# THE MEANING OF "PEACEFUL PURPOSES" IN ARTICLE IV OF THE OUTER SPACE TREATY[+]

by

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## SYNOPSIS



## KEYWORDS

Outer Space Treaty, peaceful uses, treaty intepretation, space law, military uses of outer space, weaponisation, prevention of an arms race

[+] This article is devoted to the memory of Professor Ivan A. Vlasic (1926 - 2011) who thought me space law during my masters studies at McGill in 1985/86, and whose far-sighted comments on the field of the military uses of outer space and their legal framework - partially quoted in this contribution as well - still belong to the best one can find in this area. I also owe thanks to Associate Professor Fabio Tronchetti for his insightful comments to earlier versions of this paper.

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# I. INTRODUCTION

Although the permissibility of using outer space for military purposes belongs to the most important questions of the actual use of outer space, some preliminary remarks are in place. First of all, relatively few provisions of international space law deal with the specific question of military uses of outer space. Secondly, there is no definition in the entire Outer Space Treaty,[1] or in other instruments of international space law for that matter, concerning the meaning of "peaceful use" or "military use" in the context of outer space. It should therefore not surprise us that the notions "peaceful uses" and "peaceful purposes" are subject to differing interpretations, of which two may be presented here. The most widespread interpretation of peaceful uses construes the notion in the sense of a "non-aggressive" use. This is the outspoken interpretation of the United States of America, the People's Republic of China and India, and the implicit interpretation of Russia.[2] On the other hand, arguments can be given to adopt a more far-reaching interpretation of peaceful uses as being equal to non-military uses.[3] Such a reading would ban all military uses from outer space, not only aggressive uses.[4]

It is the purpose of this paper to shed light on the above question by using the means of interpretation of international law as provided for in the Vienna Convention on the Law of Treaties (VCLT).[5] Though strictly speaking not applicable to the Outer Space Treaty for having entered into force after its conclusion, the rules of customary international law codified in the VCLT do apply to the Outer Space

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[1] *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies*, 27 January 1967, 610 UNTS 205, 18 UST 2410, TIAS No 6347, 6 ILM 386 (entered into force on 10 October 1967) [*Outer Space Treaty*].

[2] See for the specific perspectives of these countries, *infra* sect III.

[3] This view is supported by authors like MG Markoff , "Disarmament and peaceful purposes provisions in the 1967 Outer Space Treaty", (1976) 4 J Space L 3; CQ Christol, "The common interest in the exploration, use and exploitation of outer space for peaceful purposes: the Soviet-American dilemma" (1984) 18 Akron L Rev 193.

[4] Even the most far-reaching interpretation would hold that peaceful uses are equal to any non-weaponed use of outer space. This interpretation would prohibit any stationing of weapons in outer space that might endanger international peace. This interpretation is at the end of the day not very much different from the first interpretation holding that military uses are legal as long as they comply with Article 2(4) of the UN Charter: *Charter of the United Nations*, 26 June 1945, Can TS 1945 No 7, 59 Stat 1031, 145 UKTS 805, 24 UST 2225, TIAS No 7739 [*UN Charter*].

[5] *Vienna Convention on the Law of Treaties*, 23 May 1969, UN Doc A/Conf.39/27, 1155 UNTS 331, 8 ILM 679 (1969), 63 AJIL 875 (1969) (entered into force 27 January 1980) [*Vienna Convention on the Law of Treaties* or *VCLT*], in particular Article 31; and also Article 32.

Treaty.[6] Pursuant to the main rule of treaty interpretation laid down in the Vienna Convention, not only the wording, context and purpose of the Outer Space Treaty, but also the State practice subsequent to the conclusion of the Outer Space Treaty will be taken into consideration.[7] This will hopefully enable for an overall conclusion as to the current meaning of "peaceful uses of outer space".

