debates, proceedings of the UNCOPUOS and its sub-committees are also found as evidence of State practice and *opinio juris*.¹⁰³ Thus, it can be accepted that some principles laid down in the OST have passed into CIL. These are that outer space is free for exploration and use by all States, but such exploration and use is to be carried out for benefit of all;¹⁰⁴ that outer space, including the Moon and other celestial bodies, is not subject to national appropriation by any means;¹⁰⁵ that space activities are carried in accordance with international law;¹⁰⁶ that States are responsible for national activities in outer space whether such activities are carried on by governmental agencies or by non-governmental entities;¹⁰⁷ and that States are liable for damage caused to other States or their nationals by such activities.¹⁰⁸

The CIL status of the principles laid down in the OST has consequences for both State Parties and non-party States. First, those States that are parties to the OST cannot divest themselves of the provisions that have turned into the CIL. As stated in Article 43 of the VCLT, the cases of the invalidity, termination or denunciation

⁹⁹ *Id.*

¹⁰⁰ Comm. on the Peaceful Uses of Outer Space, Rep. of the Legal Subcommittee on its Sixty-First Session, *Status of International Agreements Relating to Activities in Outer Space as at 1 January 2022*, U.N. Doc. A/AC.105/C.2/2022/CRP.10 (2022)[hereinafter *Status of International Space Agreements*].

¹⁰¹ *Id.*

¹⁰² FRANCIS LYALL & PAUL B. LARSEN, *SPACE LAW: A TREATISE* 38 (2018).

¹⁰³ *Id.*

¹⁰⁴ OST, *supra* note 7, art. I.

¹⁰⁵ *Id.* at art. II.

¹⁰⁶ *Id.* at art. III.

¹⁰⁷ *Id.* at art. VI.

¹⁰⁸ *Id.* at art. VII. See LYALL & LARSEN, *supra* note 102, at 64.

of a treaty or withdrawal of a party from the treaty do “not in any way impair the duty of any State to fulfil any obligation contained in the treaty to which it would be subject under international law independently of the treaty.”¹⁰⁹ Second, non-party States may be bound by provisions of the OST as they have passed into CIL and have universal application. Although there is wide participation in the OST, 58 States out of 193 UN member States have not signed the OST. Thus, the consequences of the CIL status of provisions of the OST also have real relevance, apart from academic one.

B. Determination of Rules as Customary International Space Law

The determination of a rule as CIL requires a careful analysis on available evidence for the presence of the two elements in any given case. In space law, *travaux préparatoires*, accounts of UN debates, proceedings of UNCOPUOS and its subcommittees and several national space legislations have been considered as evidence of State practice and *opinio juris*.¹¹⁰ However, one might hesitate to rely on accounts of UN debates as evidence of *opinion juris* since the reportage is vague and may not be considered true advocacy.¹¹¹

To determine whether provisions of a treaty have attained the status of CIL, the factors expressed in *North Sea Continental Shelf* should be taken into consideration. For provisions of the OST there is, first, widespread and representative participation, there are 112 State Parties to the treaty, and 23 more States are signatories. Second, all spacefaring countries are parties to the treaty, which covers States whose interests are specially affected. Third, State practice has been highly consistent with provisions of the OST. Fourth, there has been a passage of time, however short or long necessary. And fifth, States' practice is occurring in a legally obligatory way.¹¹² Other evidence to prove that principles laid down in the OST evolve into CIL can be found in UNGA space-related resolutions and measures, which were adopted after the conclusion of the OST.¹¹³ For instance, the Principles Relating to Remote Sensing of the

¹⁰⁹ VCLT, *supra* note 6, art. 43.

¹¹⁰ LYALL & LARSEN, *supra* note 102, at 38.

¹¹¹ *See id.*

¹¹² *Id.* at 70.

¹¹³ *Id.*

Earth from Outer Space concluded in accordance with Article I of the OST.¹¹⁴ Space freedoms laid down in Article I permit passage of satellites over other countries without permission.¹¹⁵ Moreover, Principle II quotes Article I, ¶1 of the OST and states that “remote sensing activities shall be carried for the benefit and interests of all countries.”¹¹⁶ By providing general benefits to all States, such as meteorology and disaster management, remote sensing activities are clear examples of the use of space for the benefit of all States.

Moreover, the OST constitutes a basis for various organizations, cooperation agreements, such as the International Telecommunications Satellite Organization Agreement and the International Mobile Satellite Organization Agreement, and memorandum of understanding.¹¹⁷ State practice under these agreements occurs in accordance with the principles laid down in the OST. To act according to the OST and consider it as a basis for other legal instruments can be regarded as evidence for *opinio juris*.

Turning to the potential of UNGA resolutions to attain the status of CIL, one might see their non-binding nature as an obstacle to constitute *opinio juris*.¹¹⁸ However, the ICJ has stated that UNGA resolutions may have normative value, despite their non-binding nature.¹¹⁹ Moreover, when States implement these resolutions as a requirement or part of their national legislations regarding space activities, it may qualify as evidence of *opinio juris*. Such implementation reflects that several national legislations arouse a legal sense of obligation for these non-binding legal instruments.

Notably, there has not been a judgment from the ICJ or any other competent tribunal dealing with the uncertainty in customary international space law. Indeed, there has not been any space law related international case. Moreover, there has not been any

¹¹⁴ G.A. Res. 41/65, (Dec. 3, 1986) [hereinafter Remote Sensing Principles].

¹¹⁵ OST, *supra* note 7, art. I.

¹¹⁶ Remote Sensing Principles, *supra* note 114, princ. II.

¹¹⁷ Agreement Relating to the International Telecommunications Satellite Organization “INTELSAT”, Aug. 20, 1971, 23 U.S.T. 3813, 1220 U.N.T.S. 19677; Convention of the International Mobile Satellite Organization, Sept. 3, 1976, T.I.A.S. 9605; See LYALL & LARSEN, *supra* note 102, at 71.

¹¹⁸ See Brian Wessel, *The Rule of Law in Outer Space: The Effects of Treaties and Non-Binding Agreements on International Space Law*, 35 HASTINGS INT’L & COMPAR. L. REV. 289, 298 (2012).

¹¹⁹ Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion 1996 I.C.J. at 254, ¶ 70.

request to the ICJ to give an advisory opinion on that matter by the UNGA, other organs of the UN or special agencies, which have been authorized by the UNGA.

When considering the uncertainty on customary international space law and the difficulty to determine which rules have attained the status of CIL, clarification by the ICJ would be welcome. This would also provide a guidance on how one can find evidence for State practice and *opinio juris* in space law instruments.

C. *An Examination of Customary International Law Status of Selected Elements of the Outer Space Treaty*

i. Customary International Law Status of Space Freedoms

One of the very first legal questions related to space law is whether a State has the right of passage through outer space.¹²⁰ In practice, the USSR did not seek for consent before launching Sputnik I into outer space. Moreover, other States did not protest the launching of Sputnik I.¹²¹ If one State had protested the launching of Sputnik I, that State likely would have encountered protest for its own space activities. The launch of Sputnik I and the lack of the protest established the principle of freedom to access and pass through outer space.¹²² Article II of the Declaration of Principles announced the freedom of exploration and use of outer space and celestial bodies.¹²³ Subsequently, Article I of the OST provides freedom for exploration, use and access to all areas of celestial bodies as well as scientific investigation.¹²⁴ These freedoms are granted to all States without discrimination on a basis of equality. These freedoms are limited by norms of public international law, such as Article 2 of the UN Charter, and space law norms, such as the peaceful use, the principle of cooperation, the avoidance of harmful

¹²⁰ See LACHS, *supra* note 92, at 125.

¹²¹ *Id.*

¹²² Comm. on the Peaceful Uses of Outer Space, Submission by the Space Safety L. & Reg. Comm. of the Int'l Ass'n for the Advancement of Space Safety to the Legal Subcomm. on its Fifty-Seventh Session, U.N. Doc. A/AC.105/C.2/2018/CRP.9, at 20 (2018) [hereinafter UNCOPUOS Delimitation Report].

