From the Unilateral Acts of States towards Unilateralism in Space Law

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Abstract

Unilateralism has generally been considered a concept with negative connotations. It should be underscored that in some cases unilateralism has resulted in changes either to customary law or treaty law, whereas in others it has not. Consequently, not every type of unilateralism can be perceived as a challenge to Space Law. Nevertheless, we can see the risks of unilateralism when not acquiesced to or generally supported by other States. It is obvious that the multilateral process is becoming more complicated than before which complicates finding multilateral solutions in Space Law. This paper argues that a better understanding of unilateral acts is necessary before delving into the matter of the unilateralism in Space Law.

Keywords: Unilateral acts of States, unilateralism, multilateralism, cooperation, space law making.

1. Unilateral acts of States in International Law and Space Law

Space Law, as a branch of International Law[1], has the same sources as those of the latter[2]. Unilateral Acts of States are recognized as sources of

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1 Article III of the Outer Space Treaty specifies that "States Parties to the Treaty shall carry on activities in the exploration and use of outer space, including the moon and other celestial bodies, in accordance with international law, including the Charter of the United Nations, in the interest of maintaining international peace and security and promoting international co-operation and understanding". Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (Outer Space Treaty), adopted by the General Assembly in resolution 2222 (XXI), opened for signature on 27 January 1967, entered into force on 10 October 1967. (Referred to hereinafter as the Outer Space Treaty) See the general analysis by Olivier Ribbelink, "Article III", *Cologne*

International Law, even though not mentioned in Article 38 of the Statute[3] of the International Court of Justice[4]. The issue of unilateral acts in International Law is especially complex due to the difficulty of finding a definition applicable to a wide diversity of unilateral acts[5]. Notwithstanding this difficulty, one can generally define this "as an expression of will emanating from one State or States which produces legal effects in conformity with international law"[6].

The International Law Commission (ILC) elaborated conclusions and a set of guiding principles on the legal regime applicable to autonomous acts (excluding non-autonomous acts) in 2006[7]. The most important autonomous unilateral acts are: promise, protest, recognition and waiver[8]. There are three categories of non-autonomous unilateral acts: acts connected with a pre-existing customary rule, acts connected with an international agreement, such as signature, ratification, reservations, accession, denunciation and acceptance, and acts connected with a resolution of an international organization[9].

Acts of domestic law, which have effects at the international level, can also be regarded as unilateral acts of States. In other words, acts of domestic law, "which are mainly or predominantly domestic", cannot be regarded as

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Commentary on Space Law: Volume I, Outer Space Treaty, S.Hobe, B.Schmidt-Tedd, K.-U.Schrogl (ed.), Carl Heymanns Verlag, Cologne, 2009, pp. 64-69.

2 For an analysis on sources of International Space Law see generally Ram S. Jakhu and Steven Freeland, "The Sources of International Space Law", *56 Proc. Int'l Inst. Space L.*, 2013, pp. 461-478 ; Marco G. Marcoff, "Sources du droit international de l'espace", 168 *Recueil des Cours*, 1980 ; Tugrul Cakir, "Les sources du droit de l'espace", *50 years of Space Law-Space Law in 50 years,* Stephan Hobe and Philippe Achilleas (ed.), Center for Studies and research of the Hague Academy of International Law, forthcoming in 2019.

3 *Statute of the International Court of Justice*, 26 June 1945, San Francisco.

4 Marco G. Marcoff, "Sources du droit international de l'espace", *op.cit.*, p. 73.

5 Przemysław Saganek, *Unilateral Acts of States in Public International Law,* Brill Nijhoff, Leiden, Boston, 2016, pp. 45-50 ; Eva Kassoti, *The Juridical Nature of Unilateral Acts of States in International Law,* Brill, Nijhoff, Leiden, Boston, 2015, p. 17.

6 Víctor Rodríguez Cedeño and Maria Isabel Torres Cazorla, "Unilateral Acts of States in International Law", *Max Planck Encyclopedia of Public International Law*, online: <www.mpepil.com>. Article last updated: February 2017, § 1.

7 *Guiding Principles applicable to unilateral declarations of States capable of creating legal obligations*, accessible in A/CN.4/L.703 20 July 2006. For the historical overview see Eva Kassoti, *The Juridical Nature of Unilateral Acts of States in International Law, op.cit.*, pp.57-62.

8 See generally Przemysław Saganek, *Unilateral Acts of States in Public International Law, op.cit.*, Part 4.

9 N. Quoc Dinh, Patrick Daillier and Alain Pellet, *Droit international public*, Paris, 1994, pp. 355–357.

unilateral acts of States[10]. In International Law, States exercise territorial jurisdiction on their territory and personal jurisdiction on their nationals[11]. The exercise of personal jurisdiction by States creates legal effects at the international level.