## II. THE ORIGIN AND USE OF THE NOTION "PEACEFUL USES"

Even before the launch of the first artificial satellite in January 1957, the United States (US) stressed that future developments in outer space should be devoted exclusively to peaceful and scientific purposes, so as to include the testing of satellites and missiles which should be placed under international inspection and participation.[8] Shortly thereafter, the then US Secretary of State, John Foster Dulles, announced that the US would develop a system which would ensure that outer space missiles would be used exclusively for peaceful and scientific purposes and for the benefit of mankind.[9] Later on, Canada, France, the United Kingdom and the United States called for the UN Disarmament Commission to undertake a study of an inspection system that would assure that the launching of objects through outer space would indeed be exclusively for peaceful and scientific purposes.[10]

The expression "exclusively for peaceful purposes" was used for the first time in a United Nation's context in this document. US President Eisenhower then wrote a letter to Soviet Premier Bulganin and proposed that the United Socialist Soviet Republics (USSR) and the United States should agree on using outer space "only for peaceful purposes" and not for the testing of missiles designed for military purposes.[11] "Peaceful" at that time was used by the US as the opposite of "military", as was apparent from the talks during the 13th session of the United Nations

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[6] See *Lagrand (Germany v. United States of America)* [2001] ICJ Rep 466, paras 99, 101.

[7] *VCLT, supra* note 5, art 31(3)(a).

[8] This is all documented in IA Vlasic, "The Legal Aspects of Peaceful and Non-Peaceful Purposes of Outer Space, in B Jasani, *ed, Peaceful and Non Peaceful Uses of Space: problems of definition for the prevention of an arms race* (New York: Taylor & Francis, 1991) at 37-38 *et seq.*

[9] P Jessup & H Taubenfeld, *Controls for Outer Space and the Antarctic Analogy* (New York: Columbia University Press, 1959) at 252

[10] United Nations, *The United Nations and Disarmament 1945 - 1970*, UN Publication No. 70.IX.1, 1970 at 67

[11] The text is reproduced in S Eastbrooks, "Preventing the weaponization of space: options for moving forward" (July-Sep 2003) *Peace Magazine.*

General Assembly at the end of 1958.[12] Afterwards, Resolution 1348 (XIII), which established the United Nations Committee on the Peaceful Uses of Outer Space, considered that the "common aim" was that "outer space should be used for peaceful purposes only".[13]

Contrary to these uniform declarations at the international stage relating to the use of outer space in the 1950s, however, US and USSR practice in those years painted a more ambiguous picture. As early as 1955, the US already indicated that it considered the use of reconnaissance satellites as an activity that served peaceful purposes, while admittedly qualifying the American space programme as primarily serving military aims.[14] By the end of the 1950s, the US had hence already begun to interpret peaceful in the sense of non-aggressive.[15] Accordingly, such uses which were non-aggressive in the sense of Article 2(4) of the United Nations Charter, were considered peaceful.[16] Likewise, the Soviet Union, while publicly stating that "peaceful" meant "non-military", in practice heavily used outer space for military purposes.[17]

## III. THE NEGOTIATIONS OF THE OUTER SPACE TREATY

If the 1950s had been characterised by idealistic language that was difficult to reconcile with the State practice of the two foremost space powers, it became clear in 1963-4, at the start of the negotiations for the Outer Space Treaty, that both superpowers were fully committed to using outer space for military purposes.[18] Such specific military purposes included surveillance, communications, navigation and detection of

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[12] Vlasic, *supra* note 8 at 38.

[13] *Question of the peaceful use of outer space*, GA Res 1348(XIII), UNGAOR, 13th Sess, UN Doc A/RES/13/1348(XIII) (1958), Preamble.

[14] This point is included in D Wolter, *Common Security in Outer Space and International Law* (Geneva: United Nations Institute for Disarmament Research, 2005) at 17.

[15] Vlasic, *supra* note 8 at 40.

[16] See e.g. MS McDougal, HD Lasswell & IA Vlasic, Law and Public Order in Space (New Haven, Yale University Press, 1963), 397 *et seq.*

[17] This point is made in B Cheng, "The Commercial Development of Space: the Need for New Treaties" (1991) 19 J Space L 17, reprinted in B Cheng, *Studies in International Space Law* (Oxford: Clarendon Press, 1997) at 650.

[18] This is made very clear by IA Vlasic, "Disarmament Decade, Outer Space and International Law" (1980) 25:2 McGill Law Journal 135 at 168; see also K-U Schrogl & J Neumann, "Article IV" in S Hobe, B Schmidt-Tedd & K-U Schrogl, eds, *Cologne Commentary on Space Law Vol I* (Cologne: Heymanns, 2009), marg note 9.

nuclear explosions in space.[19] While the United States was open about its intentions, the Soviet Union at the time was more secretive about its military uses of outer space.[20]

