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PPWT 2008 versus EU Code of Conduct

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Abstract

The joint draft Treaty on the Prevention of the Placement of Weapons in Outer Space, the Threat or Use of Force against Outer Space Objects (PPWT 2008) presented by China and Russia, represents an attempt to increase the regulation of states' activities in outer space, specifically in the contexts of force and weapons. The EU draft Code of Conduct (2008, 2010, 2012) (EU COC) was proposed in order to further negotiations and agreements between states in order to increase global security in the context of outer space. States' activities in outer space remain problematic for global security. PPWT 2008 introduces some definitions which have been lacking in previous outer space treaties. Developing space powers tend to prefer the clarity and security that such treaties offer including the signatory and ratification process. By contrast the EU COC lacks such definitions and represents an approach which tends to be preferred by more powerful states, which states often prefer flexibility of interpretation. If the EU COC were to be adopted by space faring states, then future developments might include the more general adoption of such principles, perhaps in a manner analogous to the law of the sea which became customary international law and ultimately was formulated into a treaty. Both approaches have different strengths and weaknesses, yet both retain structural deficiencies which may prevent them from achieving long term utility. This paper discusses the strengths and weaknesses of these two approaches in the context of international law mechanisms. The PPWT 2008 is considered to be hard law whilst the EU COC approach is soft law. This paper compares and contrasts the structure and purpose of the documents and discusses possible difficulties which may arise as a result. Finally this paper makes suggestions as to how these problems might be addressed and proposes new solutions relevant to the further development of space security

1 Introduction

States activities in outer space remain a fundamentally ambiguous and contentious issue within debates concerning global security. Ambiguities about space security have only been heightened with the increased interdependence of the

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post-Cold War era, including increased reliance on telecommunications equipment in day-to-day life, increased technological sophistication of space faring objects, combined with the still fundamentally realist calculations of great powers in global politics. Outer space remains the most realist arena of global politics, in which great powers can project capabilities and assets unrestrained, and with little to no accountability to smaller states. While many claim that there is not an emerging space arms race in the post-Cold War era, others believe that a space arms race may already be underway and the international community should act accordingly. The role of international law remains unclear in outer space. Paradoxically, arms control law in outer space has been effective in preventing the use of nuclear weapons and weapons of mass destruction, but highly ineffective in preventing more subtle and sophisticated manifestations of hegemonic and military projection in outer space. This paper will adopt a new and critical perspective on the international law of arms control in outer space. It will be argued that the international law of arms control in outer space needs to become more comprehensive and sophisticated to match the increasing sophistication and complexity of the outer space security environment. The PPWT 2008 represents a hard law treaty that introduces definitions which have been lacking in previous outer space treaties. Developing space powers should tend to prefer the clarity and security that the treaty would offer, including the signatory and ratification process. By contrast, the EU COC lacks key or precise definitions and represents an approach that will tend to be preferred by the more powerful states which prefer flexibility of open interpretation. Advocates of the EU COC argue it is possible that future developments might include the more general adoption of more precise principles and definitions, perhaps in a manner analogous to the law of the sea. Possible difficulties arise with both the PPWT 2008 and EU COC and this paper makes suggestions as to how these problems might be addressed and proposes new 'use-based' definitions relevant to the further development of space security in the post-Cold War era.

On 12 February 2008, China and Russia jointly submitted to the Conference on Disarmament (CD) their draft Treaty on the *Prevention of the Placement of Weapons in Outer Space, the Threat or Use of Force against Outer Space Objects*[1] (PPWT 2008) in its Plenary Session[2]. The fact and necessity of such proposal should be seen to reflect the fundamental shortcomings within the international law of arms control in outer space. Similarly it is a reflection of the fundamental failure and inadequacy of the Cold War negotiated Outer Space Treaty 1967 (OST 67) in relation to arms control. The PPWT 2008 aims at curtailing the use of weapons in outer space yet has no likelihood to be accepted by other great powers, in particular the US. The EU COC stemmed from the Portuguese European Presidency in 2007. The "Best Practice Guidelines for/Code of Conduct on Outer space Activities"

1 CD/1839, 29 February 2008, Conference on Disarmament. <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/G08/604/02/PDF/G0860402.pdf?OpenElement>.