¹²³ G.A. Res. 2625 (XXV), art. II (Oct. 24, 1970).

¹²⁴ OST, *supra* note 7, art. I.

contamination and the carrying out of activities for the benefit and in the interests of all countries.¹²⁵

After the adoption of the OST, the space freedoms gradually became rules of CIL due to widespread and consistent State practice and *opinio juris*. Since the launching of Sputnik I, all space activities have been conducted in accordance with space freedoms. Space freedoms have subsequently constituted the basis of legal instruments governing outer space activities, such as resolutions, guidelines and national legislations.

When it comes to discussing airspace, however, States have complete and exclusive sovereignty over their own airspace.¹²⁶ Hence, without the permission or other authorization of the State, it is not possible to use or even innocently pass through the State's airspace for scheduled civil flights.¹²⁷ While there are freedoms for use and exploration of outer space, there is a prohibition of passage on territorial airspace with an exception for unscheduled flights.¹²⁸ During the launch and descent phases, space objects must pass through airspace. Since the difference causes contrasting results in terms of the right of passage, the delimitation of the boundary between airspace and outer space becomes relevant. However, there is no agreed definition of where airspace ends and outer space begins.¹²⁹

The problem of delimitation has been discussed in and outside the UN for many years.¹³⁰ After years of discussion, the approaches can be categorized into two prevailing schools of thought on the

¹²⁵ ALEXANDER SOUCEK, *SPACE LAW ESSENTIALS* 21 (2015).

¹²⁶ Convention on International Civil Aviation, art. 1, Dec. 7, 1944, T.I.A.S. 159, 15 U.N.T.S. 295 [hereinafter Chicago Convention].

¹²⁷ *Id.* at art. 6.

¹²⁸ *Id.* at art. 5.

¹²⁹ S. Neil Hosenball & Jefferson S. Hofgard, *Delimitation of Air Space and Outer Space: Is a Boundary Needed Now?*, 57 U. COLO. L. REV. 885, 885 (1986).

¹³⁰ Comm. on the Peaceful Uses of Outer Space, Background Paper Prepared by the Secretariat, for the Legal Subcomm. in 1970 and updated in 1977, U.N. Doc. A/AC.105/C.2/7 (May 7, 1970); Comm. on the Peaceful Uses of Outer Space, Background Paper Prepared by the Secretariat, for the Legal Subcomm. in 1970 and updated in 1977, U.N. Doc. A/AC.105/C.2/7/Add. 1 (Jan. 21, 1977); Comm. on the Peaceful Uses of Outer Space, Working Paper Prepared by the Chair of the Working Group on the Definition and Delimitation of Outer Space, for the Legal Subcomm. on its Fifty-Seventh Session, U.N. Doc. A/AC.105/C.2/L.302 (May 17, 2017).

delimitation of outer space: functionalist and spatialist.¹³¹ While functionalists claim that a characterization of the activity should be a determinant factor, spatialists assert that a physical boundary should be established.¹³² Functionalists would argue that a State's sovereignty is not applicable to space flights even during launch and descent phases when passing through national airspace.¹³³ This means that when it comes to space activities, other States' airspace sovereignty begins and ends at mean sea level.¹³⁴ However, spatialists would disagree with this opinion, claiming that, until a specific physical boundary, airspace sovereignty remains applicable to space flights.¹³⁵ If the Von Karman line is used as the physical boundary, it means that airspace sovereignty is applicable to space flights up to 100 km above mean sea level.¹³⁶ Although there are a lot of aspects to discuss about both approaches, a detailed analysis of the differences between these views is beyond the scope of this article.

At the beginning of the space era, the US Space Shuttle usually launched and descended over its own airspace or over the oceans.¹³⁷ In the same vein, the USSR rockets usually passed through the USSR's own territorial airspace.¹³⁸ There were few cases in which a space object overflowed air space of a State other than the launching State.¹³⁹ Generally, in those occasions the State of registry had furnished the information to the overflowed States or there was a bilateral agreement between the State of registry and underlying States providing the consent.¹⁴⁰ When there was no

¹³¹ See Hosenball & Hofgard, *supra* note 129, at 887; TANJA MASSON-ZWAAN & MAHULENA HOFMANN, *INTRODUCTION TO SPACE LAW* 13 (4th ed., 2019).

¹³² *Id.*

¹³³ Ricky J. Lee, *Reconciling International Space Law with the Commercial Realities of the Twenty-first Century*, 4 SING. J. INT'L & COMPAR. L. 194, 208 (2000).

¹³⁴ Bin Cheng, *The Legal Status of Outer Space and Relevant Issues: Delimitation of Outer Space and Definition of Peaceful Use*, 11 J. SPACE L. 89, 97 (1983).

¹³⁵ *Id.* at 95.

¹³⁶ *Id.*

¹³⁷ UNCOPUOS Delimitation Report, *supra* note 122, at 22.

¹³⁸ *Id.*

¹³⁹ Comm. on the Peaceful Uses of Outer Space, Note by the Secretariat, U.N. Doc. A/AC.105/635/Add.1, at 6 (Mar. 15, 1996).

¹⁴⁰ *Id.*; UNCOPUOS Delimitation Report, *supra* note 122 at 22. As an example of that occasion, in 1990, the US requested permission and provided information on the final stage of Atlantis Space-Shuttle. The USSR granted the US permission to overfly Russian territory. See also Agreement between the Russian Federation and Republic of

notification, the reason why the overflowed States have not protested could simply be their unawareness.¹⁴¹

The right of innocent passage for space objects through national airspace of other countries has a particular importance for terrestrially smaller States.¹⁴² Without this right, it may not be possible to reach into or return from outer space for such States.¹⁴³

Whether the customary rule on the right of passage for ascending and descending space objects has emerged in space law has been a controversial issue. Some scholars claim that the right of passage through foreign airspace has not been developed as a customary rule.¹⁴⁴ For instance, Vereshchetin and Danilenko claimed the existing practice has not become a general rule of CIL regulating the passage of space objects through foreign airspace.¹⁴⁵ However, they made a reservation on this statement by referring to the possibility of creating a local or particular custom ruling the relations of neighboring countries.¹⁴⁶ According to Gorove, the freedom of exploration and use of outer space covers the freedom to go into outer space and the freedom to return to the Earth.¹⁴⁷ Despite this statement, he did not think that a customary rule on the passage for space objects through airspace had been created.¹⁴⁸ Professor Cheng, Professor Haanappel and Professor Masson-Zwaan also expressed their views that no customary rule of passage for ascending or descending space objects exists.¹⁴⁹ In contrast, other scholars assert that there is a customary rule on passage of space objects through foreign national

Kazakhstan on the Basic Principles and Conditions of Use of the Baikonur Spaceport, Kaz.-Russ., (Mar. 28, 1994).

¹⁴¹ UNCOPUOS Delimitation Report, *supra* note 122, at 22.

¹⁴² See Vereshchetin & Danilenko, *supra* note 91, at 28.

¹⁴³ *Id.*

¹⁴⁴ *Id.* at 29.

¹⁴⁵ *Id.*

¹⁴⁶ *Id.*

¹⁴⁷ Stephen Gorove, *Aerospace Plane: New Policy Issues for Space Law*, 31 PROC. ON L. OUTER SPACE 282, 283 (1989).

¹⁴⁸ *Id.*

¹⁴⁹ CHENG, *supra* note 83, at 425-428; P.P.C. Haanappel, *The Aerospace Plane: Analogies with Other Modes of Transportation*, 32 PROC. ON L. OUTER SPACE 341, 342 (1990); Tanja L. Masson-Zwaan, *The Aerospace Plane: an Object at the Cross-roads between Air and Space Law*, in AIR AND SPACE L.: DE LEGE FERENDA ESSAYS IN HONOUR OF HENRI A. WASSENBERGH 247, 253 (1992).

airspace,¹⁵⁰ or at least that it is developing.¹⁵¹ Therefore, while space freedoms have attained the status of CIL, a customary rule on the passage for space objects through foreign airspace has not been solidified.

