

Does the End Justify the Means?

A Legal Study on the Role and Consequences of Normative Pluralism in International Space Governance

*Alexander Soucek and Jenni Tapio**

Abstract

The exploration and use of outer space, an area beyond national jurisdiction, is subject to international legal norms: a multilateral effort since more than half a century. However, the pressure on solutions facilitated or enabled by public international law is augmenting, not least because of new space actors, novel ideas to use and explore outer space and the increasingly ubiquitous concern of maintaining the long-term sustainability of spaceflight. Different actors produce standards, best practices, guidelines and other governance tools; beyond COPUOS, various initiatives of different character by industry and other actors have emerged, in particular in the area of sustainable uses of outer space. This article explores the place and effects of normative pluralism and non-legally binding norms of behaviour in global space governance from a perspective of international law.

Keywords: space law; space governance; normative pluralism; soft law; national space law

1. Introduction

The governance¹ of space activities is traditionally handled by established public mechanisms. Among those mechanisms, law plays an important role in alleviating uncertainty by setting binding behavioural norms. Law is,

* Alexander Soucek, European Space Agency (ESA), Paris, France/Noordwijk, The Netherlands, alexander.soucek@esa.int.

Jenni Tapio, Ministry of Economic Affairs and Employment of Finland, Finland, jenni.tapio@helsinki.fi.

1 Governance, “the act or process of governing or overseeing the control and direction of something (such as a country or an organization)”; Merriam-Webster.com. 2020, available at <https://www.merriam-webster.com> (accessed 7 September 2020).

however, not without alternatives. The space sector is increasingly influenced by non-governmental actors and private tools and processes,² which are contributing to the creation of a multi-layered system of norms³ and normative orders that can be referred to as ‘global space governance’.⁴

The use of non-legally binding tools – like standards, guidelines or best practices – in space governance brings flexibility but raises practical questions that are often intertwined with legal theory: How can one best avoid uncertainty and fragmentation in the regulation of space activities? What should be the role, character and consequences of these ‘informal’ technical, industrial and policy-related norms? Can law be *replaced* by non-legally binding instruments in order to steer or justify behaviour? Can such alternatives deliver the desired result without a binding legal effect and enforcement?

Loosely following the concept and method of ‘normative pluralism’,⁵ this article aims to:

- a) identify *effects and consequences* of normative pluralism in global space governance; and
- b) discuss those in the context of *normative coherence and effectivity*, two postulated guiding principles for the further development⁶ of space law.⁷

2 Edward Peter Stringham, *Introduction*, 1-6, in *Private Governance: Creating Order in Economic and Social Life* (Oxford University Press, 2015).

3 For the purposes of this article, the term ‘norm’ is used in a wide sense to mean “prescriptions (ought-phrases) as opposed to descriptions” Peters, Anne and Pagotto, Isabella, 4, *Soft Law as a New Mode of Governance: A Legal Perspective* NEWGOV: New Modes of Governance, (February 28, 2006). Available at SSRN: <http://dx.doi.org/10.2139/ssrn.1668531> (accessed 7 September).

4 For a comprehensive overview of the different space governance mechanisms see R.S. Jakhu & J.N. Pelton (eds.), *Global Space Governance: An International Study*, Chapter 2, 2017 Springer International Publishing; There is no universally accepted definition of ‘Global Space Governance’ or ‘Space Governance’, sometimes different terms are used to refer essentially to the same matter, e.g. the ‘UNISPACE+50 thematic priority 2’ refers to the legal aspects as “The legal regime of outer space governance” United Nations Office for Outer Space Affairs, UNISPACE+50 thematic priorities, https://www.unoosa.org/documents/pdf/unispace/plus50/thematic_priorities_booklet.pdf (accessed 7 September, 2020); In the absence of a set definition for ‘space activities’ in international law, and depending on the context and the national space policies, this term may include also a variety of activities that are dependent on space assets, but do not necessarily take place in outer space (i.e. purely terrestrial activities). The elements of this term for the purposes of this article are further developed in the third chapter of this article.

5 See especially *Normative Pluralism and International Law, Exploring Global Governance* (Jan Klabbbers, Touko Piiparinen eds, Cambridge University Press, Cambridge, 2013).

2. 'Normative pluralism': Definition and use of the term in the context of this article

The concept of 'normative pluralism' looks at the interaction between law and other (social) norms. In doing so, it draws attention to the relationship between law and different types of alternatives to law (*soft law*, *non-law*, *extra-legal*, *non-legally binding*) as standards of evaluating acceptable behaviour. It provides a practice-oriented method of researching and understanding global complexity;⁸ its founding idea is that "behaviour can be evaluated from the perspectives of a variety of normative orders or normative control systems and thus, importantly can also be justified from a variety of such perspectives."⁹

Normative pluralism arises in situations where public governance is seen as "imperfect"¹⁰ and does not meet expectations or needs. This can be said to be one of the reasons for the prevalent normative plurality in space governance. In addition to the decline in treaty-making after the conclusion of the Moon Agreement,¹¹ there is a need for technical expertise and guidance, especially when it comes to the practical details of regulation.¹² Spaceflight is a complex endeavour requiring interdisciplinary knowledge: the 'what', and even more