As a result, paragraph 1 of Article IV of the Outer Space Treaty – the principal provision of international space law dealing with the peaceful uses of outer space- was adopted without banning all military uses of outer space. On the contrary, the provision only contains a prohibition to place "in orbit around the earth any objects carrying nuclear weapons or any other kind of weapons of mass destruction, install such weapons on celestial bodies, or station such weapons in outer space in any other manner". The Outer Space Treaty also fails to provide any definition of such "weapons of mass destruction" (WMDs), though it is argued that they should be understood as meaning not only nuclear weapons but also radiological, bacteriological and chemical weapons, as well as any future weapons possessing large scale destructive potential.[21] It is significant, moreover, that the Treaty only prohibits the placement and stationing of WMDs in outer space and on celestial bodies, but does not necessarily proscribe their actual use in space, which hence remains lawful in theory.[22]

The second paragraph of Article IV Outer Space Treaty does explicitly contain the requirement that space activities shall be carried out by all States parties to the Outer Space Treaty "exclusively for peaceful purposes", but limits this provision to the Moon and other celestial bodies only. This paragraph prohibits the establishment of "military bases, installations and fortifications, the testing of any type of weapons and the conduct of military maneuvers on celestial bodies". Regardless of the interpretation of the notion, it is hence clear that the "peaceful purposes" concept should apply only to activities on celestial bodies, and not to the outer space between these bodies. The specific formulation of Article IV Outer Space Treaty was deliberately intended to give the superpowers the necessary leeway for using outer space for their reconnaissance satellites and intercontinental ballistic missiles. Incidentally, the testing of weapons of mass destruction in outer space such as nuclear ballistic missiles, is also left untouched by the prohibition of the first paragraph of Article IV of the Outer Space Treaty, which only

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[19] Vlasic, *supra* note 8 at 39.

[20] *Ibid* at 40.

[21] *Ibid* at 42; C-G Hasselmann, "Weapons of Mass Destruction - Art. IV of the Outer Space Treaty and the relationship to General disarmament" (1982) Proceedings of the 25th Colloquium on the Law of Outer Space 99.

[22] Schrogl & Neumann, *supra* note 18, paras 31-32.

refers to the placement of these weapons in orbit.[23] However, nuclear tests in outer space had already been banned by the so-called Partial Test Ban Treaty of 1963, concluded between the US, USSR and the UK (see further *infra*).[24]

The *travaux préparatoires* of the Outer Space Treaty show that during the negotiations India had proposed to extend the application of "exclusively for peaceful purposes" in the second paragraph of Article IV of the Treaty to all areas of outer space.[25] This proposal was, however, rejected because neither the United States nor the Soviet Union wished a final definition of "peaceful uses" in the light of the expected limitations this could have meant for both States in their future uses of outer space. The text of the Outer Space Treaty hence remains silent on the precise meaning of the notion "peaceful purposes". At the very least, the *travaux* of the Outer Space Treaty do not support a reading that would interpret "peaceful uses" as outlawing all military uses of outer space. Though the United States had urgently favoured this approach at the beginning of the space era,[26] it soon turned to the non-aggressive doctrine. Likewise, the USSR, while publicly supporting the "non-military view", used satellites to carry out military activities in the guise of scientific research during the Outer Space Treaty negotiations.[27]

Subsequent law-making practice has not exactly helped to elucidate the legal status of outer space, as opposed to celestial bodies, in terms of the legality of military activities. On the one hand, the wording of the Outer Space Treaty has been retained in subsequent UN space law treaties. Article 3 of the Moon Agreement more or less repeats the phrasing of Article IV of the Outer Space Treaty. Of course, the former treaty only applies to celestial bodies in our solar system. As regards the military uses of outer space as such, however, the Intergovernmental Agreements on the International Space Station of 1988 and 1998 devote the ISS to "exclusively peaceful purposes" only.[28] Likewise, the activities

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[23] See Wolter *supra*, note 14 at 11.

[24] *Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space, and Under Water*, 5 August 1963, 14 UST 1313, TIAS No 5433, 480 UNTS 43 (entered into force 10 October 1963) [*Partial Test Ban Treaty*].

[25] UN Doc A/AC.105/PV.3 (1962) at 63.

[26] See also US Senate Committee on Aeronautical & Space Sciences, *Documents on International Aspects of the Exploration and Use of Outer Space*, 1954-1962, 88th Cong, 1st Sess (1963) at 52.

[27] Cheng, *supra* note 17 at 17.