The prevailing approach is that there is no existing customary rule on innocent passage for an ascending or descending space objects.¹⁵² The main arguments of this prevailing approach revolve around the lack of the State practice and unawareness of overflown States.

ii. Customary International Law Status of the Non-Appropriation Principle

a) *The Non-Appropriation Principle*

From the beginning of the space era, it was obvious that the traditional rules of public international law on sovereignty, territory and delimitation cannot be applicable to outer space including the Moon and celestial bodies.¹⁵³ States agreed to consider outer space, including the Moon and other celestial bodies as a *res communis omnium*.¹⁵⁴ The *res communis* principle holds that international commons belong to all nations and are not able to be appropriated.¹⁵⁵

The Cold War origins of space law play an important role in the establishment of the non-appropriation principle.¹⁵⁶ Countries had concerns on the results of space activities conducted by the US and the USSR.¹⁵⁷ The importance of the non-appropriation principle derives from its contribution to the fundamental principles of

¹⁵⁰ V. D. Bordunov, *Space Shuttle Flights and Correlation of Legal Regimes of Air Space and Outer Space*, 25 PROC. ON L. OUTER SPACE 211, 212 (1982).

¹⁵¹ Mr. Chowdrury's Response to Questionnaire, Space Law, 59 INT'L L. ASS'N. CONF. REP. 168, 183 (1980).

¹⁵² CHENG, *supra* note 83, at 428.

¹⁵³ R. J. Lee, *Article II of the Outer Space Treaty: Prohibition of State Sovereignty, Private Property Rights, or Both?*, 11 AUSTRALIAN J. OF INT'L L. 128, 128 (2004).

¹⁵⁴ Fabio Tronchetti, *The Non-Appropriation Principle Under Attack: Using Article II of the Outer Space Treaty in its Defence*, 50 PROC. ON L. OUTER SPACE 526, 526 (2007).

¹⁵⁵ A. Kiss, *The Common Heritage of Mankind: Utopia or Reality?*, 40(3) INT'L J. (TORONTO), 423-24 (1985).

¹⁵⁶ Joanne Irene Gabrynowicz, *Space Law: Its Cold War Origins and Challenges in the Era of Globalization*, 37 SUFFOLK U. L. REV. 1041, 1043 (2004).

¹⁵⁷ *Id.* at 1043-44.

space law.¹⁵⁸ Not only has this principle prevented outer space from becoming an area of conflict between States, but it is also the best guarantee for the principle that the exploration and use of outer space will be carried out for the benefit and in the interest of all States, irrespective of their stage of development.¹⁵⁹

Article II of the OST declares that: “Outer 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.”¹⁶⁰

At the beginning of the space era, States renounced any potential claims over outer space, which is in accordance with the non-appropriation principle.¹⁶¹ Starting with Neil Armstrong and Buzz Aldrin, US astronauts planted several US flags on the surface of the Moon. The act of “planting the flag” has been associated with a declaration of sovereignty and ownership rights over newly settled land based on colonial history.¹⁶² However, these acts did not signify US’ intention to claim sovereignty in the same way as Captain Cook claimed Australia for Great Britain back in 1770,¹⁶³ but similar to the planting of a flag on Mount Everest or at the South and North Poles to reflect pride.¹⁶⁴ Prior to the Apollo 11 Moon landing, the US signed and ratified the OST. As a result, the US was bound by Article II of the OST. This was also affirmed by Section 8 of the National Aeronautics and Space Administration Authorization Act of 1970, which states:

The flag of the United States, and no other flag, shall be implanted or otherwise placed on the surface of the moon, or on the surface of any planet, by the members of the crew of any spacecraft making a lunar or planetary landing as a part of a mission under the Apollo program or as a part of a mission

¹⁵⁸ See Tronchetti, *supra* note 154, at 526.

¹⁵⁹ *Id.* at 527.

¹⁶⁰ OST, *supra* note 7, art. II.

¹⁶¹ *Id.*

¹⁶² See Merete Borch, *Rethinking the Origins of Terra Nullius*, 32 AUSTL. HIST. STUD. 222, 222 (2001).

¹⁶³ Austl. Gov’t Dep’t of the Prime Minister and Cabinet, Australian Flags: Part 4: History of the Australian National Flag: Evolution of a National Flag, <https://www.pmc.gov.au/resource-centre/government/australian-flags-booklet/part-4>.

¹⁶⁴ Anne Platoff, *Where No Flag Has Gone Before: Political and Technical Aspects of Placing a Flag on the Moon*, NASA Contractor Report 188251, <https://www.hq.nasa.gov/alsj/alsj-usflag.html>.

under any subsequent program, the funds for which are provided entirely by the Government of the United States. This act is intended *as a symbolic gesture of national pride in achievement and is not to be construed as a declaration of national appropriation by claim of sovereignty* (own emphasis).¹⁶⁵

The question whether the private appropriation of outer space, including the Moon and other celestial bodies, or private ownership over space resources is also prohibited by Article II of the OST has been controversial among legal scholars. Article II of the OST must be interpreted in accordance with Article 31 of the VCLT.¹⁶⁶ Although the VCLT entered into force after the OST, Article 31 of the VCLT codified the pre-existing CIL on the interpretation of treaties.¹⁶⁷ The rules of interpretation in Article 31 of the VCLT exist as a rule of CIL at the time when States express their will to be bound by the OST; therefore, the rule of interpretation laid down in Article 31(3) of the VCLT governs the interpretation of the OST. The term “national appropriation” must be interpreted “in accordance with the ordinary meaning,” “in its context” and “in the light of its object and purpose” of the OST.¹⁶⁸

While the national appropriation of outer space, including the Moon and other celestial bodies, is explicitly forbidden by Article II of the OST, there is no explicit mention of its private appropriation in this provision. Based on this consideration, some legal scholars have claimed that Article II of the OST, in its present form, does not prohibit the private appropriation of outer space, including the Moon and other celestial bodies.¹⁶⁹ Therefore, in line with that argument, private individuals or international organizations could lawfully appropriate any parts of outer space.¹⁷⁰ Moreover, some enterprises rely on this legal argument and claim that there is a

¹⁶⁵ National Aeronautics and Space Administration Authorization Act of 1970, Pub. L. No. 91-119, 83 Stat. 196, § 8.

¹⁶⁶ VCLT, *supra* note 63, art. 31.

¹⁶⁷ See OLIVER DÖRR & KIRSTEN SCHMALENBACH, VIENNA CONVENTION ON THE LAW OF TREATIES 6 (2012).

¹⁶⁸ VCLT, *supra* note 63, art. 31(1).

¹⁶⁹ Stephen Gorove, *Interpreting Article II of the Outer Space Treaty*, 37 FORDHAM L. REV. 349, 351 (1969).