2 China and Russia Jointly Submitted the Draft Treaty on PPWT to the conference on Disarmament. <www.fmprc.gov.cn/eng/wjb/zzjg/jks/jkxw/t408634.htm>.

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advocated a "*rules of the road*"[3] approach for which states will follow and adhere to in the course of space activities. The French Presidency document in 2008 further developed these principles. The EU can now put forward security documents to the international community under the auspices of the Lisbon Treaty 2009. The revised version of the EU COC was resubmitted to the international community in September 2010[4,5]. This international soft law approach will see much more support than the PPWT 2008, but may not be enough to ensure comprehensive security in space, or able to offer adequate guidance for space faring states generally. It is argued that both approaches are likely to fail and that the best possible mechanism going forward is a '*hybrid mechanism*' integrating the comprehensiveness of the PPWT 2008 with the non-binding soft and flexible nature of the EU COC and utilising a *'use-based'* approach discussed later. It is argued that use-based definitions and a new monitor agency would best facilitate a soft law approach fundamentally capable of providing a comprehensive open-and-rule based order in outer space security.

2 Arms Control through the Space Treaties

The structural deficiencies, including ambiguities of and limitations on definitions, of the OST 67 have allowed states to circumvent the spirit of the treaty in order to pursue Cold War security. This treaty was formulated with very limited arms control mechanisms (not having been formulated as an arms control treaty as such). A growing number of scholars question whether the treaty still has relevance today[6]. However, major space faring states such as the US, continue to assert that OST 67 is still adequately relevant[7], especially in relation to growing concerns of a possible emerging arms race in outer space.

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3 Also see Stares. P "The Militarization of Space: U.S. Policy, 1945-1984". Cornell Studies in Security Affairs. 1985.

4 EU Council "Council Conclusions concerning the revised draft Code of Conduct for Outer Space Activities". Council of The European Union, Brussels, 11 October 2010. <www.consilium.europa.eu/uedocs/cmsUpload/st14455.en10.pdf>.

5 Also see Hobe. S, Schmidt-Tedd. B, and Schrogl. K (eds.). Cologne Commentary on Space Law; Volume 1; Outer Space Treaty." Cologne: Carl Heymanns Verlag, 2009. 180.

6 For example Quinn, A. G. "The New Age of Space Law: The Outer Space Treaty and the Weaponization of Space". Minn. J. Int'l L. 17;475. p483. 2008

7 Comments are readily available in most primary documents an example can be found in These comments stipulated by Christina. B. Rocca the permanent representative of the USA to the Conference on Disarmament and can be found in the Analysis of a draft "Treaty on prevention of the placement of weapons in outer space, or the threat or use of force against outer space objects". CD/1847. 26th August 2008. USA. comments on the PPWT in CD/1839.

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OST 67 Article IV limitations proscribe against nuclear weapons in outer space or weapons of mass destruction, but fail to prohibit any other class of weapons including conventional weapons[8]. The relevant section of Article IV stipulates "States Parties to the Treaty undertake not to place in orbit around the earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction, install such weapons on celestial bodies, or station such weapons in outer space in any other manner"[9]. There is no definition as to what constitutes a weapon of mass destruction leaving much uncertainty of interpretation. Article IV of OST 67 lacks the specificity of terms and definitions such as ensures potential wide interpretation especially in relation to possible future development of technology such as laser or biological weapons. States could potentially argue that such weapons are not weapons of mass destruction per se. The Cold War context in which Article IV was drafted is critical: it was "drafted at a time when nuclear weapons were the only way to successfully attack satellites"[10]. The Preamble and articles of OST 67 stipulate that states shall *peacefully* use outer space, but the lack of definitions and failure to define such terms causes similar difficulties[11]. Similarly, OST67 fails to provide a clear demarcation line between air space or the term 'outer space'. This creates difficulty due to the conflict between air law and space law. Another problem is that it does not define the term '*peaceful*' which is the major operative term of the treaty (discussed below).