[28] See *Space Station Agreement between the United States of America and Other Governments*, 29 January 1998, TIAS 12927, arts 1(1) and 14(1), online: US State Department <www.state.gov/documents/organization/107683.pdf>.

undertaken by the European Space Agency are only for the promotion of exclusively peaceful purposes.[29] Finally, the Environmental Modification Convention (ENMOD) of 1977 refers to peaceful purposes in its preamble and Article 3 in a sense of being opposed to military uses.[30]

## IV. AN INTERPRETATION OF "PEACEFUL PURPOSES" IN THE LIGHT OF SUBSEQUENT STATE PRACTICE

The above overview has clarified but two things: that celestial bodies should be used for peaceful purposes only, while the space between these bodies apparently can be used for military purposes, excluding the placement of weapons of mass destruction. Specific agreements may limit such military uses for specific activities. The meaning of "peaceful" purposes as such remains unclear, however.

It has been noted that if one starts with the ordinary meaning of the word "peaceful" one finds expressions like "friendly", "amicable", "pacific", "aiming for peace" and "inclined to peace".[31] Other elements of interpretation listed in Article 31 of the Vienna Convention, such as the preamble and the internal context of the Outer Space Treaty, do little to clarify this ordinary meaning. To further elucidate this notion, we must therefore look at the practice subsequent to the negotiation and adoption of the Outer Space Treaty (external context, Article 31(3) of the Vienna Convention).[32] In so doing, we are primarily guided by the practice of the most important space powers, the State practice of which is considered most relevant by the International Court of Justice, as stated in the famous *North Sea Continental Shelf* case.[33] For spacefaring activities, this means that one has to look into the practice of the US and the Soviet Union/Russian Federation, initially, and of China and Europe, subsequently.

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[29] *Convention for the Establishment of a European Space Agency*, 30 May 1975, 1297 UNTS 161, UKTS (1980) 30, ILM (1975) 864 (entered into force 30 October 1980), art 2 [*ESA Convention*].

[30] *Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques*, 10 December 1976, UN Doc A/RES/31/72 (entered into force on 5 October 1978).

[31] Vlasic, *supra* note 8 at 44-45.

[32] *VCLT*, *supra* note 5, art 31(3).

[33] *North Sea Continental Shelf Case (Federal Republic of Germany vs Denmark; vs the Netherlands)*, [1969] ICJ Rep 3, para 73.

## A. STATE PRACTICE AS REFLECTED IN TREATIES

The practice of the US and Russia may lead one to conclude that the two original space powers do not favor an interpretation of peaceful as "non-military". Indeed, the high percentage of launchings of both the Soviet Union/Russia as well as the US for military purposes leads to the conclusion that certain military uses of outer space were and are still considered permissible under the existing doctrine of "peaceful uses of outer space".[34]

The legal regime in outer space, excluding the celestial bodies, is markedly different for weapons of mass destruction, in particular nuclear weapons, on the one hand, and the so-called conventional weapons, on the other hand. With regards to the former, Article IV of the Outer Space Treaty is clear in outlawing the placement of WMDs in space. It does not specifically mention the use of these weapons in outer space, however. Still, other treaties contain important limitations to these activities. First of all, the provisions of the Outer Space Treaty are complemented by the general provisions of international law, which also apply to outer space.[35] In particular, one must take into account the provisions of the UN Charter relating to international peace and security, which outlaw the use and threat of force in international relations.[36]

Further, it has been correctly pointed out that the damage caused by early tests of nuclear weapons in the Earth atmosphere was of such a grave nature that the parties to the Partial Test Ban Treaty quickly agreed to prohibit these activities in outer space as well, even before the adoption of the Outer Space Treaty.[37]

Moreover there are other agreements, such as the Treaty on the Non-Proliferation of Nuclear Weapons (NPT),[38] which aims at preventing the spread of nuclear weapons and weapons technology, and the Comprehensive Nuclear Test Ban Treaty of 1996,[39] which aims at

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[34] RJ Lee "The Jus Ad Bellum in Spatialis: The Exact Content and Practical Implications of the Law on the Use of Force in Outer Space"(2003) Journal of Space Law 29 at 97-98.

[35] *Outer Space Treaty, supra* note 1, art III.

[36] *UN Charter, supra* note 4, art 2(4).

[37] B Cheng, "Military use of outer space: Article IV of the 1967 Space Treaty Revisited" in C-J Cheng and DH Kim, eds, *The utilization of the world's air space and free outer space in the 21st century* (The Hague: Kluwer, 2000) 311.