¹⁷⁰ *Id.*

loophole in Article II of the OST.¹⁷¹ There are few cases that citizens “shouldered the quixotic mission to test this idea, but their property claims over the celestial bodies ended up with Courts’ rejections.”¹⁷² Despite these thoughts, claims and attempts there is a present tendency to believe that both national appropriation and private property rights over outer space, including the Moon and other celestial bodies, fall under the prohibition of national appropriation as laid down in Article II of the OST.¹⁷³

Recent technological developments and “initiatives to harvest, mine, process and subsequently sell resources stemming from celestial bodies” raise the question whether the non-appropriation principle is also applicable to space resources.¹⁷⁴ Since the drafting of the OST, the non-appropriation principle has been reinterpreted as narrower in scope than the original intent of its drafters.¹⁷⁵ This interpretation excludes space resources from the scope of the non-appropriation principle.¹⁷⁶ Consequently, this reinterpretation has had a changing effect on CIL relating to the non-appropriation principle.¹⁷⁷

As part of the Apollo 11 mission, astronauts collected material, including Moonrocks to bring back to Earth.¹⁷⁸ From 1969 to 1972, 842 pounds of lunar material were brought back during Apollo

¹⁷¹ Lunar Embassy is a company that claims to sell land on the Moon. However, the Beijing Administration of Industry and Commerce had revoked the business license of the company and fined the company 50,000 yuan. Following this, the company sued the Beijing Administration of Industry and Commerce in 2005. The rules of The Haidian District People’s Court and the Beijing First Intermediate People’s Court (Appeal Court) were against the company. The Appeal Court ruled against the company’s appeal by referring to the Article II of the OST, <http://www.china.org.cn/english/China/203329.htm>; See Tronchetti, *supra* note 1549, at 533.

¹⁷² John G. Wrench, *Non-Appropriation - No Problem: The Outer Space is Ready for Asteroid Mining*, 51 CASE W. RESERVE J. INT’L L. 437, 446 (2019); *Nemitz v. NASA*, 126 Fed. Appx. 343 (9th Cir. 2005).

¹⁷³ See Tronchetti, *supra* note 154, at 533.

¹⁷⁴ See MASSON-ZWAAN & HOFMANN, *supra* note 131, at 18.

¹⁷⁵ Abigail D. Pershing, *Interpreting the Outer Space Treaty’s Non-Appropriation Principle: Customary International Law from 1967 to Today*, 44 YALE J. INT’L L. 149, 157-158 (2019).

¹⁷⁶ *Id.*

¹⁷⁷ *Id.*

¹⁷⁸ LUNAR AND PLANETARY INST., *Apollo 11 Lunar Samples*, Lunar & Planetary Inst., https://www.lpi.usra.edu/lunar/missions/apollo/apollo_11/samples/ (last visited Oct. 15, 2022).

missions.¹⁷⁹ NASA clearly stated that “[l]unar material retrieved from the Moon during the Apollo program is U.S. government property.”¹⁸⁰ In the same vein, Japanese and Russian governments consider rocks and soil they have removed from the Moon or asteroids as their properties.¹⁸¹ In *US v. One Lucite Ball*, the Court considered a lunar rock as a material that can be a subject of stolen property.¹⁸² Moreover, the Court upheld “the right of Honduras to assert national property ownership over a Moon rock.”¹⁸³

Turning to the national appropriation and ownership rights of *in situ* resources, the language of the OST is not clear as to whether the non-appropriation principle laid down in Article II extends to resources extracted *in situ* from the Moon and other celestial bodies.¹⁸⁴ According to ICJ Judge Lachs, *in situ* resources fall under the scope of the non-appropriation principle.¹⁸⁵ Some States are interpreting the scope of this principle narrowly, exemplified by recent legislation in the US, Luxembourg and United Arab Emirates, as discussed further below.¹⁸⁶

The Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (Moon Agreement) has significant relevance to space resources.¹⁸⁷ Article 6 of the Moon Agreement provides the right to collect on and remove from the Moon samples of its minerals and other substances for scientific investigation.¹⁸⁸

¹⁷⁹ NAT'L AERONAUTICS AND SPACE ADMIN., *Lunar Rocks and Soils from Apollo Missions*, <https://curator.jsc.nasa.gov/lunar/> (last visited Oct. 15, 2022).

¹⁸⁰ Paul K. Martin, *NASA's Management of Moon Rocks and Other Astromaterials Loaned for Research, Education and Public Display*, NASA Office of the Inspector Gen., Report No. IG-12-007 at V, note 8 (Dec. 8, 2011).

¹⁸¹ H.R. REP. NO. 114-153, at 8 (2015).

¹⁸² *U.S. v. One Lucite Ball Containing Lunar Material*, 252 F. Supp. 2d 1367, 1369 (2003).

¹⁸³ H.R. REP. NO. 114-153, at 8.

¹⁸⁴ Andrew Lintner, *Extraterrestrial Extraction: The International Implications of the Space Resource Exploration Utilization Act of 2015*, 40 FLETCHER F. WORLD AFF. 139, 140 (2016).

¹⁸⁵ See Lachs, *supra* note 92, at 42-43.

¹⁸⁶ Space Act of 2015, Pub. L. No. 114-90, 129 Stat. 704 [hereinafter Space Act]; Grand Duchy of Luxembourg, Law on the Exploration and Use of Space Resources (July 20, 2017)[hereinafter Luxembourg Law]; United Arab Emirates, Federal Law No. 12 On the Regulation of the Space Sector, 669 Official Gazette 111 (Dec. 19, 2019)[hereinafter UAE Law],

¹⁸⁷ Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, Dec. 5, 1979, 1363 U.N.T.S. 3 [hereinafter Moon Agreement].

¹⁸⁸ *Id.* at art. 6.

Although it limits space resource extraction to scientific purposes, it shows that the OST does not preclude space resource extraction. Article 11(1) of the Moon Agreement proclaims that the Moon and its resources are common heritage of [hu]mankind.¹⁸⁹ Article 11(3) of the Moon Agreement explicitly bans property rights of States, international organizations, national organizations, non-governmental entities or any natural person over natural resources.¹⁹⁰ However, it has been ratified by only 18 countries and signed by 4 countries, including France and India, and it has no effect on third States.¹⁹¹

Space resource extraction recently became a subject in national legislatures. First, the US passed the Space Act of 2015, which grants US citizens right to exploit, including “possess, own, transport, use, and sell,” space resources and asteroid resources “in accordance with applicable law, including the international obligation of the United States.”¹⁹² On the other hand, it includes a disclaimer that the US does not assert the sovereignty over or ownership of any celestial bodies by the enactment of the Space Act.¹⁹³ Moreover, the US position on space resources can also be examined by using another legal document. The White House issued the Executive Order on Encouraging International Support for the Recovery and Use of Space Resources on 6 April 2020.¹⁹⁴ The Executive Order states that the “US does not view outer space as a global commons.”¹⁹⁵ Moreover, in the Executive Order, the importance of fostering “international support for the public and private recovery and use of resources in outer space, consistent with applicable law” is highlighted.¹⁹⁶ The most recent US approach is reflected in the Artemis Accords, which will be discussed below.

Following the US act, Luxembourg adopted and entered into force the Law on the Exploration and Use of Space Resources.¹⁹⁷

¹⁸⁹ *Id.* at art. 11(1).

¹⁹⁰ *Id.* at art. 11(3).

¹⁹¹ Status of International Space Agreements, *supra* note 100.

¹⁹² Space Act, *supra* note 187, § 402.

¹⁹³ *Id.* § 403.

¹⁹⁴ Executive Order No. 13914, Encouraging International Support for the Recovery and Use of Outer Space Resources, 85 Fed. Reg. 20381 (April 6, 2020) [hereinafter Executive Order].

¹⁹⁵ *Id.*

¹⁹⁶ *Id.*

¹⁹⁷ Luxembourg Law, *supra* note 186.

Pursuant to Article 1 of the Law, “space resources are capable of being owned.”¹⁹⁸ Contrary to the US act, it does not exclude legal entities owned in full or fully controlled by foreigners from the scope of application.¹⁹⁹ Moreover, it does not make a distinction between space and asteroid resources. Most recently the United Arab Emirates introduced its national space law in 2020 which has provisions on space resource extraction, exploitation and utilization.²⁰⁰

Other States also expressed their interests in space resource exploitation. For example, Poland,²⁰¹ Portugal,²⁰² Japan,²⁰³ China,²⁰⁴ the Czech Republic,²⁰⁵ the United Arab Emirates,²⁰⁶ Belgium²⁰⁷ and US²⁰⁸ signed Memorandums of Understanding with Luxembourg for cooperation in space activities, including space resource exploitation. Russia expressed its will to join Luxembourg in

¹⁹⁸ *Id.* at art. 1.