Unilateral acts of States played an important role in the formation of two customary rules in Space Law at the beginning of the Space Age: the principle of free exploration and use of Outer Space and celestial bodies and the principle of the prohibition on national appropriation of Outer Space and celestial bodies[12]. Therefore, some unilateral acts of States, as in the case of the occupation of *terra nullius* and prescription and historic titles, has no application in the field of Space Law[13]. One of the most important example of unilateral acts in the field of space law is the Bogota Declaration of 1976. Eight Equatorial States claimed that the segments of the Geostationary Orbit (GEO) were not part of the Outer Space but of their territory whereas the claims of sovereignty in outer space has been outlawed by the principle of non-appropriation (and confirmed by Article II of the Outer Space Treaty)[14].

According to Article VI of the Outer Space Treaty, States are responsible for their national activities, which include not only governmental ones but also the activities of non-governmental entities. State Parties shall also authorize and continuously supervise the activities of these entities. This is why the obligations of authorization and continuing supervision are the first two building blocks of national space legislations identified in the framework of the "2001 Project"[15]. It should be noted that international obligations

10 Przemysław Saganek, *Unilateral Acts of States in Public International Law, op.cit.*, p.85; Unilateral acts of States, Document A/CN.4/486, First report on unilateral acts of States, by Mr. Víctor Rodríguez Cedeño, Special Rapporteur, Original: Spanish, 5 March 1998, para.109.

11 Tugrul Cakir, "La compétence personnelle en droit spatial : un principe interprété différemment par les Etats", *Revue Française de Droit Aérien et Spatial*, 2017/1, Vol. 281, p.67.

12 Marco G. Marcoff, "Sources du droit international de l'espace", *op.cit.*, p.74. D. Goedhuis, "Influence of the conquest of outer space on national sovereignty: some observations", *Journal of Space Law*, 1978, Vol. 6, number 1, p. 37. The role played by these acts in the formation of the law of the sea was also determining. Víctor Rodríguez Cedeño and Maria Isabel Torres Cazorla, "Unilateral Acts of States in International Law", *Max Planck Encyclopedia of Public International Law*, *op.cit.*, § 24.

13 Marco G. Marcoff, "Sources du droit international de l'espace", *op.cit.*, pp.73-74.

14 A unilateral act must not emanate only from a single State. Authors may express collectively their will in the framework of a unilateral act attributable to them, creating a new legal relationship with a third State. Unilateral acts of States, Document A/CN.4/486, First report on unilateral acts of States, by Mr. Víctor Rodríguez Cedeño, *op.cit.*,, para.133 and 135.

15 Michael Gerhard and Kai-Uwe Schrogl, "Report of the 'Project 2001' Working Group on National Space Legislation", '*Project 2001' – Legal Framework for the Commercial Use of Outer Space, Recommendations and conclusions to develop the present state of the law*, K-H. Bockstiegel (ed.), Carl Heymanns Verlag KG, Koln, 2002, pp. 529-564.

stemming from space treaties are not binding for private entities but States shall make sure that these entities comply with their obligations. The mechanisms of authorization and continuous supervision of non-governmental activities by an "appropriate State" are necessary means to assure this.
National space legislation is at the point of intersection between the unilateral acts of States and the phenomenon of unilateralism. Before delving into the matter of the unilateralism in Space Law (3.), it is necessary to recall the context in which space law-making has been made since the beginning of the Space Age (2.).

2. Space law-making from "the bipolar U.S.-Soviet Union diplomacy" to the American predominance

Bipolarized negotiations between the United States and the Soviet Union during the Cold War were decisive for the space lawmaking at the beginning of the Space Age[16]. For the drafting of outer space legislation, the U.S. and the Soviet Union decided to deal with the use of outer space for military purposes bilaterally and for peaceful uses multilaterally[17]. In this respect, the United Nations Committee on the Peaceful Uses of Outer Space (UNCOPUOS), as a universal forum, was well positioned to do just that[18]. Therefore, Space law had been created in the framework of "the bipolarized multilateralism" under the auspices of UNCOPUOS[19]. In other words, Space law until 1980s was the product of "the bipolar U.S.-Soviet Union diplomacy"[20]. The end of Cold War has led to a U.S. predominance in the space field[21]. Bilateral and unilateral initiatives are preferred by space faring States, especially by the U.S., excluding any multilateral approach inside UNCOPUOS[22].

The other three building blocks are: the obligation of registration of space objects, the liability issues and the additional aspects such as the export control regulation.

16 See the general analysis by M.J. Bencke, *The politics of space, A history of U.S.-Soviet/Russian competition and cooperation in space*, Oxford, WestviewPress, 1997.

17 Stephan Hobe, "Historical Background", *Cologne Commentary on Space Law: Volume I*,, *op.cit*., p. 14 ; Eilene Galloway, "Guidelines for the review and formulation of outer space treaties", *41 Proc. on L. Outer Space*, 1998, p.246.

18 See the general analysis by Sergio Marchisio, "The Evolutionary Stages of the Legal Subcommittee of the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS)', *Journal of Space Law*, 2005, Vol. 31/1, pp. 219-242.

19 Armel Kerrest, « le droit de l'espace face aux dangers de privatisation et d'unilatéralisme », *L'adaptation du droit de l'espace à ses nouveaux défis, Mélanges en l'honneur de Simone Courteix*, Armel Kerrest (ed.), Pédone, 2007, p.30.