[38] *Treaty on the Non-Proliferation of Nuclear Weapons*, 1 July 1968, 729 UNTS 161, 7 ILM 8809 (1968), 21 UST 483 (entered into force 5 March 1970).

[39] *Comprehensive Nuclear Test Ban Treaty*, 24 September 1996, S Treaty Doc 105-28 (1997), 35

achieving the discontinuation of all test explosions of nuclear weapons for all time. Further, the abovementioned Environmental Modification Convention (ENMOD) of 1977 additionally prohibits military and other hostile uses of environmental modification techniques in the Earth atmosphere and outer space.

Finally, at the bilateral level between the US and Russia, the Anti-Ballistic Missile (ABM) Treaty of 1972 prohibited the development, testing and deployment of sea-based, air-based, space-based or mobile land-based ABM systems.[40] The ABM treaty was adopted alongside the so-called SALT I Treaty of 1972,[41] which had essentially frozen the number of intercontinental ballistic missiles (ICBMs), all launches and submarine ballistic missile launches on the Soviet and the US side. It was accompanied by the Intermediate Range Nuclear Forces Treaty (INF)[42] and led to the Treaty of Reduction and Limitation of Strategic Offensive Arms (START I).[43] The ABM treaty proved rather ineffective, however, and it was terminated in June 2002 when the US decided to withdraw. So in essence we find that neither general outer space legislation, nor the more specific treaties of bilateral or multilateral nature have effectively prohibited the use of outer space for military purposes.

Unlike for nuclear tests, the legality of anti-satellite (ASAT) tests when performed by both the US and the then USSR in the 1980s was not questioned. As a result, one of the matters of greatest concern is the placement and testing of ASAT and other conventional weapons in Earth orbit. Tests with kinetic weapons, such as the Chinese ASAT test of January 2007, are of particular concern due to the enormous amount of space debris that is generated by the destruction of a satellite. Although there is a *communis opinio* in favour of the legality of the testing of ASAT technologies,[44] their negative consequences both in terms of pollution of

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ILM 1439, UN Doc A/RES/50/245 (not yet in force) [*CTBT*].

[40] *Treaty between The United States of America and The Union of Soviet Socialist Republics on The Limitation of Anti-Ballistic Missile Systems*, 26 May 1972, 944 UNTS 13 (entered into force 3 October 1972) , art V(1) [*ABM Treaty*].

[41] *Strategic Arms Limitation Treaty*, 26 May 1972, 86 Stat 746, Pub L No 79-448 (entered into force 3 October 1972).

[42] *Intermediate Range Nuclear Forces Treaty* (INF), 8 December 1987, 27 ILM 84 (1987) (entered into force on 1 June 1988).

[43] *Treaty of Reduction and Limitation of Strategic Offensive Arms* (*START* I), 31 July 1991 ILM (1992) 246 (entered into force on 5 December 1994). The treaty expired on 5 December 2009. On 8 April 2010 the replacement NEW START treaty was signed in Prague by US President Obama and Russian President Medveded. Following ratification by the US Senate and the Federal Assembly of Russia it entered into force on 26 January 2011.

[44] For example, in the 1980s both the US and the Soviet Union carried out ASATs test. The

the space environment and of their threat to the safety and security of space objects cannot be denied.

Despite the existence of the treaty-law and State practice mentioned above, since 1981, the UN General Assembly has annually adopted resolutions on the prevention of an arms race in outer space, in which the risks of space weaponisation are outlined and States are urged to actively contribute to avoid an arms race.[45] In recent years, discussions on this topic have intensified within the Conference on Disarmament (CD), the UN committee on the Peaceful Uses of Outer Space and the First Committee of the UN General Assembly on disarmament. Proposals addressing the issues of space security and the prevention of space weaponisation have been submitted by States in these fora, including, most significantly, the 2008 Sino-Russian Draft Treaty on the Prevention of the Placement of Weapons in Outer Space and of the Threat or Use of Force against Outer Space Objects (PPWT).[46]

This draft treaty, a new version of which was submitted in June 2014,[47] would significantly expand the limited ban on space weaponisation of the first paragraph of Article IV of the Outer Space Treaty. Rather than merely proscribing the placement of WMDs in orbit, the draft PPWT requires the ratifying States parties to "not place any weapons in outer space; [and] not resort to the threat or use of force against outer space objects of States Parties [...]".[48] The latter part of this provision is merely an application of the UN Charter prohibition of the use or threat of force. The ban on the placement of "any weapons" in outer space, however, would significantly curtail the possibility of military uses of outer space, especially taking into account the broad definition of "weapon" proposed by the PPWT.[49]

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legality of such tests was not questioned at the time these tests took place, see *inter alia* Schrogl & Neumann, *supra* note 18, marg note 27.