¹⁹⁹ *Id.* at art. 4.; See MASSON-ZWANN & HOFMANN, *supra* note 131, at 103.

²⁰⁰ UAE Law, *supra* note 186.

²⁰¹ Press Release, Lux. Space Agency, *Luxembourg and the Republic of Poland Agree to Cooperate on Space Activities* (Oct. 12, 2018), https://space-agency.public.lu/en/news-media/news/2018/Lux_Poland.html.

²⁰² *Id.*

²⁰³ Press Release, Lux. Ministry of the Econ., *Luxembourg and Japan Agree to Cooperate on Exploration and Commercial Utilization of Space Resources*, (Nov. 29, 2017), <https://space-agency.public.lu/dam-assets/press-release/2017/2017-11-29-press-release-mou-japan-space.pdf>.

²⁰⁴ Press Release, Lux. Ministry of the Econ., *Luxembourg Cooperates with China in the Exploration and Use of Outer Space for Peaceful Purpose*, (Jan. 16, 2018), <https://space-agency.public.lu/dam-assets/press-release/2018/2018-01-17-press-release-cooperation-china-luxembourg.pdf>.

²⁰⁵ Press Release, Lux. Ministry of the Econ., *Luxembourg and the Czech Republic Cooperate in the Frame of Space Resources Exploration and Utilization*, (Oct. 10, 2018), <https://space-agency.public.lu/dam-assets/press-release/2018/2018-10-10-Press-release-MoU-Czech-Lux-FINAL.pdf>.

²⁰⁶ Press Release, Lux. Ministry of the Econ., *Luxembourg and the United Arab Emirates to Cooperate on Space Activities with Particular Focus on the Exploration and Utilization of Space Resources*, (Dec. 5, 2018), <https://space-agency.public.lu/dam-assets/press-release/2017/2017-10-10-press-release-mou-space.pdf>.

²⁰⁷ Press Release, Lux. Ministry of the Econ., *The Grand Duchy of Luxembourg and Belgium Join Forces to Develop the Exploration and Utilisation of Space Resources*, (Jan. 23, 2019), <https://space-agency.public.lu/dam-assets/press-release/2019/2019-01-23-ENG-joint-press-release-BE-LU.pdf>.

²⁰⁸ Memorandum of Understanding on Space Cooperation, U.S.-Lux., Dept. Com. May 10, 2018, <https://lu.usembassy.gov/complete-text-of-the-mou-on-space-cooperation-between-the-u-s-and-luxembourg/>.

space resource exploitation.²⁰⁹ India is also interested in space mining.²¹⁰

From this follows that the aforementioned countries take the stance that the prohibition laid down in Article II of the OST does not extend to space resources. UNCOPUOS discussions are ongoing regarding the legitimacy of national legislation on space resource exploitation and whether the OST permits the ownership of space resources.²¹¹ Some delegations are of the view that general terms laid down in national legislation on space resources are “not sufficient to ensure compliance with the spirit of the Outer Space Treaty.”²¹²

It is widely accepted that the non-appropriation principle laid down in Article II of the OST has attained the status of CIL.²¹³ This is because it consistently established State practice and *opinio juris* not to claim sovereignty over outer space, including the Moon and other celestial bodies. However, there is a shift from the traditional approach towards the non-appropriation principle, referenced by the above-mentioned State interests in space resource utilization. With the advance of technology and the involvement of private entities in outer space activities, this change is understandable. Moreover, at this period of time there is no sufficient State practice and *opinio juris* to develop a rule of CIL in ownership of *in situ* space resources. The existing practices are premature to constitute elements of CIL.

Recently, the National Aeronautics and Space Administration (NASA) announced the Artemis Accords, which provide principles that NASA has identified as important for regulating the use and

²⁰⁹ Vladimir Soldatkin, *Russia Wants to Join Luxembourg in Space Mining*, REUTERS, March 6, 2019, <https://www.reuters.com/article/us-luxembourg-russia-space/russia-wants-to-join-luxembourg-in-space-mining-idUSKCN1QN1OQ>.

²¹⁰ See Anurag Kotoky, *India Prepares Quest to Find a Trillion-Dollar Nuclear Fuel on the Moon*, ECON. TIMES, June 27, 2018, <https://economictimes.indiatimes.com/news/science/india-prepares-quest-to-find-a-trillion-dollar-nuclear-fuel-on-the-moon/articleshow/64760124.cms?from=mdr>.

²¹¹ Comm. on the Peaceful Uses of Outer Space, Draft Rep. of the Legal Subcomm. on Its Fifty-Eighth Session, U.N. Doc. A/AC.105/C.2/L.309/Add.3, at 4-5, ¶¶ 23, 24 & 27 (April 9, 2019).

²¹² *Id.* at 4, ¶ 24.

²¹³ See Vereshchetin & Danilenko, *supra* note 91, at 25; Zachos A. Paliouras, *The Non-Appropriation Principle: The Grundnorm of International Space Law*, 27 LEIDEN J. INT'L L. 37, 44 (2014).

exploration of the Moon and eventually Mars.²¹⁴ The Artemis Accords can be understood as a framework for bilateral agreements to be negotiated with space agencies of other countries.²¹⁵ What makes the Artemis Accords relevant to the non-appropriation principle is that it reinforces that space resource extraction and utilization can and will be conducted in accordance with the OST.²¹⁶ Reactions and participation of other States may be worth examining as State practice for a new international legal regime on space resource activity.

There is a need to develop an international regime governing space resource exploitation and harmonize existing national legislations thereon. A prospective international framework might be of an obligatory or recommendatory nature. However, in both cases they may eventually constitute evidence for State practice and *opinio juris*. State practice, national legislation, actual practice and prospective legal frameworks would have potential to develop evidence for CIL.

To provide a basis for negotiations on space resource activities, The Hague International Space Resources Governance Working Group was created.²¹⁷ The Hague Working Group has published the Building Blocks for the Development of an International Framework on Space Resource Activities.²¹⁸ Reactions of States to the Building Blocks may also have a contribution to the development of new CIL on space resource activities.

²¹⁴ The Artemis Accords: Principles for Cooperation in the Civil Exploration and Use of the Moon, Mars, Comets, and Asteroids, NASA, <https://www.nasa.gov/specials/artemis-accords/img/Artemis-Accords-signed-13Oct2020.pdf> [hereinafter Artemis Accords].

²¹⁵ David P. Fidler, *The Artemis Accords and the Next Generation of Outer Space Governance*, COUNCIL ON FOREIGN REL. BLOG (June, 2, 2020), <https://www.cfr.org/blog/artemis-accords-and-next-generation-outer-space-governance>.

²¹⁶ Artemis Accords, *supra* note 214, § 10, ¶ 2.

²¹⁷ LEIDEN UNIV., *The Hague International Space Resources Governance Working Group*, <https://www.universiteitleiden.nl/en/law/institute-of-public-law/institute-of-air-space-law/the-hague-space-resources-governance-working-group> (last visited Oct. 15, 2022) [hereinafter The Hague Working Group].