20 Kai-Uwe Schrogl, "Space Law and diplomacy", *67 Proc. on L. Outer Space*, 2017, p.5.

21 Conseil d'Etat, *Pour une politique juridique des activités spatiales*, La documentation française, Paris, 2006, pp.14-17.

22 Philippe Achilleas, "Le new space ou la privatisation des ambitions spatiales des Etats : Réflexions sur le droit de l'espace à l'heure de l'innovation entrepreneuriale", *Annuaire Français de Droit International* LXII – 2016 – CNRS Éditions, Paris, p. 508.

At the beginning of the Space Age, the consensus principle, method for decision-making by the UNCOPUOS, was advantageous but this is no longer the case[23]. Moreover, the consensus rule during the discussions in the UNCOPUOS complicates finding solutions even for simple issues[24]. The failure of the Moon Agreement was the end of the "'romanticism' of the space era"[25] making necessary returning to the non-binding rules as was the case at the beginning of the Space Age. One can point out three main tendencies in space law making: one from binding rules to non-binding rules, the second from international rules to national rules and the third from public law to private law.

The context of space has radically changed with the intensification and diversification of space activities. It is obvious that the multilateral process is becoming more complicated than previously which complicates finding multilateral solutions in Space Law. National space legislations has become a source of Space Law in which unilateralism of States has been expressed.

3. The phenomenon of unilateralism in Space Law

Unilateralism "refers to an individualistic approach to foreign affairs"[26]. This concept should not be confused with unilateral acts of States because unilateralism is a broader concept which also includes the acts non producing legal effects under International Law[27]. Political acts are also a form of the unilateral behavior of States but they are not legal acts[28]. Therefore, unilateralism in International Law has two dimensions: legal and political[29].

An extraterritorial scope given to a national legislation, as in the case of the Helms/Burton act, is one of the clear manifestations of unilateralism in International Law[30]. A piece of national legislation, imposing obligations on

23 See generally on the consensus procedure Eilene Galloway, "Consensus decisionmaking by the United Nations committee on the peaceful uses of outer space", *Journal of Space Law*, 1979, vol.7 number 1, pp. 3-13.

24 Gérard Brachet, "Le rôle et les activités du Comité des Nations Unies pour les utilisations pacifiques de l'espace extra-atmosphérique (CUPEEA) ", *Annuaire Français de Relations Internationales*, vol. IX, 2008, p.906.

25 Vladlen S. Vereshchetin, "Next Steps in International space law", *Perspectives on International Law*, N. Jasentuliyana (ed.), Kluwer Law International, London, The Hague, Boston, 1995, p. 477.

26 André Nollkaemper, "Unilateralism/Multilateralism", *Max Planck Encyclopedia of Public International Law*, online: <www.mpepil.com>. Article last updated: March 2011, §1.

27 *Ibid*., §2.

28 Unilateral acts of States, Document A/CN.4/486, First report on unilateral acts of States, by Mr. Víctor Rodríguez Cedeño, *op.cit*., paras.42-43.

29 Pierre-Marie Dupuy, "The place and role of unilateralism in contemporary international law", *EJIL* 2000, Vol.11/1, p.20.

30 *Ibid*., p.26.

other States, without any basis in any rule of international law is considered generally unilateral and contrary to international law[31]. A State cannot impose an obligation unilaterally on another State without its consent. This is explained by the foundational principle of sovereign equality[32].

Unilateralism is the negation of a cooperative action concerning international issues. It should be noted that the nature of space activities requires that Space Law is a law of cooperation[33]. As in the High Seas, the Outer Space is *res communis* and the activities in these areas are subject to limitations. One of these is the common interest principle. According to this principle, national interests should be in conformity with the interests of all States. In fact, this principle incentivizes cooperation among all States[34]. The cooperation principle is included in the following Articles of the Outer Space Treaty: I, III, IX, X, XI. Today, the number of international organizations involved in space has increased even more so after the intensification and diversification of space activities[35]. However, this high level of cooperation in Space has not prevented States from having "an individualistic approach to foreign affairs". It is evident that we are facing unilateralism in Space Law.

3.1. Unilateral exploitation of space resources

The United States[36] and Luxembourg[37] are the first countries enacting national space legislation relating to the exploitation of the natural resources of the celestial bodies. It is necessary to observe that the term "exploitation" is not mentioned in the Outer Space Treaty, which does not mean that it is illegal. The exploitation of space resources is encompassed by the principle of free exploration and use of Outer Space and celestial bodies[38]. Concerns have been raised especially concerning the violation of non-appropriation principle by these States enacting national legislations.

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31 Unilateral acts of States, Document A/CN.4/505, Third report on unilateral acts of States, by Mr. Victor Rodríguez Cedeño, Special Rapporteur, Original: English/French/Spanish, 17 February 2000, para. 58.