[45] *General and complete disarmament*, GA Res 36/97, UNGAOR, 36th Sess, UN Doc A/RES/36/97 (1981).

[46] CD, *Letter dated 12 February 2008 from the Permanent Representative of the Russian Federation and the Permanent Representative of China to the Conference on Disarmament addressed to the Secretary General of the Conference transmitting the Russian and Chinese texts of the draft "Treaty on Prevention of the Placement of Weapons in Outer Space and of the Threat or Use of Force against Outer Space Objects (PPWT)" introduced by the Russian Federation and China*, UN Doc CD/1839 (29 February 2008).

[47] *Treaty on Prevention of the Placement of Weapons in Outer Space and of the Threat or Use of Force against Outer Space Objects* [*PPWT*], online: Reaching Critical Will <reachingcriticalwill.org/images/documents/Disarmament-fora/cd/2014/documents/PPWT2014.pdf>.

[48] *PPWT*, *supra* note 47, art II.

[49] Under the PPWT,

The PPWT rivals for the attention of the international space community with other space weaponisation initiatives focusing more on soft law measures of transparency and confidence-building measures.[50] Most prominent among these is the International Code of Conduct for Outer Space Activities (ICoC).[51] What started off as an initiative of the French presidency of the European Union in 2008 has developed, throughout the years, into an attempt to arrive at a veritable code of conduct for securing sustainable and peaceful spacefaring, focusing on both the safety and security and the outer space environment.[52] The competition between the different space powers backing the proposal for a binding PPWT (China and Russia) and the non-binding ICoC (mainly Europe), means that, in practice and despite their legally disparate nature, neither of these proposals has managed to receive global acceptance so far.

## B. MILITARY DOCTRINES OF THE MAJOR SPACE POWERS

In addition to the treaties concluded by the spacefaring nations in other fields of international law than space law *strictu senso*, we may gain an insight into the interpretation of the nature of the peaceful uses of outer space by turning to the military policies and doctrines of the main space powers.[53]

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> the term 'weapon in outer space' means any outer space object or its component produced or converted to eliminate, damage or disrupt normal functioning of objects in outer space, on the Earth's surface or in the air, as well as to eliminate population, components of biosphere important to human existence, or to inflict damage to them by using any principles of physics.

*Ibid*, art 1(b).

[50] See M Listner and RJ Rajagopalan, "The 2014 PPWT: A New Draft but with the Same and Different Problems", *The Space Review* (11 August 2014), online: Space Review <www.thespacereview.com/article/2575/1>.

[51] See also the 2009 Canadian working paper on "The Merits of Certain Draft Transparency and Confidence Building Measures and Treaty Proposals for Space Security", CD/1865, 5 June 2009.

[52] Paragraph 1.1 of the IcoC:

> The purpose of this Code is to enhance the safety, security, and sustainability of all outer space activities pertaining to space objects, as well as the space environment.

EU, *Draft Code of Conduct for Outer Space Activities*, 31 March 2014, online: European External Action Service
<www.eeas.europa.eu/non-proliferation-and-disarmament/pdf/space_code_conduct_draft_vers_31-march-2014_en.pdf>.

[53] For an overview on these doctrines, see Schrogl & Neumann, *supra* note 18, marg notes 84-93.

As the most important space power, the United States heavily depends on space for its national security. It considers space capabilities to be vital to its national interests. The US Strategic Defense Initiative (SDI) of 1983 advocated space weaponisation, which resulted in the building of a layered ABM defense system. After the dissolution of the Soviet Union in 1991, and in light of the feasibility of using space assets for military purposes in the 1991 Gulf War, the US rather focused on space control. This is interpreted as the acquiring the capability of maintaining freedom of action in space for the US and its allies, while denying such freedom to their adversaries.