3 PPWT 2008 (Hard Law)

The PPWT 2008 aims to ban weapons in outer space specifically calling for nation states to prevent an arms race in outer space. This developed further ideas that were seen in the 1981 proposal to prevent an arms race in outer space that was advocated by the former Soviet Union[12] in the form of the "Draft Treaty on the Prohibition of the Stationing of Weapons of any Kind in Outer Space"[13].

8 Su, J. "The 'Peaceful Purposes' principle in Outer Space and the Russia-China PPWT Proposal". Space Policy, 26 (2010) 81-90. p84.

9 The Outer Space Treaty 1967 <www.oosa.unvienna.org/pdf/publications/STSPACE11E.pdf>.

10 Conference on Disarmament, CD/1865. 5 June 2009. "Canada: Working Paper on the Merits of Certain Draft Transparency and Confidence-Building Measures and Treaty Proposals for Space Security". <www.unog.ch/80256EDD006B8954/(httpAssets)/C40D0B92E5F37A9CC12575FC003BCE37/$file/CD_1865_E.pdf>.

11 There are authors who advocate the that OST 67 still has as much relevance today as it did in the Cold War in relation to militarisation of outer space. See Batsanov. S "The Outer Space treaty: Then and Now". Published in: Celebrating the Space Age: 50 Years of Space Technology, 40 Years of the Outer Space Treaty—Conference Report 2–3 April 2007, Geneva, UNIDIR, 2007.

12 Request for Inclusion of a supplementary item in the agenda of the 36th Session, United Nations General Assembly, UN Doc A/36/192 (1981).

13 Request for Inclusion of a supplementary item in the agenda of the 36th Session, United Nations General Assembly, UN Doc A/36/192 (1981).

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Varying explanations are offered as to the reasons surrounding the failure of the above, which followed a lack of support from the international community. *Christol* notes that the draft gave relative advantage to the then USSR concerning ASATs. Similarly, *Tronchetti* relates that difficulties were present at negotiation stages. He does not explain why the draft was unsuccessful although he does make the astute point that the issue was brought to the attention of the international community.

As argued by the Chinese and Russian delegation in 2002[14], the present international law as it pertains to outer space including bilateral and multilateral treaty mechanisms, is still "unable to effectively prevent the deployment of weapons and an arms race in outer space"[15]. Accordingly, the Chinese and Russian delegation stipulated that "Only a treaty-based prohibition of the deployment of weapons in outer space and the prevention of the threat or use of force against outer space objects can eliminate the emerging threat of an arms race in outer space and ensure the security for outer space assets of all countries which is an essential condition for the maintenance of world peace"[16].

The major arms control provision located within Article II of the draft PPWT 2008 stipulates that "States Parties undertake not to place in orbit around the Earth any objects carrying any kind of weapons, not to install such weapons on celestial bodies, and not to station such weapons in outer space in any other manner; not to resort to the threat or use of force against outer space objects; not to assist or encourage other states, groups of states or international organizations to participate in activities prohibited by the Treaty". The PPWT 2008 aims to deviate from the accepted practice of ambiguous definitions by providing definitions concerning outer space and its demarcation line, definitions as to a weapon in outer space, space objects and use of force in space (as discussed below).

Andrey Makarov postulates "that only a legally binding treaty could provide security in outer space, on the one hand, and fill in all existing gaps in modern international space law, on the other hand"[17]. He notes that whilst some states have embraced the idea of a new treaty, this has been rejected by the United States[18]. The US claims that present international law (OST 67) is adequate to deal with such matters. However the present international law in relation to aggressive uses of outer space is unclear. There are significant omissions within