²¹⁸ BUILDING BLOCKS FOR THE DEVELOPMENT OF AN INTERNATIONAL FRAMEWORK FOR THE GOVERNANCE OF SPACE RESOURCE ACTIVITIES, <https://www.universiteitleiden.nl/binaries/content/assets/rechtsgeleerdheid/instituut-voor-publiekrecht/lucht--en-ruimterecht/space-resources/bb-thissrwwg--cover.pdf>. [hereinafter BUILDING BLOCKS].

b) Persistent Objectors to the Non-Appropriation Principles

On December 3, 1976 eight equatorial States, including Brazil, Colombia, Congo, Ecuador, Indonesia, Kenya, Uganda and Zaire (now the Democratic Republic of Congo) concluded an international agreement titled The Declaration of the First Meeting of Equatorial Countries.²¹⁹ The starting points for the Declaration were that Geostationary Earth Orbit (GEO) slots were increasingly used by developed countries and the failure of equatorial States' attempts to be recognized as States with special interests in GEO.²²⁰

In the Declaration, there are some key points such as a definition of GEO and a declaration that GEO is a limited natural resource.²²¹ And, most relevant to this article, a proclamation that equatorial States have sovereignty over their corresponding segments of GEO.²²² As a consequence of a States' sovereignty claim, Section 3 (e) of the Bogotá Declaration declares that:

Equatorial States do not condone the existing satellites or the position they occupy on their segments of the Geostationary Orbit nor does the existence of said satellites confer any rights of placement of satellites or use of the segment unless expressly authorized by the State exercising sovereignty over this segment.²²³

The sovereignty claims of the equatorial States over the segments of GEO need further elaboration under the relationship between treaty provisions and CIL due to the customary status of the space freedoms and the non-appropriation principle. However, before delving into the CIL evaluation, it is necessary to discuss this principle as a treaty provision, as some of the State Parties to the Bogotá Declaration were already parties or signatories to the OST.

To be persistent objectors, States manifest their opposition to a practice before it has become CIL.²²⁴ Nine years before the

²¹⁹ The Declaration of the First Meeting of Equatorial Countries (Dec. 3, 1976), Japan Aerospace Exploration Agency (2007) [hereinafter Bogotá Declaration], https://www.jaxa.jp/library/space_law/chapter_2/2-2-1-2_e.html.

²²⁰ See LYALL & LARSEN, *supra* note 102, at 160; CARL Q. CHRISTOL, THE MODERN INTERNATIONAL LAW OF OUTER SPACE 465-468 (1982).

²²¹ Bogotá Declaration, *supra* note 219, § 1.

²²² *Id.* § 2.

²²³ *Id.* § 3(e).

²²⁴ Scharf, *supra* note 41, at 317.

acceptance of the Bogotá Declaration, the OST entered into force. Moreover, three parties to the Declaration, namely Brazil, Ecuador and Uganda, had ratified or accessed to the OST.²²⁵ Three other parties, namely Indonesia, Zaire and Colombia had signed the OST by 1976.²²⁶ The remaining parties, Congo and Kenya were not signatories of the OST at that time.²²⁷

The consequences of being party to the Bogotá Declaration depend on the party or signatory status to the OST at the time. First, those States which were parties to the OST at the time when the Bogotá Declaration was concluded (Brazil, Ecuador and Uganda) risked breaching the international obligations stemming from Article II of the OST. Secondly, those States which were not parties but signatories to the OST at the time when the Bogotá Declaration was concluded (Indonesia, Zaire and Colombia) violated the international obligations stemming from the CIL and, particularly, Article 18 of the VCLT. This provision imposes interim obligations on States “to refrain from acts which would defeat the object and purpose of a treaty” between the time of signature and that of ratification.²²⁸ Although the VCLT was adopted on May 23, 1969 and entered into force on January 27, 1980, Article 18 of the VCLT is a codification of rule of CIL.²²⁹ Therefore, these States were obliged to refrain from acts which would defeat the object and purpose of treaty. However, they breached CIL by concluding the Bogotá Declaration.

Section 4(4) of the Bogotá Declaration provides that, due to a lack of definitive definition for outer space, Article II of the OST should not be applicable to GEO and, therefore, does not affect the equatorial States that party to the OST.²³⁰ In other words, the Bogotá Declaration excluded GEO from the any definition of outer

²²⁵ See Status of International Space Agreements, *supra* note 100; UN Treaties, OST Participants’ Statuses/Actions, <https://treaties.un.org/Pages/showDetails.aspx?objid=0800000280128cbd>.

²²⁶ See *id.*

²²⁷ See *id.*

²²⁸ VCLT, *supra* note 63, art. 18.

²²⁹ Martin A. Rogoff, *The International Legal Obligations of Signatories to an Unratified Treaty*, 32 ME. L. REV. 263, 284 (1980); Dyllan Moreno Taxman, *Unratified Treaties and Signatory Obligations: A Conceptual Solution*, 50 U. MEMPHIS L. REV. 137, 145 (2020); Restatement (Fourth) of Foreign Relations Law § 304, Reporters’ Note 8 (A.L.I. 2018).

²³⁰ Bogotá Declaration, *supra* note 219, § 4(4).

space through obscure arguments. This might be seen as an argument to avoid the discussion regarding the persistent objector status of party States to the Bogotá Declaration at all. However, the author is of the view that there is no agreed definition regarding where outer space starts and ends, thus GEO cannot be excluded from outer space by using the argument laid down in the Bogotá Declaration.

The representative of Colombia expressed the opinion that the provisions of the OST do not bind Colombia as treaty provisions or norms of CIL.²³¹ Regarding treaty provisions, the argument of Colombia is that it has not been a party to the OST.²³² Regarding norms of CIL, Colombia did not consider provisions of the OST binding on it because, it claimed, the Colombian government and its international actions had been very clear and emphatic in rejecting the argument.²³³ However, after this statement, Colombia accessed to the OST in 1984.²³⁴

Lastly, those States which are neither parties nor signatories to the OST at the time when the Bogotá Declaration was concluded (Congo and Kenya) might be persistent objectors to the non-appropriation principle since Article II of the OST has attained the status of CIL. Although there is no exact time when Article II of the OST attained the status of CIL, the status of Congo and Kenya may be evaluated as persistent objectors to the non-appropriation principle during its formation as CIL.

As categorized above, at the time when the Bogotá Declaration was concluded, Brazil, Ecuador and Uganda were bound by Article II of the OST due to their status as State Parties to the OST. Indonesia, Zaire and Colombia were imposed interim obligations due to their status of signatories to the OST; Congo and Kenya were neither parties nor signatories to the OST. As a result, only Congo's and Kenya's claims do not constitute a violation of the international law. Moreover, they may attain the persistent objector status to the

²³¹ U.N. Comm. On the Peaceful Uses of Outer Space, 32nd Sess., 173d mtg. at 56, U.N. Doc. A/AC.105/PV.173 (July 21, 1977).

²³² *Id.*

²³³ *Id.* at 57.

²³⁴ Status of International Space Agreements, *supra* note100; UN Treaties, OST Participants' Statuses/Actions, <https://treaties.un.org/Pages/showDetails.aspx?objid=0800000280128cbd>.

non-appropriation principle. However, Kenya lost its status as a persistent objector by accessing the OST in 1984.²³⁵

iii. Peaceful Purposes

The Cold War origins of space law may raise questions on the purposes of space activities. At the beginning of the space race, both the US and the USSR explored the possibilities of rocket technologies.²³⁶ They both had obtained nuclear weapon capabilities and saw the other's technology as a threat to their own existence.

There is a long-standing emphasis on the idea that space activities are conducted for peaceful purposes at the UN level. The term *peaceful purpose* frequently appears throughout space law instruments including the five UN space treaties, UNGA resolutions and national legislation.²³⁷

Article IV of the OST prohibits the placement of nuclear weapons or any other kinds of weapons of mass destruction in orbit around the Earth, on celestial bodies or in outer space and states these entities shall be used "exclusively for peaceful purposes."²³⁸ There is a debate on the definition of peaceful purposes. While some States and scholars define it as non-military, others consider it as only non-aggressive.²³⁹ The prevailing opinion is that the norm of peaceful purposes is violated by aggressive conduct.²⁴⁰ According to this view, if a military activity pursues non-aggressive purposes, such an activity does not violate the obligation to conduct space activities for peaceful purposes.²⁴¹ However, advocates of opposing opinions argue that all military activities carry non-peaceful

²³⁵ *Id.*

²³⁶ *Space Race: Military Origins of the Space Race*, SMITHSONIAN NAT'L AIR & SPACE MUSEUM (2002), <https://airandspace.si.edu/exhibitions/space-race/online/sec200/sec200.htm>.