32 Marco G. Marcoff, "Sources du droit international de l'espace", *op.cit.*, p.73.

33 Manfred Lachs, *The Law of Outer Space, An Experience in Contemporary Law-Making*, Reissued on the occasion of the 50th anniversary of the International Institute of Space Law, Martinus Nijhoff Publishers, Leiden, Boston, 2010, pp. 27-28.

34 Nandasiri *Jasentuliyana*, "Article I of the Outer Space Treaty revisited", *Journal of Space Law*, Vol. 17 no.2, 1989, p.140.

35 There are three main categories of space cooperation: global, regional and bilateral. See generally Chukeat Noichim, "International cooperation for sustainable space development", *Journal of Space Law*, 2005, vol.31, no 2, pp.332-337.

36 *Title IV of the U.S. Commercial Space Launch Competitiveness Act*, H.R. 2262.

37 *Luxembourg Draft Law on the Exploration and Use of Space Resources*, 11 November 2016.

38 Stephan Hobe, "Article I", *Cologne Commentary on Space Law: Volume I*, *op.cit.*, p.35.

The exploitation of resources of the Moon and of celestial bodies is governed by the Outer Space Treaty and the Moon Agreement[39]. Article 11 (5) of the latter provides that "States Parties to this Agreement hereby undertake to establish an international regime, including appropriate procedures, to govern the exploitation of the natural resources of the Moon as such exploitation is about to become feasible". Similarly, the non-appropriation principle incorporated in the same Article is a broader concept than the one introduced in the Outer Space Treaty. It should be underscored that the Moon Agreement is not binding for States non-party to this treaty.

The adoption of a single piece of national space legislation does not provide sufficient grounds to say that there is a violation of an obligation, so its implementation will be the determining factor[40]. These States shall make sure that their national activities are conducted in conformity with their obligations including the non-appropriation principle. For instance, States shall guarantee that the liberty of other States is respected; so that the consumption of a celestial body by private entities in its entirety should be avoided[41].

From a political perspective, the engagement of a discussion with international community during the legislative history of the American act would have been preferable[42]. However, the unilateral behavior of these countries can be beneficial after the failure of the multilateral process of the Moon Agreement[43]. These laws can be seen as the beginning of a process of a multilateral action which is yet to be developed in the future[44].

3.2. Unilateral delimitation of Outer Space

One of the problems raised in space law is the lack of a "workable definition" for concepts such as the definition of Outer Space[45]. There is no boundary between air space and outer space. The Von Karman line (100 km above sea level), represents the boundary as set by the International

39 Steven Freeland and Ram Jakhu, "Article II", *Cologne Commentary on Space Law: Volume I*,, *op.cit*., p. 59.

40 Fabio Tronchetti, "Title IV – Space Resource Exploration and Utilization of the US Commercial Space Launch Competitiveness Act: A Legal and Political Assessment", *Air & Space Law* 41, no.2 (2016), p.149.

41 Jinyuan Su, "Legality of unilateral exploitation of space resources under international law", *International and Comparative Law Quarterly,* vol 66, October 2017, p. 1006.

42 Fabio Tronchetti, "Title IV – Space Resource Exploration and Utilization of the US Commercial Space Launch Competitiveness Act: A Legal and Political Assessment", *op.cit*., p.154.

43 Maggie Gardner, "Channeling Unilateralism", *Harv. Int'l L.J.*, 2015, vol.56, pp.299-300.

44 Board of Directors of the International Institute of Space Law, Position Paper on Space Resource Mining, 20 December 2015, III. Future Perspectives.

45 Stephan Hobe, 'The relevance of current international space treaties in the 21st century', *Annals of air and space law*, vol. XXVII, 2002, p.341.

Aeronautical Federation, but this delimitation is not a juridical one[46]. This issue has become relevant because of the emergence of the aerospace objects[47]. Finding a compromise at the international level does not seem possible in the near future[48]. In the lack of multilateral action on Outer Space delimitation, the choice of States is between unilateral action and no action[49]. The lack of a delimitation has not prevented some States from establishing such a delimitation at the domestic level.

Kazakhstan[50], Nigeria[51] and Denmark[52] define Outer Space commencing at 100km above sea level in their national space legislations. The South-African legislation[53] defines "Outer Space" as "the space above the surface of the earth from a height at which it is in practice possible to operate an object in an orbit around the earth". Frans von der Dunk considers that this definition "distinctly points to a borderline somewhere between 100 and 120 kms, as the minimum height at which so far satellites seem to have been operated in orbits"[54]. Section 8 of the Australian legislation defines "space object" as "a launch vehicle and a payload (if any) that the launch vehicle is to carry into or back from an area beyond the distance of 100 km above mean sea level"[55]. These examples constitute the *opinio juris* of States concerning the delimitation issue[56]. Certainly, these legislations are important contributions to the debate[57]. Thus far, there is no customary rule on the delimitation[58].

46 Philippe Achilleas, « Le new space ou la privatisation des ambitions spatiales des états : Réflexions sur le droit de l'espace à l'heure de l'innovation entrepreneuriale », *op.cit.*,, p. 513.