The US National Space Policy of 2006 reaffirmed the above doctrine of space control and opposed the development of new legal regimes or other restrictions that seek to prohibit or limit US access to all uses of space.[54] The unwillingness of the US to accede to the PPWT stands as an example of this doctrine. To be sure, the current US National Space Policy, adopted in 2010, takes a more cooperative approach. It points out the importance of international cooperation and indicates the willingness of the US to:

> pursue bilateral and multilateral transparency and confidence-building measures to encourage responsible actions in, and the peaceful uses of space. The United States will consider proposals and concepts for arms control measures if they are equitable, effectively verifiable, and enhance the national security of the United States and its allies.[55]

However, the American reluctance to accede to the ICoC appears inconsistent with this policy. Ultimately, the United States, in keeping with the right of self-defense and its international obligations, remains open to the option of employing a variety of measures to assure the responsible use of outer space to defend US space systems, to deter others from interference and attacks and to contribute to the defense of allied space systems.[56]

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[54] US, *US National Space Policy*, online: Federation of American Scientists <fas.org/irp/offdocs/nspd/space.pdf>.

[55] US, *National Space Policy of the United States of America* (28 June 2010), online: Global Security <www.globalsecurity.org/space/library/policy/national/100628_national_space_policy.pdf>.

[56] *Ibid.*

The Russian Federation officially advocates a total demilitarisation of outer space, which is exemplified in its repeated proposals for a PPWT in the Conference on Disarmament, jointly with China. At the same time, however, Russia perceives the US leadership in outer space as a clear security threat, one that is exacerbated, moreover, by the eastward enlargement of the North Atlantic Treaty Organisation (NATO). Hence, the latest Russian military space doctrine emphasises the reinforcement of Russia's nuclear capabilities, including in outer space.[57] In recent years, China has slowly but surely joined the club of leading space powers. Its entire (military) satellite programme includes the testing of satellites in space, thereby using outer space for military purposes. Like the use of nuclear weapons, the weaponisation of outer space is considered to be a matter of national necessity and prestige.[58]

Finally, determining the formal position of Europe with regards to the use of outer space for military purposes complicated by the fact that, with the extension of the powers of the EU to outer space,[59] there are now officially two Europes in space. Neither the EU nor European Space Agency (ESA), however, have a clearly defined competence for defence matters in space, nor do they consistently operate under a single policy framework.[60] The EU is only slowly developing a common security policy which currently means that it possesses a competence only for the coordination of national security policies of its member States.[61] At the same time, ESA can only act in support of exclusively peaceful purposes in outer space.[62] In recent years, however, it has been interesting to observe that ESA's interpretation of "peaceful" as being strictly "non-military" has been somewhat watered down.[63] Ultimately, the competence to act in matters of security and defence in outer space in Europe remains with the Member States of the EU and ESA. In particular, France and the United Kingdom largely determine the (nuclear-based) direction of the European defense policy.[64]

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[57] M de Haas, "Russia's Upcoming Revised Military Doctrine", Pow*er and Interest News Report* (26 February 2007).

[58] For information about Chinese military space activities and programmes see W Rathgeber & NL Remuss, "Space Security – A Formative Role and Principled Identity for Europe", *ESPI Report* (16 January 2009) at 32-34.

[59] *Treaty on the Functioning of the European Union*, [2012] OJ C 326/1, art 189 [*TFEU*].

[60] Rathgeber & Remuss, *supra* note 58, at 35 *et seq.*

[61] For a description of the rudimentary nature of the EU military policy, see S Hobe, *Europarecht* (European Law), 6th ed (Munich: Verlag Franz Vahlen, 2010) at 319 *et seq.*

[62] See *ESA Convention*, *supra* note 29.

[63] Schrogl & Neumann, *supra* note 18 at 83-84.

[64] de Haas, *supra* note 57 at 35-37.

# V. CONCRETE MILITARY USES OF OUTER SPACE IN TERMS OF THEIR PERMISSIBILITY

As the above doctrines indicate, there appears to be a rather considerable inclination on the part of the major space powers to interpret "peaceful" as non-aggressive rather than "non-military". Such a reading is justified by the fact that any kind of self-defence is explicitly permitted by international law[65] and that there is in fact a considerable variety of threats which can only be defended effectively from outer space.