14 CD/1679 <http://disarmament2.un.org/Library.nsf/0/0b9bdb56abb694a385256c0f004fa9c0/$FILE/cd1679.pdf>.

15 CD/1679 <http://disarmament2.un.org/Library.nsf/0/0b9bdb56abb694a385256c0f004fa9c0/$FILE/cd1679.pdf> p2.

16 CD/1679 <http://disarmament2.un.org/Library.nsf/0/0b9bdb56abb694a385256c0f004fa9c0/$FILE/cd1679.pdf> p2.

17 Makarov, A. "Draft PPWT: overview of key comments and suggestions". <www.unidir.ch/pdf/conferences/pdf-conf105.pdf>.

18 CD/1847 <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/G08/628/51/PDF/G0862851.pdf?OpenElement>.

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international law pertaining to outer space which the PPWT 2008 tries to clarify as follows:

Demarcation

It has long been argued by the academic and international professional community that a demarcation line in space is necessary. The task of defining the demarcation line between air and space has great significance in relation to the classification and operation of space weapons systems. Whether the weapon in question is governed by the international legal principles established by the Convention on International Civil Aviation or the Outer Space Treaties depends upon whether the weapon is in air or space. Under air law states are required to seek permission from states over which their assets are flying, which contrasts with space law. Without a clear demarcation line, the question remains unanswerable. PPWT 2008 offers the international community 100KM above sea level under Article I and thus is a workable solution to this problem.

Weapons in Outer Space

The weaponisation of outer space is a somewhat controversial question. Some believe that due to the absence of nuclear weapons and weapons of mass destruction orbiting the planet in space as stipulated under Article IV of OST 67, therefore space does not have "weapons" (as prohibited by OST 67)in it and thus has not been weaponised. Some argue on this basis that neither weapons nor an arms race in space have yet occurred and thus can be prevented. These arguments tend to view the issue of weaponisation as straightforward and tied to specific types of object capabilities, however, they do not consider the possibility that current objects allowed in outer space may be used for purposes that are not necessarily peaceful and potentially aggressive. Current space 'weapons', beyond current legal definition, might include conventional weapons (you need to define this in footnote), laser weapons, biological weapons, or other weapons that might pass through space e.g. ICBMs, SLBMs, ABMs or ASATs. These objects arguably have space capabilities but do not meet the description of weapons prohibited as in OST 67 Article IV. The PPWT 2008 offers a more comprehensive definition that:

> "any device placed in outer space, based on any physical principle, which has been specially produced or converted to destroy, damage or disrupt the normal functioning of objects in outer space, on the Earth or in the Earth's atmosphere, or to eliminate a population or components of the biosphere which are important to human existence or inflict damage on them"[19].

This definition offers wider application in contrast to the OST 67 Article IV which only prohibits 'nuclear weapons' or 'weapons of mass destruction'. Also, the above interpretation is flexible enough to adapt to technological development

19 CD/ 1839 <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/G08/604/02/PDF/G0860402.pdf?OpenElement>.

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which may not yet be in contemplation yet wide enough to retrospectively apply to the technology which did not fall within the ambit of OST 67.
As to the definition of a weapon which is "placed", the PPWT 2008 defines it as "A weapon shall be considered to have been "placed" in outer space if it orbits the Earth at least once, or follows a section of such an orbit before leaving this orbit, or is permanently located somewhere in outer space"[20]. The PPWT 2008 adds clarity to this previously poorly delineated situation and further defines an object in outer space as "any device designed to function in outer space which is launched into an orbit around any celestial body, or located in orbit around any celestial body, or on any celestial body, except the Earth, or leaving orbit around any celestial body towards this celestial body, or moving from any celestial body towards another celestial body, or placed in outer space by any other means"[21]. Previously the term 'space object' was left undefined. Whilst it does not include objects which are space capable, which would add more clarity to the definition, the definition offers workable foundation.