47 Stephan Hobe and Kuan-Wei Chen, "Legal status of outer space and celestial bodies", *Routledge Handbook of Space Law*, R. Jakhu and P. Dempsey (ed.), London, 2017, p.28.

48 *Ibid.*.

49 André Nollkaemper, "Unilateralism/Multilateralism", *Max Planck Encyclopedia of Public International Law*, *op.cit.*, §42.

50 Article 1(6), *Law of the Republic of Kazakhstan on Space Activities*, 6 January, 2012, No. 528-IV.

51 Sec. 43, 1st resp. 6th para. *Draft Regulations on the Licensing and Supervision of Space Activities*. Cited by Frans von der Dunk, "The Second African National Space Law: The Nigerian NASRDA Act and the Draft Regulations on Licensing and Supervision", *59 Proc. on L. Outer Space*, 2017, note 29.

52 Article 4 (4), *Outer Space Act*., Act no. 409 of 11 May 2016.

53 Sec. 1, *Space affairs Act* (South Africa, 1993) Statutes of the Republic of South Africa - Trade and Industry No. 84 of 1993.

54 Frans von der Dunk, "The delimitation of outer space revisited: The Role of National Space Laws in the Delimitation Issue", *41 Proc. on L. Outer Space*, 1998, p.260.

55 Sec. 8, *Space Activities Act 1998* Act No. 123 of 1998 as amended.

56 Stephan Hobe, "Legal Aspects of Space Tourism", 86 *Neb. L. Rev*., 2007, p. 442.

57 Frans von der Dunk, "The delimitation of outer space revisited: The Role of National Space Laws in the Delimitation Issue", *op.cit.*, p. 255 ; Steven Freeland, "The Australian regulatory regime for space launch activities: out to launch?", *47 Proc. on L. Outer Space*, 2004, p. 63.

The practice of the other States (especially the spacefaring ones) will be determinant. However, the establishment of different delimitations of Outer Space can be seen as dangerous[59].

3.3. Unilateral application of export control regulations

Export control regulations are essential in order to attain the goal of counter-proliferation[60]. These regulations are more important in the space sector as compared to others[61]. It should be remembered that States have been facing a policy dilemma between security considerations and economic objectives since the end of the Cold War[62]. The U.S. export control regulations, the most detailed and strict ones, have favored security considerations which harm the competitiveness of American space industry[63].

As put forward by Michael Gerhard and Matthias Creydt, "since in most cases it is not possible for the space industry to get by without using U.S. components, the foreign space industry is therefore forced to deal with the U.S. export control regulations in addition to their national laws"[64]. The specificity of the U.S. regulations compared to the other national laws is its extra territorial application[65]. This exercise of jurisdiction over the controlled

58 Marc J. Sundahl, "Legal status of spacecraft", *Routledge Handbook of Space Law*, *op.cit.*, p.54.

59 Olavo de Oliveira Bittencourt Neto, *Defining the Limits of Outer Space for Regulatory Purposes*, Springer International Publishing, Switzerland, 2015, p.70 ; Francis Lyall and Paul B. Larsen, *Space Law: a Treatise,* Ashgate, 2009, p. 497 note 146 : "we would wish not to see diversity in limits. The precedent of the very varied territorial sea claims made by states prior to the 1982 UN convention on the Law of the Sea should be taken as a warning".

60 Michael Bothe, "Weapons of Mass Destruction, Counter-Proliferation", *Max Planck Encyclopedia of Public International Law*, online: <www.mpepil.com>. Article last updated: August 2016, §48. "The term 'counter-proliferation' circumscribes the policy goal of preventing the spread of certain weapons as well as the policy and legal instruments or tools used to achieve this goal. The reason behind this goal is stability": *Ibid.*, §1.

61 Michael Gerhard and Matthias Creydt, "Safeguarding National Security and Foreign Policy Interests – Aspects of Export Control of Space Material and Technology and Remote Sensing Activities in Outer Space", *National Space Legislation in Europe,* Frans von der Dunk (ed.), Martinus Nijhoff, Leiden, Boston, 2011, p.190.

62 Larry F. Martinez, "The Legal Implications of High Technology Export Controls for Commercial Activities in Outer Space", *35 Proc. on L. Outer Space*, 1992, pp. 230-231.

63 Antonella Bini, "Export Control of Space Items in Europe: Legal and Political Constrains", *50 Proc. on L. Outer Space,* 2007, pp.94-95 ; Amal Rakibi, "Export control and dual use of space technologies", *48 Proc. on L. Outer Space*, 2005, pp.385-386.

64 Michael Gerhard and Matthias Creydt, "Safeguarding National Security and Foreign Policy Interests – Aspects of Export Control of Space Material and Technology and Remote Sensing Activities in Outer Space", *op.cit.*, pp.190-191.

65 *Ibid.*, p.214.

goods and technology has been criticized and been the subject of intense debates concerning its legal basis under international law[66].