-
- 6 "Development implies three aspects: to complement, to enforce and to improve." A.A. Cocca, *A Way To Complement, Enforce And Improve The Space Treaty And Related International Instruments Of Space Law*, 36, in *Emerging and Future Supplements to Space Law Specifically in the Context of the International Space Year IISL Proceedings 1992*, Issue 1, Eleven International Publishing.
 - 7 This article does not attempt to categorize every non-legally binding instrument, but rather to provide examples of the diversity of the instruments in order to help to discuss their consequences. For comprehensive account on various aspects of 'soft law' in the context of space activities, see *Soft Law in Outer Space: The Function of Non-binding Norms in International Space Law* (I. Marboe ed., Böhlau Verlag, Wien, 2012).
 - 8 Touko Piiparinen, *Exploring the Methodology of Normative pluralism in the Global Age*, 55, in *Normative Pluralism and International Law, Exploring Global Governance*, Cambridge University Press, 2013 (Jan Klabbers, Touko Piiparinen eds.).
 - 9 Jan Klabbers and Touko Piiparinen, *Normative Pluralism: An Exploration*, 14, in *Normative Pluralism and International Law, Exploring Global Governance*, Cambridge University Press, 2013 (Jan Klabbers, Touko Piiparinen eds.).
 - 10 Edward Peter Stringham, *Introduction*, 3 in *Private Governance: Creating Order in Economic and Social Life* (Oxford University Press, 2015.)
 - 11 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, entered into force 11 July 1984; 1363 UNTS 3 (hereinafter the 'Moon Agreement').
 - 12 Discussion with reference to technical specialization in public international law in Martti Koskenniemi, *The Fate of Public International Law: Between Technique and Politics*, 3-4, *The Modern Law Review* (2007) 70(1) MLR 1-30; It should be noted that space law, understood to comprise of international and national space law, is already a pluralist regime of different level of legal rules. The mix of norms of today is created when different non-legal elements are added in the governance equation.

so the ‘how’, in regulating human space activities is not only a legal question, but also a technical, mathematical or scientific one.¹³ How a specific problem is framed has a bearing on whether it is seen as requiring principally technical or legal responses, or both.¹⁴

The promulgation of non-legally binding instruments is not a novelty in space governance. Since its inception, the treaty-based body of space law has been developed further by United Nation’s (‘UN’) resolutions – these are non-legally binding instruments that have supplemented¹⁵ treaty obligations by providing further precision.¹⁶ However, none of these resolutions alters the existing legal framework, nor do they provide authoritative legal interpretation of treaty terms and obligations. A different path is the development of non-legally binding instruments that are referred to as ‘guidelines’ or ‘standards’. These instruments often carry policy or technical content. For practical reasons, they seem to have partially substituted law making under the auspices of the UN Committee on the Peaceful Uses of Outer Space (‘COPUOS’).

13 This can be witnessed in fields like space debris mitigation and remediation, planetary protection or planetary defence.

14 Discussion with reference to public international law and the consequences on whether a question is described as predominantly an environmental or trade question, Martti Koskenniemi, *The Fate of Public International Law: Between Technique and Politics*, 5, *The Modern Law Review* (2007) 70(1) MLR 1-30; However, even if there was agreement that law would be the most suitable governance tool in a given situation, there is no guarantee of success: law-making may be side lined due to practical considerations of time or complexity, particularly at international level.

15 Especially in this context, see the annual ‘omnibus resolutions’ pertaining to international cooperation in the peaceful uses of outer space adopted yearly by the UN General Assembly; the ‘Principles resolutions: Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space, UNGA Res A/RES/18/1962 (13 Dec. 1963), Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting, UNGA Res A/RES/37/92 (10 Dec. 1982), Principles Relating to Remote Sensing of the Earth from Outer Space, UNGA Res A/RES/41/65 (3 Dec. 1986), Principles Relevant to the Use of Nuclear Power Sources in Outer Space, UNGA Res A/RES/47/68 (14 Dec. 1992), Declaration on 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, UNGA Res A/RES/51/122 (13 Dec. 1996); and the ‘Practice Resolutions’: Recommendations on National Legislation Relevant to the Peaceful Exploration and Use of Outer Space, UNGA Res A/RES/68/74 (11 Dec. 2013) (the ‘National Space Law Resolution’); Application of the Concept of the ‘Launching State’, UNGA Res A/RES/59/115 (25 Jan. 2005) (the ‘Launching State Resolution’); and Recommendations on Enhancing the Practice of States and International Intergovernmental Organizations in Registering Space Objects, UNGA Res A/RES/62/101 (10 Jan. 2008) (the ‘Registration Practice Resolution’).

16 See category iv. in section 3.2.

Consequently, the choice to look at normative pluralism through the lenses of ‘global space governance’ instead of ‘international space law’ in this article is deliberate. The risk of normative fragmentation and, therefore, uncertainty is not primarily a question of legally binding versus non-legally binding norms. It is rather a question of effectiveness of the instruments: their ability to steer the behaviour of space actors.¹⁷ Can a decentralized governance system effectively regulate spaceflight?

3. Normative pluralism in modern space governance

3.1. Reflections on space law as the basis of space governance

For a long time, the *corpus iuris spatialis* consisted of little more than the five¹⁸ space treaties adopted within the framework of the United Nations. Over time, however, this picture has become considerably more complex. Today, both legal and non-legal norms devised by a variety of actors in different fora make up what is referred to as ‘global space governance’. This development has given rise to more differentiated definitions of what ‘space law’ actually is, or denotes.

A traditional, narrow approach sees space law as the sum of legal norms pertaining to the exploration and use of outer space, irrespective of the legal sphere in which such norms materialize: public international law, private international law, national law or private law. Vladimir Mandl, author of the first “doctrine of space law”¹⁹ in 1932, “considered relevant issues of civil law, public law and international law”²⁰ in his attempt to deduct legal rules by analogy for a domain that had not yet emerged.

A wider and more recent approach is the extensive interpretation that ‘space law’ would encompass norms of behaviour even if the latter materialize outside the legal sphere, i.e. do not constitute legal norms *per se*.²¹ In a domain where international law-making has come to a standstill decades ago, where national law-making is on the rise, and the subject matter is undergoing profound changes, questions of definition and reference are

17 Tapio, Jenni and Soucek, Alexander, *National Implementation of Non-Legally Binding Instruments: Managing Uncertainty in Space Law?* Air & Space Law 44, no. 6 (2019): 565–582. 2019 Kluwer Law International BV, The Netherlands.