As early as 1991, Ivan Vlasic made an attempt to classify space activities in terms of their scale of (un)lawfulness under international law.[66] In a first category he listed as typical uses strictly prohibited by treaty or customary international law the placing of nuclear weapons in orbit, around the Earth or on celestial bodies; the placing of weapons of mass destruction in orbit, around the Earth or on celestial bodies; the establishment, on the Moon and other celestial bodies, of military bases and installations, as well as the testing of any kind of weapons under conduct of military maneuvers on these bodies; and the detonation of any nuclear weapon explosions or any other nuclear explosion anywhere in outer space. These limitations to the military use of outer space flow from the Outer Space Treaty as well as the Partial Test Ban Treaty.[67] Also prohibited under this first category are: military or hostile uses of environmental modification techniques that could produce widespread adverse effects on the human environment; and any hostile acts committed by a device designed to operate in outer space that causes damage to the assets of another State located in outer space, as well as any intentional physical interference with space assets of another country.[68] These limitations follow from the ENMOD Convention and the rules on non-interference and liability in the Outer Space Treaty, respectively.[69]

A second category of military activities in outer space made by Vlasic lists those acts that are generally considered lawful under current international law.[70] Such would be the use, even for defence and security purposes, of satellites for communication, navigation, photo

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[65] UN Charter, *supra* note 4, art 51.

[66] Vlasic, *supra* note 8 at 47 *et seq.*

[67] *Outer Space Treaty, supra* note 1, art IV; *Partial Test Ban Treaty, supra* note 24, art I.

[68] Vlasic, *supra* note 8 at 48.

[69] *Outer Space Treaty, supra* note 1, art IX.

[70] Vlasic, *supra* note 8 at 49 *et seq.*

reconnaissance and the gathering of signals for intelligence, ocean surveillance to locate and track warships, the detection of nuclear explosions in the space and Earth environments. The list also includes the use of ballistic missiles and conventional satellite weapons of any kind, excluding those that would carry nuclear weapons. It should be noted in this respect that the use of nuclear power sources on board of space objects is as such not unlawful.[71]

Finally, there is a rather long list of activities Vlasic thought should be banned, though they are strictly speaking still legal in the current regime.[72] This list includes, *inter alia*, the development and deployment of ASAT weapons of any kind, the testing in outer space of dedicated as well as any other kind of ASAT devices, all weapons designed to attack targets in outer space, interceptors in the framework of the earlier US ballistic missile defense programme and satellites designed to cause electronic interference with the space assets of another country.

As mentioned previously, the testing of debris-generating ASAT weapons represents the most urgent threat to the security of space objects and the space environment as a whole. It is interesting to note that several States have started supporting the idea of a ban on 'hit-to-kill' ASATs. This approach is, for instance, included in the 2009 Canadian working paper on the Merits of Certain Draft Transparency and Confidence-Building Measures and Treaty Proposals for Space Security[73] and, to a large extent, in the International Draft Code of Conduct for Outer Space Activities.[74] A similar position is also held by the influential US Council on Foreign Relations.[75] However, it remains questionable whether a global ban on ASAT weapon tests can really be achieved and, in particular, whether those States supporting a total ban on the placement and testing of any kind of weapons in space, such as Russia and China, can be convinced to accept anything less.

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[71] See the regulation thereof in *Principles Relevant to the Use of Nuclear Power Sources in Outer Space*, UNGA Res 47/68, UNGAOR, 47th Sess, UN Doc A/RES/47/68 (1992).

[72] Vlasic, *supra* note 8 at 48-9.

[73] For the text of the Working Paper see supra note 51.

[74] For the text of the revised *EU Draft Code of Conduct*, see *supra* note 52.

[75] US Council on Foreign Relations, *China, Space Weapons and U.S. Security*, Council Special Report No. 38 (September 2008) at 18, online: Council on Foreign Relations <www.cfr.org/content/publications/attachments/China_Space_CSR38.pdf>.

## VI. PERSPECTIVES

In the 21st Century, outer space is frequently used for military purposes. The three main military powers – the US, Russia and China – as well as France and the United Kingdom, use outer space for this purpose and it seems to be commonly accepted that "peaceful" means "non-aggressive", rather than "non-military". One may regret this development, but the interpretation is indisputable when looking at State practice. In light of the ambiguity of the meaning of the text of the main provisions on international space law regarding the peaceful use of outer space, such State practice remains one of the most important sources of interpretation.

A possible means of putting a halt to the increasingly military usage of outer space may be found in other, conflicting principles of international law, however, as primarily inspired by concerns for the environment of outer space. Increasing concern over the potentially disastrous ecological damage of such military activities in outer space as ASAT testing may indeed one day curb the militarisation of space. For this to happen, however, States must demonstrate in their practice that they consider such activities unlawful. Only then will Vlasic's aspirations of prohibiting these and other activities become a reality.