Two regulations are central in the U.S. export control regime: International Traffic in Arms Regulations (ITAR), applicable to the items designated in the United States Munitions List (USML) and Export Administration Regulations (EAR), applicable to the Commerce Control List (CCL)[67]. EAR relates to the export of dual use items whereas ITAR concerns military items. EAR is also applicable to a non US made spacecraft under the *de minimis* rule. Therefore, EAR is not applicable when[68]: "(1) the value of the controlled U.S. content comprises 25% or less of the total value of the item and is not destined for a country subject to U.S. arms embargo; or (2) the value of the controlled U.S. content comprises 10% or less of the total value of the item and is destined for a country subject to a U.S. embargo".

US export control regulations implement not only U.S. government policy but also the following international regimes: the Missile Technology Control Regime[69] (MTCR) and the Wassenaar Agreement on Export Controls for Conventional Arms and Dual Use Goods and Technologies[70] (the Wassenaar Agreement)[71]. These regimes are not treaties, but voluntary informal arrangements and Member States implement them at the domestic level[72]. The latter, came into force in 1996 and succeeded to the Coordinating Committee on Multilateral Strategic Export Controls (COCOM)[73], has the goal of the control of conventional arms and of dual use goods and technologies. The former, established in 1987 between G-7 industrialized countries (Canada, France, Germany, Italy, Japan, the United Kingdom and the United States), relates to the control of delivery systems of weapons of mass destruction (WMD).

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66 Amal Rakibi, "Export control and dual use of space technologies", *op.cit.*, pp.388-389.

67 With the National Defense Authorization Act for Fiscal Year 2013, satellites and related items have been removed from the USML and transferred to the CCL. *Introduction to U.S. Export Controls for the Commercial Space Industry*, 2nd Edition – November 2017, prepared by the U.S. Department of Commerce's Office of Space Commerce and the Federal Aviation Administration's Office of Commercial Space Transportation, 1.2.1.

68 *Ibid.*, 3.1.3.

69 Missile Technology Control Regime, http://www.mtcr.info (accessed 26/08/2018)

70 Wassenaar Arrangement on Export Controls for Conventional Arms and Dual Use Goods and Technologies, http://www.wassenaar.org/ (accessed 26/08/2018)

71 Mark J. Sundahl, "Space Tourism and Export Controls: A Prayer for Relief", *75 J. Air L. & Com.*, 2010, p. 585 note 16.

72 H. Peter van Fenema, "Export Controls and Satellite Launches: What's New", *46 Proc. on L. Outer Space*, 2003, p.240.

73 See generally on COCOM, Cindy Whang, "The Challenges of Enforcing International Military-Use Technology Export Control Regimes: An Analysis of the United Nations Arms Trade Treaty", *33 Wis. Int'l L.J.*, 2015, pp. 120-126.

The MTCR Guidelines state specifically that they "are not designed to impede national space programs or international cooperation in such programs as long as such programs do not contribute to nuclear weapons delivery systems" (Point 1). Nevertheless, MTCR has been criticized by non-member States as being a form of unilateralism[74]. Because of their dual use quality, many civilian space programs in emerging countries, especially the development of space launch industry, have been affected by the strict implementation of the MTCR by the U.S.[75]. It is certain that the U.S. export control regulations serve to attain the goal of counter proliferation but this goal can be perfectly attained with a multilateral approach.

As proposed by the Netherlands during its presidency of MTCR in 1999, this arrangement should be elevated to a multilateral agreement and be open to all States[76]. In this sense, the International Code of Conduct against Ballistic Missile Proliferation (HCoC), intended to implement MTCR and open to all States, was founded on 25 November 2002 in The Hague[77]. HCoC is not legally binding but a multilateral transparency and confidence building instrument. However, the Arms Trade Treaty (ATT), adopted under the auspices of the United Nations on 2 April 2013 and which came into force on 24 December 2014, is a multilateral treaty and is intended to regulate international trade in conventional arms[78]. The enforcement of ATT standards has been left to the Member States making the enforcement issue more problematic and its non-ratification by major arm exporter States, such as China, Russia and the United States (signed on 25 September 2013 but not yet ratified), poses a challenge to its enforcement[79].

74 Michel Bourbonniere, "National-Security Law in Outer Space: The Interface of Exploration and Security", *70 J. Air L. & Com.*, 2005, p. 46 note 226.

75 J. Hurewitz, "Non-Proliferation and Free Access to Outer Space: The Dual-Use Conflict between the Outer Space Treaty and the Missile Technology Control Regime", *9 High Tech. L.J.*, 1994, pp.211-243 ; H. Peter van Fenema, "Export Controls and Satellite Launches: What's New", *op.cit.*, p.241 ; Larry F. Martinez, "The Legal Implications of High Technology Export Controls for Commercial Activities in Outer Space", *op.cit.*, p.235 ; Francis Lyall and Paul B. Larsen, *Space Law: a Treatise, op.cit.*, pp.462-463.