18 Some States spoke from the outset, and do so until today, of *four* treaties, not counting for the Moon Agreement due to its limited acceptance.

19 Kopal, V., *Evolution of the Doctrine of Space Law*, in: N. Jasentuliyana (ed.), *Space Law: Development and Scope*, Praeger Publishers: 1992, p.18-19.

20 Ibid.

21 “The “space law” today appears still as being more and more fragmented, more and more fragile and more and more difficult to define (none agreed definition exists)”, Gabriel Lafferranderie, *Basic Principles Governing the Use of Outer Space in Future Perspective*, 8, in *Space Law: Current Problems And Perspectives For Future Regulation* (M. Benkö/K.-U. Schrogl eds.). (Eleven International Publishing, 2005).

neither an exclusively theoretical nor dogmatic problem; they are closely tied to the object of regulation. This leads to the second constituent of ‘space law’: the term ‘space’ (‘outer space’). It does not describe the normative shell, but the material content, or reference point:

- a) the geographical place (“*outer space, including the Moon and other celestial bodies*”); and
- b) human activity taking place therein (“*the activities of States in the exploration and use of outer space*”).

Both elements being tied together under the same term has led to questions of definition and to confusion about the actual object of regulation: outer space itself, or space activities of States and individuals, or both. Similar questions could be, and have been, discussed about the meaning and extent of air law and maritime law.²² It is not inconceivable to think of a future distinction, at least in the sphere of public international law, between the ‘law of outer space’ and ‘spaceflight law’, or, in other words, between the geographical sphere of regulation (‘the stage’) and the activities regulated.

3.2. Categorization of norms in space governance: the five categories and the role of various elements

For the purposes of this article, the authors distinguish five sources of behavioural norms that arguably form elements of space governance:²³

- i. public international law;
- ii. national law;
- iii. private law (including private international law);
- iv. soft law made under the auspices of the UN; and
- v. soft law made outside the UN.²⁴

22 The distinction between ‘*air law*’ and ‘*aviation law*’ as well as the distinction between the ‘*law of the sea*’, ‘*maritime law*’, and ‘*admiralty law*’, shows that there are both different legal spheres and different objects of regulation at play.

23 This distinction is, as any categorization, to a certain extent arbitrary and does not represent a dogmatic differentiation but a practical distinction between sets of norms that play a role in space governance today; For a comprehensive overview of the different space governance mechanisms see R.S. Jakhu & J.N. Pelton (eds.), *Global Space Governance: An International Study*, Chapter 2, 2017 Springer International Publishing; See also UNISPACE +50, Thematic Priority 2: “Legal regime of outer space and global space governance: current and future perspectives” in UN office for Outer Space Affairs, *UNISPACE +50 Thematic Priorities Booklet*, available at: https://www.unoosa.org/documents/pdf/unispace/plus50/thematic_priorities_booklet.pdf (accessed 06 December 2020).

24 Technical and policy norms by different interest groups (nationally focused, sector/topic focused, international, etc., including here also industry self-regulation (e.g. ‘codes of conduct’, ‘corporate social responsibility’).

Behavioural norms are being concurrently developed within all these categories, raising questions relating to their respective authority and hierarchical relations. Not only do they differ, at times substantially, in their process of creation and content; they also belong to different normative orders, may address different actors and serve different purposes.

How is the individual space actor supposed to distinguish between them in practice? It must be recalled that a behavioural norm is never isolated but takes effect, and creates relations, within a broader context. It does not exist in a vacuum. Its circumstances and the process of its origin matter as much as its authors, its content and its addressees, as well as its impact and recognition.

In these regards, *law* is distinct and precise because its creation, application and interpretation follows established rules and procedures; this gives legal norms authenticity and reliability. In essence, law can be characterized as a system consisting of rules and principles²⁵ that can give rights or impose obligations to its subjects. The rationale for enacting law is to steer behaviour top-down towards a desired goal. In solving a recognized problem, law balances different interests relating to the subject matter. The author, or lawmaker, has recognized authority to create law. Law can be characterized by its binding and enforceable effect – as opposed to non-law.²⁶ Legal obligations have the advantage of bringing legal clarity and certainty as to the acceptable behaviour while providing for a level playing field for its subjects.

A practical advantage of law is the *ex-ante* and *ex-post* regulatory impact assessment tools available at the national level, which may on their part increase the effectiveness of the legal obligations by bridging the gap between the aim, and the means available in receiving the desired impact.²⁷ And finally: if not earlier, the balance of interests will be achieved in adjudication,

25 A 'normative order' "signifies a set of related commands, injunctions, "do's and don'ts" that stem from the same source or a multitude of similar sources", Jan Klabbers and Touko Piiparinen, *Normative Pluralism: An Exploration*, 21, in *Normative Pluralism and International Law, Exploring Global Governance*, Cambridge University Press, 2013 (Jan Klabbers, Touko Piiparinen eds.).

26 This binary view of law as opposed to non-law has been criticised of "black-and-white painting" and "over-simplification", which are not reflective of the current realities, for good overview of the general discussion see Peters, Anne and Pagotto, Isabella, 6-8, *Soft Law as a New Mode of Governance: A Legal Perspective* NEWGOV: New Modes of Governance, (February 28, 2006). Available at SSRN: <http://dx.doi.org/10.2139/ssrn.1668531> (accessed 7 September); also, it has been submitted that "soft law is within the penumbra of law" and therefore a rigid distinction of these may not be meaningful, in *ibid.* especially 12, and in the following investigation of 'European soft law', 13-22.