Peaceful and Use of Force

The term *peaceful* adopted in OST 67 has been left undefined. Informally the international community has adopted the US approach of *non-aggressive* as it pertains to the threat or use of force. The present international law pertaining to outer space under OST 67 Article III provides that states must adhere to the rule of the UN Charter including Article 2(4) (use of force provision). The OST 67 within its arms control provision prohibits the placement into orbit of nuclear weapons and weapons of mass destruction under Article IV. The definition of use of force and that which constitutes a use of force remains problematic for the international community for Earth bound conflicts, yet this definitional difficulty of interpretation extends, perhaps, most acutely, into outer space. The 2319th Plenary Meeting of the Special Committee dealing with the question of definition of aggression defines it under UNGA 3314 that "Aggression is the use of armed force by a state against the sovereign, territorial integrity or political independence of another state, or in any other manner inconsistent with the Charter of the United Nations". This provides a link to OST 67 in that peaceful purposes are often conflated as non-aggressive by the international community following the US lead. Aggression under UNGA 3314 equates to the use of armed force (armed force may be regarded as synonymous with the use of force/force application). Yet the use of force has always remained problematic in relation to a definition which also sees difficulties with the Article 51 Self Defence provision of the UN Charter and the possibilities surrounding the "pre-emptive self defense" issues[22].

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20 CD/1839 <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/G08/604/02/PDF/G0860402.pdf?OpenElement>.

21 CD/1839 <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/G08/604/02/PDF/G0860402.pdf?OpenElement>.

22 See also Military and Paramilitary Activities in and against Nicaragua (*Nicaragua v United States of America*) Merits, Judgement, ICJ Reports (1986).

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Outer space constitutes a unique environment free from sovereign claim and belonging to no state. Earth based 'aggression' has generally occurred between states, however, differences of interpretation of what constitutes aggression in space is not clear. In this regard, such matters as claims to be 'pursuing scientific research' might be utilised as justifications for activities not falling within military or aggressive spheres. Non-aggressive but military uses of outer space could include the use of communication satellites such as NAVSTAR.
The draft PPWT 2008 tries to clarify these matters and defines the use of force in outer space under Article I as "any device designed to function in outer space which is launched into an orbit around any celestial body, or located in orbit around any celestial body, or on any celestial body, except the Earth, or leaving orbit around any celestial body towards this celestial body, or moving from any celestial body towards another celestial body, or placed in outer space by any other means"[23].
The PPWT 2008 aims to remedy deficiencies within international law pertaining to outer space and offers some definitions to this end. Yet, the major space faring state, the US, has made clear to the international community that it will not sign the new draft[24] which would clearly be a problem for the success of the draft PPWT 2008 given that the US is the major space power at present.

4 EU Code of Conduct (Soft Law)

As a non-legally binding international instrument, soft law often stipulates the existence of a particular practice of law or some formal *opinion juris* leading to a new form of customary international law. The European Code of Conduct (EU COC) appears to be advocating such a direction. Unlike an agreement of a formal practice like that of the draft PPWT 2008, the EU COC is not binding but could see the acquisition at a future date of a formative legal backing as it may possibly lay the foundation for a treaty base. The difference between the soft law and hard law approaches is a matter of degree but the difference can be seen by states as an important one. The soft law approach adopted through EU COC is seen by some as the first major step of a long process towards the formalization of hard law principles in outer space, yet what form this progression will take remains fundamentally ambiguous and contingent on great power politics. As a means of advocating a step forward on issues of international space law, the EU COC has been embraced by many in the international community including, perhaps most importantly, the United States, as a first step to addressing outer space arms control substantively in the post-Cold War era.

23 CD/1839 <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/G08/604/02/PDF/G0860402.pdf?OpenElement>.

24 These comments stipulated by Christina. B. Rocca the permanent representative of the USA to the Conference on Disarmament and can be found in the Analysis of a draft "Treaty on prevention of the placement of weapons in outer space, or the threat or use of force against outer space objects". CD/1847. 26th August 2008.