²³⁷ *E.g.* All preambles of the five UN Space Law Treaties except the Moon Agreement; OST, *supra* note 7, arts. IV, IX, & XI; Moon Agreement, *supra* note 187, art. 3; G.A. Res. 1721 (XVI), at 6 (Dec. 20, 1961); G.A. Res. 51/122, at 2 (Feb. 4, 1997); 42 U.S.C. § 2451; U.K. *Outer Space Act of 1986* (c. 38) § 5(2)(e)(ii).

²³⁸ OST, *supra* note 7, art. IV.

²³⁹ *See* P.J. Blount, *Space Security Law*, in OXFORD ENCYL. OF PLANETARY SCIENCES (2018).

²⁴⁰ CARL Q. CHRISTOL, *SPACE LAW: PAST, PRESENT AND FUTURE* 17 (1991); *See* Stephan Hobe, *The Meaning of Peaceful Purposes in Article IV of the Outer Space Treaty*, 40 ANNALS AIR & SPACE L. 9, 17 (2015).

²⁴¹ *See* Hobe, *supra* note 240, at 12.

purposes in their nature and thus they are aggressive.²⁴² From a practical point of view, space has been used for military activities since the beginning of the space era.²⁴³

Pursuant to Article III of the OST, international law, including the UN Charter, applies to space activities. Article 2(4) of the UN Charter has relevance to peaceful purposes because it provides that States are obliged to “refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any State, or in any other manner inconsistent with the Purposes of the United Nations.”²⁴⁴ The term *peaceful purposes*, within the meaning of customary international space law, covers Article 2(4) of the UN Charter and specific space law norms that aim to reduce the risk of international conflict.²⁴⁵ Non-aggressive use, the prohibition of weaponization and the non-appropriation principle may be examples of such space law norms.

One of the greatest threats to peaceful purposes is anti-satellite (ASAT) tests. Although a *communis opinio* support the legality of ASAT tests, they pose a threat to the space environment and the safety and security of space objects by creating an enormous amount of space debris.²⁴⁶ The author is of the view that, despite a *communis opinio* on the legality of ASAT tests, the consequences of such tests may lead to international conflict. Therefore, ASAT tests should constitute a violation of customary international space law on peaceful purposes.

IV. PROSPECTIVE EVOLUTION OF CUSTOM’S ROLE IN INTERNATIONAL SPACE LAW

A. *Prospective Role of Custom in Space Law*

The most recent space law treaty, the Moon Agreement, was only ratified by a small number of countries, most of which are not major spacefaring nations.²⁴⁷ Even though existing treaties have established the fundamental principles and guidelines, new

²⁴² See *id.* at 10.

²⁴³ See Freeland, *supra* note 91, at 37; See also Hobe, *supra* note 240, at 12.

²⁴⁴ UN Charter art. 2, ¶ 4.

²⁴⁵ See MASSON-ZWAAN & HOFMANN, *supra* note 131, at 67; Blount, *supra* note 239.

²⁴⁶ See Hobe, *supra* note 240, at 17-18.

²⁴⁷ See Status of International Space Agreements, *supra* note 100.

circumstances such as advances in technology and the increasing involvement of private commercial entities in space activities bring along new legal problems. Existing treaties may become insufficient to meet these new needs. In addition, there is no guarantee that the adoption of new treaties is feasible in the first place. Even if there was an attempt to conclude a space law treaty, there would be a possibility that, similar to the Moon Agreement, the participation rate would be low. Thus, it is unlikely that there will be a new space law treaty concluded between a large number of States in the near future. Nonetheless, the law-making process in space law does not halt.

The nature of space law instruments seems to be shifting from binding treaties to non-binding principles, guidelines and codes of conduct. These non-binding instruments are not new in space law. However, taking this trend in space law into account, non-binding legal instruments may take a central role in space law. Moreover, with evidence of State practice and of *opinio juris*, these non-binding legal instruments may have attained the status of CIL. As a consequence, legal instruments that are non-binding initially may eventually gain a binding nature.

Between the 1980s and 1990s, the UNGA adopted non-binding principles in specific areas of space law: Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting,²⁴⁸ Principles Relating to Remote Sensing of the Earth from Outer Space²⁴⁹ and Principles Relevant to the Use of Nuclear Power Sources in Outer Space.²⁵⁰ Moreover, the Declaration of International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States, Taking into Particular Account the Needs of Developing Countries can be included in these principles.²⁵¹

Starting from early 2000, the UNCOPUOS concluded non-binding guidelines on more technical aspects of space law, such as on the launching State,²⁵² registration and national space legislation.²⁵³ Except for the Direct Broadcasting Resolution, all

²⁴⁸ G.A. Res. 37/92 (Dec. 10, 1982).

²⁴⁹ G.A. Res. 41/65 (Dec. 3, 1986).

²⁵⁰ G.A. Res. 47/68 (Dec. 14, 1992).

²⁵¹ G.A. Res. 51/122 (Dec. 13, 1996).

²⁵² G.A. Res. 59/115 (Dec. 10, 2004).

²⁵³ G.A. Res. 62/101 (Dec. 17, 2007); G.A. Res. 68/74 (Dec. 11, 2013).

Resolutions have been adopted by consensus.²⁵⁴ Moreover, the UNGA has approved technical guidelines on orbital debris,²⁵⁵ nuclear power sources²⁵⁶ and long-term sustainability of outer space activities.²⁵⁷

The tendency to develop non-binding legal instruments is also occurring outside of the UN. Such examples are codes of conduct, which are the result of efforts external to the UN,²⁵⁸ aiming to create rules of the road for space activities.²⁵⁹ A code of conduct can be considered as “an ultimate goal in itself, or as a stepping stone toward a legally binding treaty.”²⁶⁰ Some issues for which codes of conduct for space activities provide voluntary guidelines include preventing outer space from becoming an area of conflict, mitigating orbital space debris, minimizing harmful interference of peaceful exploration of other States, streamlining notification of space activities and bolstering space situational awareness.²⁶¹

Non-binding legal instruments, within the UN system and externally, may lead to State practice and *opinio juris*. These instruments may also be considered evidence of State practice and *opinio juris*. With sufficient evidence of State practice and of *opinio juris*, these non-binding space law instruments may eventually evolve into CIL, thus becoming binding.²⁶²

In draft reports of the UNCOPUOS, it was expressed that non-binding UNGA instruments may become more valuable through use and practice and that they can be evidence of a rule of CIL.²⁶³

²⁵⁴ See G.A. Res. 37/92 (Dec. 10, 1982).

²⁵⁵ *Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space* (2010), https://www.unoosa.org/documents/pdf/psa/bsti/COPUOS_SPACE_DEBRIS_MITIGATION_GUIDELINES.pdf [hereinafter *Space Debris Mitigation Guidelines*].

²⁵⁶ Comm. on the Peaceful Uses of Outer Space, Safety Framework for Nuclear Power Source Applications in Outer Space, U.N. Doc. A/AC.105/934 (May 19, 2009).

²⁵⁷ Comm. on the Peaceful Uses of Outer Space, Rep. of the Comm. on Its Sixty-Second Session, Annex II, U.N. Doc A/74/20 (2019) [hereinafter *LTS Guidelines*].

²⁵⁸ See LYALL & LARSEN, *supra* note 102, at 479.

²⁵⁹ See *id.*

²⁶⁰ Wolfgang Rathgeber, Nina-Louisa Remuss & Kai-Uwe Schrogl, *Space security and the European Code of Conduct for Outer Space Activities*, Disarmament Forum (No. 4, 2009), 33, 34.

²⁶¹ See LYALL & LARSEN, *supra* note 102, at 479; See Wessel, *supra* note 118, at 296.