76 H. Peter van Fenema, "Export Controls and Satellite Launches: What's New", *46 Proc. on L. Outer Space*, 2003, p.242.

77 The International Code of Conduct against Ballistic Missile Proliferation, http://www.hcoc.at/ (accessed 26/08/2018)

78 Arms Trade Treaty, http://disarmament.un.org/treaties/t/att/text (accessed 26/08/2018). See generally on the treaty, Cindy Whang, "The Challenges of Enforcing International Military-Use Technology Export Control Regimes: An Analysis of the United Nations Arms Trade Treaty", *op.cit.*, pp. 131-139.

79 *Ibid.*, pp.136-139. See Status and Signatories http://disarmament.un.org/treaties/t/att (accessed 26/08/2018)

3.4. Unilateral action of debris removal without the consent of the State of registry

The current situation in Outer Space regarding space debris is sufficient to note that the environmental protection of Outer Space will be more of a concern than it is currently. To assure the viability of space activities, space debris mitigation is not sufficient; active debris removal is also necessary to minimize the collision risk[80]. In this sense, Space Debris Mitigation Guidelines of the UNCOPUOS (Guidelines 6 and 7) recommends the removal of space crafts in the LEO and the GEO, the most used orbital regions, after the end of their mission[81]. However, Alexandre Soucek underscores that "while spacecraft removal from the LEO region may be complex and expensive, spacecraft removal from the GEO region is practically impossible"[82]. In addition to this technical difficulty, the removal also raises legal concerns. The question, as posed by Jan Helge Mey, is the following[83]: "Do States have the right under international law to actively remove space debris from Earth orbit caused by space activities carried out by other States?"

Debris removal by a third State necessitates the cooperation of the State of registry of the object[84]. Abandonment of a space object is not possible, State of registry remains its owner's[85]. Valid consent of the State of registry is a circumstance excluding the wrongfulness of active debris removal according to the Article 20 of Draft Articles on Responsibility of States for Internationally Wrongful Acts of ILC[86].

If the State of the registry of a given space debris is not identifiable, the removing state should make efforts in order to have confirmation of the status of that object ; in the absence of any protest from any State of registry, the removal action can be undertaken[87]. The nonconsensual removal of space

80 Peter Stubbe and Kai-Uwe Schrogl, "COPUOS SDM Guidelines", *Cologne Commentary on Space Law: Volume III*, S. Hobe, B. Schmidt-Tedd and K-U. Schrogl (ed.), Carl Heymanns Verlag, Cologne, 2015, p. 652; Melissa K. Force, "Legal Implications of Debris Removal", *55 Proc. Int'l Inst. Space L.*, 2012, pp.728-730.

81 See generally Alexandre Soucek, "COPUOS SDM Guidelines", *Cologne Commentary on Space Law: Volume III*, *op.cit.*,, pp.636-640.

82 *Ibid.*, p.639.

83 Jan Helge Mey, "Space Debris Remediation", *61 ZLW*, 2012, p.252.

84 Peter Stubbe and Kai-Uwe Schrogl, "COPUOS SDM Guidelines", *Cologne Commentary on Space Law: Volume III*, *op.cit.*, p. 652.

85 Francis Lyall and Paul B. Larsen, *Space Law: a Treatise,* Ashgate, 2009, p. 67.

86 Jinyuan Su, "Active Debris Removal: Potential Legal Barriers and Possible Ways Forward", *9 J. E. Asia & Int'l L.*, 2016, p.421. Draft Articles on Responsibility of States for Internationally Wrongful Acts adopted by the International Law Commission at its fifty-third session (extract from Official Records of the General Assembly, Fifty-sixth session, Supplement No. 10 (A/56/10), chp.IV.E.2) (2001)).

87 Jan Helge Mey, "Space Debris Remediation", *op.cit.*, pp.265-266.

debris from orbit is more problematic[88]. Concerns pertaining to the lack of a legally binding definition of space debris and possible infringement upon other States' sovereign jurisdiction or ownership are relevant[89]. This is why, the removal action should be conducted cautiously and in good faith[90]. For instance, state of necessity justifies a removal action without the consent of the State of the registry as a circumstance of preclusion of wrongfulness, recognized in Article 25 of the draft Article of ILC[91]. The nonconsensual removal action is also justified as a countermeasure in case of a preceding violation of an international obligation by the State of registry (Article 49 of the Draft Article)[92]. Countermeasure is another circumstance of preclusion of wrongfulness recognized by the ILC (Article 22 of the Draft Article).

Finally, the reaction of States will be a determining factor: if there is mainly no protest from State of registries in case of a removal action without their consent, this subsequent practice may establish between State Parties to the Outer Space Treaty an agreement regarding the interpretation[93]. Even if national interests are prevailing for States, global issues, such as space debris removal, require a multilateral cooperation to assure effective management[94]. The establishment of an international mechanism is necessary. The establishment of an international debris removal fund has been proposed in

88 Melissa K. Force, "Legal Implications of Debris Removal", *op.cit.*, pp.731-734.

89 Jinyuan Su, "Active Debris Removal: Potential Legal Barriers and Possible Ways Forward", *9 J. E. Asia & Int'l L.*, 2016, pp.407-409.