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Thus, the soft law approach carries with it an initially non-binding nature, but potentially and ambiguously, includes implementation of an informal body of rules which may lay a path to future developments, the nature and extent of which are not specified in substantive detail.
The attractions of the EU COC to the wider international community are a reflection of its soft law approach, as opposed to the PPWT 2008 which adheres to the traditional hard law principles of international treaty law. The EU COC is thus a flexible document and exhibits the elasticity and ambiguity required to attract great powers in space who fundamentally view space as an arena of great power politics and possible future provocation. The EU COC, after its 2008 introduction and later proposals in 2010 and 2012, relied on this flexibility as an informal document to generate support from the international community and Western great powers. Although initially rejected by the US, the US began to contemplate the benefits to be derived from soft law measures and now supports it.
The question as to whether soft law instruments can provide adequate mechanisms for intentional law in outer space remains crucial. The EU COC is directly concerned with the safety and security of space activities with a particular focus on space debris. After the 2007 Chinese ASAT testing caused much space debris, the EU COC emphasised space debris issues. As a soft law approach, its non-binding nature offers the prospect of the development of best practice regarding space debris management but it is likely not strong enough to achieve substantial progress in this regard. Article 4.2 provides an example of this by stipulating that states must "refrain from any intentional action which will or might bring about, directly or indirectly, the damage or destruction of outer space objects unless such action is conducted to minimize outer space debris and/or justified by imperative safety considerations". Ambiguities thus remain: action (be it aggressive or not) may be justified if space debris is a concern or as necessary due to safety issues. Yet, this section remains only relevant to space objects in orbit. It does not bring the international space community any closer to a solid agreement of states' activities in space or space law. The behavioural and evolutionary norms advocated by the EU COC illustrate the EU's growing role in space matters, as well as the EU's perception of the necessity to promote space security in international affairs, but the EU COC is still a long way from providing a comprehensive and adequate guidance to the increasing sophistication and subtleties of space security that space faring states, emerged and emerging, have to navigate with increasing diligence.
The EU COC thus relies primarily on Transparency and Confidence-Building Measures (TCBM) including those outlined in its purpose and scope: "this code, in codifying new best practices, contributes to transparency and confidence-building measures and is complementary to the existing framework regulating outer space activities"[25]. However, without comprehensive and clear

25 Council conclusions, 27 September 2010. Council of the European Union; 11 October 2010. <www.consilium.europa.eu/uedocs/cmsUpload/st14455.en10.pdf.> P4.

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definitions within the EU COC, it is highly likely to suffer the same fate, and fundamental inadequacy, as the present international law pertaining to outer space (OST 67). The EU COC does not address temporary interference with space assets and leads to problems of overlap between the CD and COPUOS[26]. In fact the EU COC and Disarmament negotiations brought to surface a fundamental problem with the CD COPUOS and PAROS. All overlap one another in their deliberations on space and security.

5 A New Use-Based Approach?

The PPWT 2008 adopts a harder approach and advocates principles to be laid down, negotiated, agreed to, signed and ratified. This approach lacks utility unless all of the relevant states agree to the terms of the treaty which has not been the case thus far. There are still problems within the draft PPWT 2008: Markov notes that "This definition is said to provoke different legal interpretation in relation to objects in outer space, to objects that only fly through outer space (ballistic missiles, fractional orbital striking systems, including their re-entry head parts), as well as to air-space devices working both in the atmosphere and in outer space[27]". Similarly, the issue of laser weapons and other conventional weapons may cause problems and is not substantially addressed in the PPWT 2008. If not used for a 'hostile purpose', their use would not fall within the definitions of the PPWT 2008. Thus, the increased sophistication of the space security environment is only partially addressed in the PPWT 2008 and thus, a more nuanced and comprehensive set of laws for outer space arms control is still possible.

It is questionable whether the EU COC can utilize soft law measures to provide the comprehensive clarity and stability which has thus far been lacking in the international law pertaining to outer space. It is highly unlikely that consensus will be achievable without agreed definitions within the legal instruments relating to outer space. The preventative measures advocated by the EU COC are thus not backed by hard law. Building confidence through soft law measures may eventually lead to a process by which treaties form, as was seen with the Law of the Sea, but this is, quite potentially, a very long and uncertain process. Space is too important an environment for the international community not to give high priority to these matters.

Markov has noted that "'weapon in outer space' must be specially produced or converted to perform certain tasks. This device should be provided with specific features. All other devices, in discussions often referred to as 'a possible weapon', including a spacecraft with peaceful purposes, could not be regarded as a weapon because they are not specially produced or converted for

26 Rathgeber W. Nina-Louisa.R, Kai-Uwe,S. "Space Security and the European Code of Conduct for Outer Space Activities". Disarmament Forum 2009; 4:37.