²⁶² See MASSON-ZWAAN & HOFMANN, *supra* note 129, at 42, 50, 51 and 115.

²⁶³ Comm. on the Peaceful Uses of Outer Space, Draft Rep. on Its Fifty-Seventh Session, ¶¶ 16, 18, U.N. Doc. A/AC.105/C.2/L.304/Add.5 (Apr. 19, 2018).

Moreover, Professor Lyall and Professor Larsen claim that certain elements laid down in and repeated in UNGA resolutions about outer space related matters and followed by States constitute elements of CIL.²⁶⁴ The latter even made a specific reference to compliance of spacefaring States with these instruments.²⁶⁵

There are many issues guided by legally non-binding UN Documents in space law.²⁶⁶ For those which are concluded outside of the UN system, proponents claim that provisions of codes of conduct may also eventually become CIL, depending on how many States agree to abide by such codes of conduct.²⁶⁷ However, there is another view that nonbinding instruments are unlikely to become CIL.²⁶⁸

B. An Examination on CIL Potential to Selected Non-Binding Space Law Instruments

i. State Practice

The widespread and consistent State practice in compliance with non-binding space law instruments is an important element to evaluate those instruments CIL potential. Many States implement these non-binding legal instruments into their national space law, which constitutes State practice.²⁶⁹ For example, a national space law may require private entities to comply with the Debris Mitigation Guidelines as a qualification for gaining a license.²⁷⁰ Therefore, State practice that complies with the recent non-binding instruments, such as the Debris Mitigation Guidelines and the LTS Guidelines, may eventually constitute the material element of CIL.

The Remote Sensing Principles were implemented over 30 years ago.²⁷¹ As discussed above, time may not be a determinant factor, but it may be used as evidence of consistent State practice. The number of States that have capability of remote sensing

²⁶⁴ See LYALL & LARSEN, *supra* note 102, at 45.

²⁶⁵ *Id.*; See also North Sea Continental Shelf, 1969 I.C.J. at 42, ¶ 73.

²⁶⁶ E.g. Remote Sensing Principles, *supra* note 114; Space Debris Mitigation Guidelines, *supra* note 255; LTS Guidelines, *supra* note 257.

²⁶⁷ See Rathgeber, Remuss & Schrogl, *supra* note 260, at 35-37.

²⁶⁸ See Wessel, *supra* note 118, at 298; see also discussion *infra* Section IV. B.ii.

²⁶⁹ See Wessel, *supra* note 118 at 297.

²⁷⁰ See MASSON-ZWAAN & HOFMANN, *supra* note 131, at 115.

²⁷¹ See Remote Sensing Principles, *supra* note 114.

activities has inevitably increased over time. Some of the Remote Sensing Principles have been incorporated in various domestic laws and policy, such as the US, Canada and Japan as well as in programs, such as Radarsat, ERS 1 and 2.²⁷² However, there is a debate on its CIL status. There is a view that some of Remote Sensing Principles reflect CIL.²⁷³ Professor Lyall and Larsen do not consider the Remote Sensing Principles, *in toto*, as CIL.²⁷⁴ Further, some States' laws, including the US, France and India, indicate their own *opinio juris* by deviating from some principles laid down in Remote Sensing Principles.²⁷⁵

ii. Opinio Juris

The OST attempted to provide a legal ground for new legal issues in the absence of binding rules and practice.²⁷⁶ It was formulated by consensus of UNCOPUOS member States. UNCOPUOS, as a *permanent* committee, initially comprised of 24 member States but has substantially expanded.²⁷⁷ By the time the OST was adopted UNCOPUOS had grown to 28 member States.²⁷⁸ The consensus reached for this adoption was, therefore, only the consensus of that rather small number of States, viewed from a global perspective. Therefore, some scholars claim that rules agreed upon by international conferences, except for articulation of pre-existing rules of CIL, are based on negotiations, their terms being formed to not reflect true *opinio juris*, but merely existing interests of party States.²⁷⁹

However, the consensus at UNCOPUOS level has gained the ability to be qualified as evidence of *opinio juris* with a significant increase in the number of member States. The non-binding legal instruments are products of a long negotiation process and every dissenting opinion during their development required a review of the drafts until unanimity was reached. It means that at the end of

²⁷² Joanne Irene Gabrynowicz, PROC. U.N./INT'L INST. AIR & SPACE L. WORKSHOP ON CAPACITY BUILDING IN SPACE LAW, at 310 (2003).

²⁷³ See Int'l L. Ass'n Space L. Comm., 2012 Conf. Rep. at 3-4.

²⁷⁴ See LYALL & LARSEN, *supra* note 102, at 370.

²⁷⁵ See MASSON-ZWAAN & HOFMANN, *supra* note 131, at 175.

²⁷⁶ *Id.* at 69-70.

²⁷⁷ UNCOPUOS Membership Evolution, *supra* note 94.

²⁷⁸ See *id.*

²⁷⁹ See LYALL & LARSEN, *supra* note 102, at 69.

this negotiation all member States were convinced of the final version of the legal document. Consensus can thus be seen as evidence of *opinio juris*.

Another view is that non-binding legal instruments failed to meet the *opinio juris* requirement.²⁸⁰ The arguments of this view are that there would not be a belief that they would be legally obligatory.²⁸¹ The Space Debris Mitigation Guidelines and the Safety Framework for Nuclear Power Source Applications in Outer Space become more relevant to this discussion, considering that they contain clear statements that they are not binding in their texts.²⁸² The author is of the view that these statements do not preclude the emergence of the legal sense of obligation in the future. Moreover, many States apply these instruments to their space activities by means of national legislations. Implemented instruments should be considered State practice and a clear indication that States consider them legal obligations that must be followed.

V. CONCLUSION

From the brief analysis of this paper, it can be concluded that the role and importance of custom in space law is changing. It appears evident that the established UN space treaties have either become insufficient to tackle existing space-related problems or have become totally incoherent. To address these issues, attempts should be made at establishing a new international regime to overhaul the existing treaties, which have become invalidated. However, following the lack of political will to implement, on an international level, binding treaties for space; the usage and acceptance of soft law and national legislations seems to be the best option. With the participation of State practice and *opinio juris*, soft law may eventually become legally binding through its development as custom.

As of today, the role of custom has been limited and controversial in space law. Fundamental principles laid down in the OST, with the specific focus on space freedoms, the non-appropriation principle and peaceful purposes, have attained the status of CIL.

²⁸⁰ See Wessel, *supra* note 118, at 298.

²⁸¹ *Id.*

²⁸² *Id.*

There is widespread and representative participation, including from all spacefaring countries, in the treaty. State practice has been extensive and virtually uniform in the sense of the provisions invoked. The treaty has been taken as a basis for almost all space law instruments.

The CIL status of these fundamental principles laid down in the OST has consequences for both party and non-party States. For party States, even if they withdraw from the treaty, they will still be bound by these provisions of the OST as they remain customary rules. For non-party States, even if they do not have treaty obligations, they are bound by these provisions by means of CIL.

For the prospective role of custom in space law, UN principles, resolutions and guidelines on space activities are strong candidates for becoming customary international space law. During the negotiation period, States express their opinion on the matter and these documents are generally adopted by consensus. They are evidence of both State practice and *opinio juris*. Many States, including spacefaring ones, implement these non-binding legal instruments into their national legislations which relate to their space activities. Furthermore, legal instruments which are concluded outside of the UN system, such as codes of conduct, may also gradually become customary international space law, if they meet certain requirements. Even if their non-binding nature is explicitly highlighted in their texts, the sense of obligation may eventually emerge. Therefore, relying on the *non-binding expression* in the texts is not a sufficient argument to claim that non-binding space law instruments will never become CIL.

As a last point, States' reactions to the Artemis Accords and the Building Blocks are worth following for their prospective contribution in custom. They may cause a change in an existing customary rule and contribute to the emergence of a new customary rule.