27 On regulatory impact assessments, see e.g. RegWatch Europe <https://www.regwatcheurope.eu/> (accessed 25 September 2020).

an institutionalized way of solving individual disputes applying the legal obligations to the facts of the case at hand.

Although the sphere of international law differs substantially from the domestic legal sphere, international law is still based on established rules and procedures. As a horizontal legal system by character, it must accommodate the interests of sovereign subjects of law and has, therefore, an inherent interest in flexibility and reconciliation. There is no single legal authority in international law. International legal norms are largely based on the will of sovereign States to be bound by such norms, formalized in accordance with the respective State's constitutional requirements. The authority to create and interpret it lies within the sovereignty of States. Societal consensus is what ultimately legitimates a norm; be that consensus enshrined in law, e.g. a national constitution or an international treaty, or established or recognized in a different way. To put the international legal requires in action, national implementation is required. This is no deficiency of the international legal system, but rather as one of its inherent characteristics.

Article VI Outer Space Treaty (the 'OST')²⁸ is a prominent example in this regard. In requiring its Parties to authorize and continuously supervise (national) activities of non-governmental space actors, it encourages legislative and executive action. These national tasks of interpretation and concretisation of the international framework are of great importance. They allow transposing these principles in an effective way and in accordance with a State's interests, at the same time preserving the core policy values and objectives included therein.²⁹ The development often referred to as 'NewSpace' has not only enriched the space arena,³⁰ but also has challenged the traditional approaches to interpreting the rules governing space activities.³¹

28 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, done on 27 January 1967, entered into force on 10 October 1967, 610 UNTS 205.

29 The OST was approved by unanimity in the UN General Assembly in 1966. Prior to that the text of the treaty was approved by COPUOS by consensus, a method of decision-making still in use. The importance of consensus in multilateral relations encompasses more than just the government representing the State, "Consensus reflects the will of each nation that participates in international assemblies and, therefore, the legal feeling of its own people. The sum of these wills is mankind's legal feeling." A.A. Cocca, *A Way To Complement, Enforce And Improve The Space Treaty And Related International Instruments Of Space Law*, 38, in IISL Proceedings 1992, Issue 1, Eleven International Publishing.

30 The 'global space economy' was valued at US\$ 360 billion in year 2019, representing a 3% growth since the previous year. Much of this value was concentrated in the provision of satellite services. <https://brycetech.com/downloads/SSIR-2019-2-pager.pdf> (accessed 7 September 2020).

31 Such as the issues relating to space traffic management or space resources.

Today, the UN space treaties remain the basis, or innermost core, of global space governance. However, they do not any longer provide exclusive and unequivocal guidance for the behaviour of their parties. Written over half a century ago, they enshrine principles, not detailed regulation; their content is selective, not comprehensive; and their interpretation is far from uniform.

Considering the pace of development in the space arena, ability to develop new ‘rules of the road’ has to exist.³² While treaty law has long been the preferred method at international level, non-legally binding instruments have emerged as alternative or substituting ways to “alleviate (if not overcome) *a lack of formal law-making capacity*”.³³ The choice of non-law to justify and steer behaviour may be seen as undermining the authority of law. Law becomes a choice among other choices – a ‘commodity’.³⁴ As a result, there is no one single entity in space governance possessing the authority to prescribe *the* standard for accepted behaviour.³⁵ Instead, a multitude of authorities emerge. They may have ‘principle-based’, ‘expertise-based’ or ‘capacity-based’ authority, but not the authority to make law; yet they define norms of behaviour in the exploration and use of outer space.³⁶

32 “One may easily understand that it is necessary in the future to add new texts to the previous ones, in order to approach new questions or to take into account new problems relating to former questions”, Pierre M. Martin, *Legislator Versus Interpreter: How Far is it Necessary to Supplement Space Law?* 97, *Emerging and Future Supplements to Space Law Specifically in the Context of the International Space Year IISL Proceedings 1992*, Issue 1, Eleven International Publishing.

33 Peters, Anne and Pagotto, Isabella, 5, *Soft Law as a New Mode of Governance: A Legal Perspective* NEWGOV: New Modes of Governance, (February 28, 2006). Available at SSRN: <http://dx.doi.org/10.2139/ssrn.1668531> (accessed 7 September).

34 Jan Klabbers, *Commodification of International Law*, 1 *Select proceedings of the European Society of International Law*, 341-58 (2006).

35 While one of dividing elements of law and types of non-law is usually the creator of these rules – the source, it should be noted that even in public governance law may not always the preferred method, even in cases where it is an option. The authority at national level, or the decision-makers in the international arena may make an informed decision to opt for other alternative means of governance instead of seeking a legally binding instrument, with legal obligations. Instead, the effects produced by the alternatives may be perceived as desired for various reasons.

36 Jan Klabbers and Touko Piiparinen, *Normative Pluralism: An Exploration*, 28 in *Normative Pluralism and International Law, Exploring Global Governance*, Cambridge University Press, 2013 (Jan Klabbers, Touko Piiparinen (eds.) citing the five kinds of authority in Global Governance used by Deborah D. Avant, Martha Finnemore and Susan K. Shell, “*Who Governs the Globe?*” in Deborah D. Avant, Martha Finnemore and Susan K. Shell (eds.), *Who Governs the Globe*, Cambridge University Press, 2010), 1-31.

3.3. **Diversification and ever more pluralism – the question of ‘non-legally binding instruments’**

The recent years in space law development have been characterized by an increasing – and, compared to the first decade, dramatic – diversification of space actors, technologies, objectives and entrepreneurial approaches: a profound change in the space landscape overall.³⁷ Fuelled by the need for regulatory guidance, the rise and diversification of national space legislation is the most noteworthy space law development of the last decade.