27 Makarov.A, "Draft PPWT: Overview of Key Comments and Suggestions" <www.unidir.ch/pdf/conferences/pdf-conf105.pdf>.

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these purposes and have not been provided with specific features"[28]. Markov touches on a pivotal point. This paper adopts Tronchetti's approach to develop a Chinese-Russian-European common approach[29] to space law but advocates the adoption of a *use-based* approach to the issue of space activities as used by many military bodies[30]. A Monitoring agency may be set up to monitor assets in space and how assets are used. How an asset is used reflects its intentional use. Whilst an asset may have been developed for peaceful purposes, it might yet also be utilised for aggressive purposes or as an instrument of force application. The monitoring of how states use their space assets represents one way in which a monitoring body could establish a stronger presence for space law. Whilst not being as stringent as hard law, the principles of which many of the major space faring states have indicated an unwillingness to even negotiate on, this softer approach may be more successful.
The use-based definition is not without its problems. Where the line is drawn between aggressive and peaceful uses of outer space, is not agreed and is open to dispute. A conventional weapon orbiting the planet or a military satellite constellation like that of NAVSTAR, may be justified by states e.g. for the purposes of 'peacekeeping'. It must be remembered that the EU COC was working within the tight constraints of the Bush Administration which would not agree to a legally-binding instrument and had withdrawn from the ABM treaty 1972. However, when that asset is used to cause destruction (like that outlined in the EU COC) or demonstrates the use of or threat to use force (like that outlined in PPWT 2008) a monitoring agency would be able to begin investigations or intervene. Many of the major space faring states share common goals, but also pursue goals which are mutually exclusive in competition with each other, reflective of the geopolitical reality of states. It is urgently required that states look at space security from a new perspective, in that the weaponisation of space and an arms race in space may have already occurred, but in order to see it as such, a new perspective towards the outer space security environment is needed beyond nuclear weapons and WMD. The use based definition of space weapons offers a promising way forward.

6 Conclusion

This research into the arms control law of outer space should properly be seen as a necessary addendum to the current EU COC initiative, supported by the EU and US in particular. As outer space is arguably the most realist arena of global politics, in which great powers can project capabilities and assets unrestrained,

28 Makarov. A, "Draft PPWT: Overview of Key Comments and Suggestions" <www.unidir.ch/pdf/conferences/pdf-conf105.pdf>.
29 Tronchetti, F. "Preventing the Weaponization of Outer Space: is a Chinese-Russian-European Common Approach Possible?". Space Policy 27 (2011) 81-88.
30 For example the UK Joint Service Manual relating to buildings ordinarily civilian but used for military purposes are deemed to a military use and subject to target.

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and with little to no accountability to smaller states, it is not likely that hard law mechanisms or treaties (like PPWT 2008) will be successful in outer space in the foreseeable future. In this regard, the soft law mechanisms of the EU COC are the most workable and progressive step forward in the international law of outer space. However, the EU COC still contains ambiguous and unworkable definitions held over from the previously negotiated OST 67 treaty which have proven largely unsuccessful in regulation and monitoring of outer space activities and, in particular, in the prevention of an arms race in outer space. A space arms race is arguably *already* underway, but in order to see it as such, a new perspective towards the outer space security environment is needed beyond nuclear weapons and WMD. Space 'weapons' need to be defined more broadly and the uses of current space objects needs re-appraisal and re-contextualization to ensure continued global security. In line with such a reappraisal and re-contextualization of space objects and their great power uses, I advocate use-based definitions towards space object capabilities developed in part from the now overlooked/defunct PPWT 2008 as a necessary addendum to the EU COC going forward. Soft law mechanisms incorporating broader definitions of space object capabilities, i.e. the possibility that space contains objects that could be weaponised at anytime, should be developed as a way to deepen the soft law mechanisms and norms of the emerging EU COC consensus. I advocate the creation of an international monitoring agency tasked with applying use-based definitions to space objects in Outer Space to increase global space security.

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