90 Jan Helge Mey, "Space Debris Remediation", *op.cit.*, p.271.

91 Melissa K. Force, "When the Nature and Duration of Space Becomes Appropriation: Use as a Legal Predicate for a State's Objection to Active Debris Removal", *56 Proc. Int'l Inst. Space L.*, 2013, p.418; Jinyuan Su, "Active Debris Removal: Potential Legal Barriers and Possible Ways Forward", *op.cit.*, p.422.

92 Jan Helge Mey, "Space Debris Remediation", *op.cit.*, p.271 ; Peter Stubbe and Kai-Uwe Schrogl, "COPUOS SDM Guidelines", *Cologne Commentary on Space Law: Volume III*, *op.cit.*, p. 652.

93 Jinyuan Su, "Active Debris Removal: Potential Legal Barriers and Possible Ways Forward", *9 J. E. Asia & Int'l L.*, 2016, pp.409-410.

94 *Contra* Megan Ansdell considers that there is a need to initiate unilateral action by the US : "Given the past hesitation of international forums in addressing the space debris issue, unilateral action is the most appropriate means of instigating space debris removal within the needed timeframe. The United States is well poised for a leadership role in space debris removal. Going forward, the U.S. government should work closely with the commercial sector in this endeavor, focusing on removing pieces of U.S. debris with the greatest potential to contribute to future collisions. It should also keep its space debris removal system as open and transparent as possible to allow for future international cooperation in this field". Megan Ansdell, "Active space debris removal: needs, implications and recommandations for today's geopolitical environnement, journal of public and international affairs", *Princeton University*, Spring 2010, vol.21, p.20.

the legal circles[95]. Martha Mejia-Kaiser considers that maritime wreck removal rules is a good example for the future international debris removal regime[96]. The application of the principle of common but differentiated responsibility to active debris removal is also an interesting issue[97].

4. Concluding remarks

According to Bin Cheng, there are three main conditions for successful treaty making in Space Law: perceived need, propitious climate and due representation of the interests during the law making process[98]. The meeting of these conditions is complex nowadays. It is obvious that the multilateral process is becoming more complicated than before which complicates finding multilateral solutions in Space Law. Even if found, the achievement of multilateral solutions is not guaranteed. However, there are global issues which cannot be treated unilaterally such as the establishment of space traffic management system and space debris issue. A multilateral solution of these issues is necessary to assure an effective use of outer space.

Customary law has a limited place in space lawmaking under the strong influence of treaty[99]. National space legislations are not only a relevant State practice but also an expression of *opinio juris* of States. Certainly, domestic legislations, as a unilateral acts of States, will be increasingly essential. In the near future, national legislations will play a determining role in the formation of customary rules in space law. In opposition, diverging State practices could pose a danger to the coherence of Space Law.

It is easy to point out the augmentation of number of soft law instruments in Space Law because of their flexibility in comparison with other classical sources of space law. There are three categories in the non-binding instruments adopted by the General Assembly of the United Nations: one relating to the principles in the field of space applications, the second is on the technical regulation and the third concerns the harmonization of practices in the implementation of space treaties. These resolutions, which are qualified as unilateral acts of international organizations, are the political expression

95 Peter Stubbe and Kai-Uwe Schrogl, "COPUOS SDM Guidelines", *op.cit*.,, p. 652 ; Jinyuan Su, "Active Debris Removal: Potential Legal Barriers and Possible Ways Forward", *9 J. E. Asia & Int'l L.*, 2016, p.423.

96 Martha Mejia-Kaiser, "Removal of non-functional space objects without prior consent", *50 Proc. on L. Outer Space,* 2007, pp.293-301.

97 See generally on this principle Philip de Man and Ward Munters, "Reciprocal Limits to the Freedom to Use Outer Space by All States: Common but Differentiated Responsibilities?", *Air & Space Law* 43, no. 1, 2018, pp.21-52.

98 Bin Cheng, *Studies in international space law*, Clarendon Press, Oxford, 1997, pp. 687-694.

99 Vladlen S. Vereshchetin and Gennady M. Danilenko, "Custom as a Source of International Law of Outer Space", *Journal of Space Law*, Vol. 13/1, 1985, pp.22-23.

of the will of the member States. Even if the principles and recommendations do not include obligations, States may implement them unilaterally at the domestic level, so taking the non-binding rules as binding. For instance, Space Debris Mitigation Guidelines have been incorporated in the national and international mechanisms giving them more effectivity, some countries requiring their respect as a condition of authorization[100].

National space legislations, as a unilateral act of State, are sources of Space Law, in which unilateralism of States has been expressed. Unilateralism does not necessarily mean an illegal action, it may contribute to the multilateral process. It should be underscored that in some cases unilateralism has resulted in changes either to customary law or treaty law, whereas in others it has not. Nevertheless, we can see the risks of unilateralism when not acquiesced to or generally supported by other States.

100 See UN Doc. A/AC.105/2014/CRP.13, Compendium of space debris mitigation standards adopted by States and international organizations - Document submitted by Canada, the Czech Republic and Germany, 10 June 2014.