There is also a manifest trend in industry self-regulation and standardization.³⁸ Industrial standards and best practices are not novel, but as the role of industry as a space actor grows, industry takes on a more active role in shaping the behavioural aspects of spaceflight. One prominent field is the development of standards and best practices for on-orbit servicing.³⁹ Naturally, industry is guided by motivations different from those defining a national regulator’s path of action. Although industry might share some interests with the national authorities – for example when it comes to the safety of spaceflight – other interests might be opposed. The active interest and role of industry in setting spaceflight standards is a mixed blessing. Industry is inventing and driving business; it plays an important role for strengthening and securing of national interests;⁴⁰ and its own predominant interest is financial gain. Contrary to that, national space legislation has not only a regulatory impetus but also a space policy impetus, i.e. the component of strengthening national capabilities. Problems arise where the interest of the private sector is in conflict with regulatory objectives, or policy goals.

37 Today, the outer space is more accessible to non-State actors: we see a broad spectrum of activities, individuals, private, commercial, scientific, governmental, international, even with elements of a cold war reminiscent space race, large exploration initiatives, space stations side by side with Cubesats and other types of small satellites; mega-constellations, new human spaceflight and planetary exploration initiatives for the reflections of this trend on space policy and regulation see e.g. The Democratization of Space: New Actors Need New Rules Baiocchi, Dave; Welsch, William, IV . Foreign Affairs ; New York Vol. 94, Iss. 3, (May/Jun 2015): 98-104; Pekkanen, Saadia, *Governing the New Space Race*, *AJIL Unbound*, 113, 92-97 (2019).

38 Technical standards have accompanied the development of spaceflight ever since its beginning; but their role as ‘substitute’ norms of behaviour becomes increasingly recognised.

39 See e.g. the In-space Robotic Servicing Program of the U.S. Defense Advanced Research Projects Agency (DARPA), <https://www.darpa.mil/our-research> (accessed 20 September 2020).

40 See e.g. Article II lit.d and VII of the Convention for the establishment of a European Space Agency.

Finally, with geopolitical tensions on the rise,⁴¹ bilateral, hub-like or ‘minilateral’⁴² cooperation grows stronger; a recent example are the Artemis Accords.⁴³ While such instruments agreed upon in smaller circles may have advantages over lengthy international consensus making, they may create a certain silo effect. However, they may also be useful for sparking the rest of the community to respond, or advance the development of space governance.

4. Opportunities and challenges of normative pluralism in international space governance: an intra-article debate

4.1. Opportunities of normative plurality: more flexibility

Normative pluralism, beyond being the result of a factual development rather than a deliberate choice, can be a positive sign in a domain that is in dynamic transformation. The development of spaceflight has regained momentum. Diagnosing an increasing diversity in space governance may, therefore, first and foremost be owed to an overall dynamic, a community ‘alive’ and seeking behavioural guidance, rather than the down-side of stagnation and erosion of international law making. Possibly, however, it is owed to both developments – from different ends.

At the level of the COPUOS Legal Subcommittee, several new agenda items⁴⁴ became subject of multi-year exchanges. This development reinforces multilateral dialogue within the scope of the mandate of COPUOS to “study the nature of legal problems which may arise from the exploration of outer space.”⁴⁵ At the same time, there is an increasing demand in the ability of an international forum like COPUOS to provide solutions within a reasonable timeframe.⁴⁶ A third element is the steady increase in members of the COPUOS, and a diversification of observers, including new permanent

41 These tensions can have a negative influence on the effective work of international institutions, particularly so for a committee like COPUOS with its decision-making method of consensus.

42 I.e. among few State actors only.

43 The Artemis Accords are set of non-legally binding principles prepared by the US space administration relating to various aspects in space exploration, including exploitation of space resources. <https://www.nasa.gov/specials/artemis-accords/index.html> (accessed 30 September 2020).

44 E.g. on the application of international law to small satellites; legal aspects of space traffic management or potential legal models for activities in exploration, exploitation and utilization of space resources.

45 UN General Assembly Resolution 1472 (XIV) International co-operation in the peaceful uses of outer space, adopted on 12 December 1959, para. 1. lit. (b).

46 A demand at times foiled by the parallel demand for a careful preparation and process of leading debate, including clarity on the ultimate goal of such debate.

observers.⁴⁷ Finally, there is evidence of a ‘normative spill-over’ effect: norms produced outside COPUOS are either ‘transformed’ into instruments adopted under the auspices of the UN or being quoted or referred to in the debate.⁴⁸ While some members of COPUOS welcome or actively support this effect, others have expressed concerns with any such ‘outsourcing’. They worry about a lack of normative legitimacy of technical or academic bodies developing norms outside traditional forums and processes, or fear an erosion effect for the productiveness and relevance of the Committee itself.

A positive sign, in this respect, is the repeated and consistent reference to public international law in norms created outside the sphere of international law. This includes primarily – although least surprising – national space law. The context, legitimacy and rationale of legislative action in the field of space activities is linked to international law and the respective obligations. However, beyond the sphere of national law, the international law basis of space activities is also referred to in political documents and in non-legally binding instruments, even technical ones established outside the UN.⁴⁹ This shows a recognition of the fact that international space law, the OST in particular, remains the fundament on which normative action is ultimately based.

The increasing number of space actors interested in contributing to the creation of behavioural norms also brings along a better chance to keep up with the pace of technical and business development. Law making is an often lengthy, and detailed process; this is chiefly true for treaty making. However, producing technical standards and guidelines takes its time, too: the decade-long process that led into the adoption, in 2019, of the 21 Guidelines for the Long-term Sustainability of Outer Space Activities (‘LTS Guidelines’) by COPUOS⁵⁰ is an example.

47 Ranging from supranational and intergovernmental organisations to industry representation, academic institutions and non-governmental organisations.

48 Space debris mitigation in particular.

49 E.g. the Space Debris Mitigation Guidelines of the Inter-Agency Space Debris Coordination Committee (IADC) IADC-02-01, Revision 1, Sept. 2007 (hereinafter the ‘IADC Space Debris Mitigation Guidelines’); the ISO Standard 24113 on Space Debris Mitigation Requirements (hereinafter ISO Space Debris Mitigation Requirements’); Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space, endorsed by the UNGA in 2007 as an annex to the International Cooperation in the Peaceful Uses of Outer Space, UNGA Res A/RES/62/217 (22 Dec. 2007) (hereinafter the ‘COPUOS Space Debris Mitigation Guidelines’); but also the COSPAR planetary protection guidelines (currently approved version is of Mar. 2011), to name a few.

50 United Nations Committee on the Peaceful Uses of Outer Space, Guidelines for the long- term sustainability of outer space activities, report by the committee, annex ii, 2019. A/74/20, Jul 3 2019, http://www.unoosa.org/res/oosadoc/data/documents/2019/aac_105c_11/aac_105c_11_366_0_html/V1805022.pdf.; The LTS Guidelines were “welcomed with appreciation” by the UN General Assembly in the yearly ‘omnibus

The definition of norms of behaviour is also fuelled by, and allows for, a more efficient self-organization of actors. Industry standards and best practices can be created without the need to consider legal or political aspects. The Inter-Agency Space Debris Coordination Committee (IADC) is an example of a body able to take advantage of focusing on a technical substance matter relatively free from political influence.⁵¹ While law making is a very detailed process, especially at national level, and review mechanisms safeguard the necessary involvement of experts and interest groups at various levels, it is also legitimate for such groups to produce norms at their level and independently from a legislative process. The specialization of norm making provides an opportunity for more detailed content and, therefore, improved space governance.

Finally, cooperation between different expert groups allows for profiting from multi-disciplinary approaches and expertise; this can relate to the genesis of a norm (or set of norms), its content, its addressees or its overall objectives. Law making is not exclusive to lawyers; the need to understand the effect any law will have requires the participation of a broad range of other experts in every national law-making process. However, the more groups require coordination, the higher is the risk of uncertainty or conflict due to improper coordination or ambiguity over mandates, competences and influence. Two recent examples of non-legally binding instruments illustrate these effects:

- a) The genesis of the various SDM Guidelines⁵² reflects the possible path of a certain norm type across different spheres, from the genesis of technical content in an international, non-governmental technical body to the political consent to the respective normative content through a UNGA resolution up to the reference of such content in national space laws, thus ultimately piercing into the sphere of law (which, however, brings specific questions of normative referencing, clarity and certainty along.⁵³

resolution' pertaining to international cooperation in the peaceful uses of outer space, UN General Assembly, Resolution adopted by the General Assembly on 13 December 2019, seventy-fourth session, A/A/RES/74/82.

- 51 The IADC can be seen as a form of a self-organised body, where (governmental) space agency engineers of a group of 15 governmental and intergovernmental institutions come together under a semi-institutionalised mechanism to exchange on technical matters related to space debris mitigation and remediation. See <https://www.iadc-home.org/>.
- 52 The IADC Space Debris Mitigation Guidelines, the ISO Space Debris Mitigation Requirements, and the COPUOS Space Debris Mitigation Guidelines are together hereinafter referred to as the 'SDM Guidelines'.
- 53 Tapio, Jenni and Soucek, Alexander, *National Implementation of Non-Legally Binding Instruments: Managing Uncertainty in Space Law?* 2019.

- b) The LTS Guidelines are a multi-disciplinary product with very heterogeneous objectives, content and addressees, a ‘storage basin’ of important and partially urgent behavioural space related norms which could not be implemented differently due to the shortcomings of the international space law-making process identified above.

Ultimately, normative pluralism can be a sign of a healthy community, although it can also evidence the opposite, carrying the negative potential to increase uncertainty.⁵⁴

The discussion of models for space traffic management (‘STM’) as a form of further development of space law shows that normative pluralism is indeed proposed in order to enhance the flexibility of what is described as a rather static regulatory system today.⁵⁵ The 2018 International Academy of Astronautics Study on STM identifies, inter alia, insufficient mechanisms for private space actors, too complex and time-intensive law-making processed, institutional competition for norm-setting competences and the inherent flexibility of some forms of soft law as elements to be considered in this regard. It looks at the “ITU model” as a possible way out: a set of norms of different character and regulatory depth under one common chapeau anchored in international law, regularly reviewed by an institutional system involving private actors. This should bring more flexibility, more tailor-made norms, more regular (and rapid) review and therefore enhanced reactivity; at the same time, this underlines what is perceived as a key problem of current space law: normative reactions that come too late for managing behaviour in a fast-paced field of human activity.

4.2. Challenges of normative pluralism: more uncertainty

Even if a certain degree of ‘uncertainty’ is inherent in law, actors regulating, authorizing, supervising or carrying out space activities need clear, stable and predictable norms in order to uphold the role of rule of law, and to act in conformity with it. Where the processes and sources of norms are not formalized, or the ‘rules of the road’ are not available, uncertainty is created as to the acceptable standard of behaviour. The lack of regulatory clarity and predictability can translate into risks for individual space actors: arbitrary choices, uncertainty and lack of trust in other actors.

Regulation through voluntary behaviour and informal mechanisms based on a ‘give and take’⁵⁶ leads to governance system where the actors take

⁵⁴ For discussion, see section 4.2.

⁵⁵ See Space Traffic Management - Towards a Roadmap for Implementation, 5.15, Kai-Uwe Schrogl, Corinne Jorgenson, Jana Robinson, Alexander Soucek (eds.), International Academy of Astronautics (2018).

⁵⁶ Described as a system where actors accept some norms as governing their activities with the understanding that also other actors will have the same limitations, see e.g. Katrin Nyman Metcalf, *A Legal View on Outer Space and Cyber Space: Similarities*

responsibility up to the level of acceptable risk. Such a system may have advantages of inclusiveness, flexibility and reactivity; moreover, it does not require State involvement. However, without States involvement, can it be expected to adhere to the established principles of public international law?

Ensuring normative compliance, and limiting undesired ambiguity, are of fundamental concern to States, not least with respect to Articles VI and VII of the OST. In the light of a State's international obligations, as well as its desire to limit legal, financial and political risk, the setting of applicable standards of behaviour should not be left to arbitrary developments. States, carrying international responsibility and liability, should collectively decide what is considered responsible behaviour. The future of space activities depends on an organised space governance that can respond to challenges of a global nature, such as the long-term sustainability of space activities, in a coordinated and foresighted manner.

4.3. Looking at the challenges brought by uncertainty through a practical example

Space debris⁵⁷ poses a risk to the current and future operations in outer space, and to the 'outer space environment'⁵⁸ at large. Space debris mitigation provides for an example of regulation by predominantly voluntary guidelines and standard setting. The challenge with the growing number of space traffic, and the consequential increase in the space debris population, has prompted various technical and policy initiatives to ensure *responsible, sustainable and safe behaviour* in the conduct of space activities.⁵⁹

These instruments have typically been created to solve a practical technical problem, to ensure interoperability of systems or to highlight the importance of certain behaviour in carrying out space activities. However, it can be debated whether they have been discussed in a systemized manner from the perspective of global governance. The urgency to develop some of these instruments may have ultimately side lined a holistic and coordinated approach.

and Differences, 9-10, in *The Tallinn Papers no. 10* (NATO CCD COE on Strategic Cyber Security, 2018).

57 There is no agreed definition for space debris, here understood as: "man-made objects, including fragments and elements thereof, in earth orbit or re-entering the atmosphere that are non-functional". IADC 2013 edition, key definitions, file:///C:/Users/03140510/Downloads/IADC_Key_Definitions.pdf (accessed 25 September 2020).

58 "This environment is understood to contain all man-made objects, including fragments and elements thereof, which currently, or previously did, reside in an Earth bound orbit." ESA Space Environment Statistics (2019), available at <https://sdup.esoc.esa.int/discosweb/statistics> (accessed 25 September 2020).

59 See e.g. the different Law and Policy Options envisaged to further sustainable use of outer space, 38-41, in *Towards Long-term sustainability of Space Activities: Overcoming the Challenges of Space Debris. A Report of the Interdisciplinary Congress on Space Debris* (A/AC.105/C.1/2011/CRP.14).

The problem is evident both at the level of terminology and content. Each group of experts have a different understanding and perception as to terms, object, purpose and reach of these concepts, creating yet an additional layer of uncertainty in addressing a global problem.

The application, interpretation and enforcement of non-legally binding norms of behaviour raise important questions. The absence of international *legal* norms dealing with space debris mitigation, substituted by soft law that is partially incorporated or referenced in national legislation, may cause uncertainty effects⁶⁰ regarding:

- a) the national authorization process;
- b) the individual requirements imposed on a satellite operator;
- c) responsibility and third party liability; and
- d) the future development of legally binding norms.

The practical side of this normative uncertainty can be illustrated by the technique of normative referencing, whereby a domestic legislator, in a given national space law, cites an external norm, or set of norms, with the intention to make the latter a constitutive or conditional element of the law, however without repeating or translating its content into the law. This technique, of particular interest if the referenced norm is of a non-legally binding character, can be witnessed in recent national space laws, which regularly make reference to “internationally recognized guidelines and standards” as a requirement for granting authorizations to carry out space activities.⁶¹ Where a non-legally binding instrument is transformed into a legally binding one, room is left for the question who, ultimately, has the possibility and mandate to decide which of the instruments belong in the group of ‘international guidelines and standards’, and what impact such decision may have. It is at such confluence points that uncertainty can cause undesired effects and needs to be managed with care and attention. National legislators carry an important responsibility in identifying and interpreting international norms and making them applicable to (non-governmental) space actors. They also have to make sure that national space laws are compliant with the requirements of the national legal system and that obligations in those laws are measurable, verifiable and enforceable.

60 Alexander Soucek & Jenni Tapio, *Normative References to Non-legally Binding Instruments in National Space Laws: A Risk-benefit Analysis in the Context of Domestic and Public International Law in Proceedings of the International Institute of Space Law 2018*, 553-580 (Den Haag: Eleven International Publishing 2019).

61 Ibid.

5. Managing normative plurality in global space governance

*"The biggest challenge today is finding the best way to make a reality of all these principles."*⁶²

The challenges faced today in global space governance can be looked at from different angles: one of those is the State's perspective.⁶³ Both from the standpoint of public international law and domestic law, the State is in the centre of action. It has the possibility to take part in the development of space governance at both levels: as a sovereign and recognized subject of the international community; and as the competent regulator of national space activities. To the extent that the individual State, or the community of States at international level, opts for law as an instrument of space governance, it finds established and recognized practices and tools available to create norms of behaviour.

Where the option of law making is either not available or not pursued, non-legally binding instruments may be a valid alternative in order to establish norms of behaviour. However, the choice, creation and application of alternative options should not be random. In order for global space governance to fulfil its functions, a given norms must correspond to the governance objective linked to it; in other words: the instrument of choice must allow for an effective expectation management, particularly so where the objective is to steer the behaviour of regulators, or of individual space actors.

At the same time, the development of space governance must build on the foundation of space law without eroding that basis. Where the international legal foundation itself needs to be changed, this should only happen with the appropriate tools offered by international law itself, including treaty interpretation and subsequent practice.

Normative pluralism therefore also requires coordination and international cooperation. It is important to organize elements of global space governance in accordance with international law and in a manner that enhances clarity and certainty with regard to the subjects, objects and consequences of regulation.⁶⁴

62 José Monserrat, Filho, *Outer Space as Private Property and Theater of War?*, 133, in *Private Law, Public Law, Metalaw and Public Policy in Space*, (Sterns P., Tennen L. eds.) Space Regulations Library, vol 8. Springer (2016).

63 Other angles include e.g. those of the individual space actors as norm addressees.

64 "Harmonisation and cooperation must therefore be regarded as essential for space activities in the 21st century", requiring a "close harmonisation between international and national standards", S. Hobe, J. Neumann, *Global and European Challenges for Space Law at the Edge of the 21st Century*, *Space Policy*, 314, 313, Volume 21, Issue 4, November 2005, Pages 313-315.

Based on the discussion presented in this article, three prime recommendations for the effective management of normative pluralism in global space governance can be made:

1. **The importance of defining ‘the end’.** The purpose of regulation shall guide the choice of the instrument, not vice versa. The suitability and appropriateness of a norm type can only be decided in relation to the desired or required objective of regulation.
2. **The importance of avoiding arbitrary choices.** Normative pluralism should not mean arbitrary choices, or opting for the way of least resistance as a matter of principle. At the same time, it is to be understood as an opportunity to develop space governance in times and circumstances where international law making is difficult to achieve, and therefore often not available. The potential of ‘soft’ governance tools as precursors or facilitators for the development of law should be kept in mind.
3. **The importance of coordination.** Where multiple choices of governance tools are available, international coordination is key, particularly if the development of such tools takes place outside the traditional, institutional norm-setting sphere (e.g. through technical coordination bodies, academic institutions, think tanks, or lobbying groups).⁶⁵ A way of achieving better coordination may be to enhance the practice of working groups at the level of COPUOS to map and coordinate developments in space governance.

The end justifies the means is used as an expression to assert that the purpose of an action is so important that any way of achieving it is acceptable. Obviously, global space governance is differentiated and complex enough to offer several avenues to reach a desired objective – provided that the international community, or the national authority, could agree on the objective in the first place. The question, then, is what level of acceptance is adequate, and who is given the mandate or trust to work on the necessary ‘means’.

The most powerful tool might thereby not always be law. The space debris mitigation guidelines proof that an effective steering of behaviour can start from very different premises than setting international law. While the question of whether or not legally binding instruments for space debris mitigation should be developed, and if so, how, continues to be debated, technical expert bodies successfully created technical norms that have become internationally recognised: a regulatory benchmark.

⁶⁵ Category v. above in section 3.2.

Long-term sustainability enshrines the idea to uphold the “inclusive interest of the community – that is the global public interest”,⁶⁶ including the interests of all States, present and future ones. The freedom of exploration and use of outer space (Article I of the OST) is granted to all States with the understanding their corresponding space activities, governmental or non-governmental entities, are in accordance with international law (Article III of the OST).

This is the ultimate benchmark for space governance.

6. Conclusion

Where alternatives to law as a tool of space governance are deliberately, consciously and collectively chosen in order to: a) overcome disadvantages of legal regulation; and b) capitalize on advantages of non-legal governance, they can indeed be a desirable element of space governance. Where, because of alternatives to law in space governance, legal uncertainty increases or the multilateral system of international space law runs the danger of being eroded or destabilized, such alternatives have to be seen critical.

Choosing among governance tools is ultimately part of a societal process. The suitability of instruments – both legal and non-legally binding – to contribute to the development of space law should be part of the trade-off made before opting for, or supporting, a certain normative instrument. The same is true for the possibility of sustaining, through that choice, a sort of ‘stewardship’ for space activities to develop in a way that is reflective of the fundamental legal principles enshrined in space law: freedom of exploration and use of outer space; accordance with international law, avoidance of harmful interference and the general cooperation imperative, to name just a few of those principle which, according to some, have transcended into the realm of customary international law.

This paradigm change and its consequences must be understood and actions taken to ensure that fundamental space law principles are upheld and uncertainty is avoided. The fact that law co-exists side by side with non-legal norms of behaviour is not necessarily a problem, as long as it is acknowledged that the choice of instrument may have an effect on the already existing normative framework.

Finally, there might not always be a choice of means, actually. Asking the question ‘*Does the end justify the means?*’ presupposes that the norm maker has a choice of means; reality is different, however. The 1960s offered a window of opportunity to decide on societal desirables to frame the exploration and use of outer space, and to enshrine them in binding treaty

66 Jakhu, Ram S., *Legal Issues Relating to the Global Public Interest in Outer Space*, 32, *Journal of Space Law*, Vol. 32, 31-110 (2006).

law. A similar decision-making process, and the creation of treaty law, would prove far more challenging today.

While normative pluralism is no new occurrence in space governance, its relative growth and the prominent role it takes, coupled with an intensifying stress on intergovernmental institutions and international law, make it imperative to further explore how to manage it wisely. Where pluralism turns into individualism, or unilateralism, it may enhance fragmentation and uncertainty: having multiple governance tools at hand, some of them alternatives to international legal norm making, should not come to the detriment of collective decision-making.

If normative pluralism is to be understood as an opportunity, the road to travel is to capitalize on its strengths in contributing to the regulation and management of space activities, and not to accidentally or deliberately erode the international legal basis on which the exploration and use of outer space is solidly standing since the dawn of the space age.