LEGALITY OF THE DEPLOYMENT OF ANTI-SATELLITE WEAPONS IN EARTH ORBIT: PRESENT AND FUTURE

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I. INTRODUCTION

We are now living in a vacuum of binding international law on the development and deployment of anti-satellite weapons. As the weaponization of outer space and proliferation of anti-satellite weapons intensifies, more and more scholars are beginning to question the legality of the development and deployment of anti-satellite weapons under the current framework of international law and are suggesting the possibility of outlawing such weapons in a future international treaty.

This paper, structured in three parts, is consequently written in response to these questions. The first part of this paper will briefly introduce the current framework of international laws regulating the development and deployment of anti-satellite weapons. As represented by Article 2(4) of the United Nations Charter,[1] Article 1(1)(a) of the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water,[2] and the Preamble and Article I, II and IV of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and

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[1] U.N. Charter art. 2, para 4.

[2] See Treaty Banning Nuclear Weapons Tests in the Atmosphere, in Outer Space and Under Water, art. 1(1), *opened for signature* Aug. 9, 1963, 14 U.S.T. 1313, 480 U.N.T.S. 43, [hereinafter Limited-Test-Ban Treaty].

Other Celestial Bodies,[3] international law has failed to respond to the legality of the development and deployment of anti-satellite weapons.

The second part of this paper is written to provide a detailed argument that the development and deployment of anti-satellite weapons do not contravene international law. The paper submits that they do not contravene the Outer Space Treaty *per se*, since the Treaty has only banned nuclear weapons and weapons of mass destruction to be placed in orbit; the "peaceful use" expression in the preamble of the Treaty is not legally binding,[4] and non-aggressive anti-satellite weapons are needed to be deployed in executing the right of self-defence. Furthermore, the development and deployment of anti-satellite weapons also do not contravene international customary law, since no State practice or *opinio juris* exists in forming an international customary law to ban the development and deployment of such weapons.

Consequently, the third part of this paper analyses the possibility of drafting a new treaty explicitly banning or restricting the usage of anti-satellite weapons. Although many nations[5] and scholars[6] suggest that a new treaty banning all

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[3] Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, pmbl., arts. I, II, IV, *opened for signature* Jan. 27, 1967, 18 U.S.T. 2410, 610, U.N.T.S. 205 [hereinafter Outer Space Treaty].

[4] *See* Major Douglas S. Anderson, *A Military Look into Space: the Ultimate High Ground*, 1995 ARMY LAW. 19, 24 (1995); Marko G. Markoff, *Disarmament and "Peaceful Purposes" Provisions in the 1967 Outer Space Treaty*, 4 J. SPACE L. 3, 11 (1976); *see also* Nina Tannenwald, *Law Versus Power on the High Frontier: The Case for a Rule-Based Regime for Outer Space*, 29 YALE J. INT'L L. 363, 404 (2004).

[5] These nations include China, Russia, France and Canada. *See* Lori Scheetz, *Infusing Environmental Ethics into the Space Weapons Dialogue*, 19 GEOIELR 57, 65-66 (2006) (stating that "China and Russia have presented proposals [at the the U.N. Conference on Disarmament] to ban weapons based in space and the use of force directed at objects in space . . . . France and Canada support the notion that the space environment should be free from weapons."). *See also* Sean R. Mikula, *Blue Helmets in the Next Frontier: the Future is Now*, 29 GA. J. INT'L & COMP. L. 531, 549-50 (2001) (the Chinese Ambassador to the United Nations on Disarmament voiced his country's view that "[t]he prevention of an arms race and the prohibition of weapon systems in outer space will ... exempt outer space from wars ... [and will] be crucial for maintaining peace, security, and stability on the Earth." Russian President Vladimir Putin […] holds to the same position […].).

militarization of outer space should be signed, preferably based on the Antarctic Treaty model, there is still a long way to go in achieving such a treaty. With the major powers of the world reluctant to sign, the possibility of ratifying such a treaty is scarce.

As a final note, this paper concludes that the current vacuum of binding international law on the development and deployment of anti-satellite weapons will possibly continue to exist for a rather long time, and international criticism will serve as the most powerful controller to slow down the process of the proliferation of anti-satellite weapons. As technology develops and the proliferation of anti-satellite weapons accelerates, the international community might finally conclude a total ban treaty in the distant future.

II. THE CURRENT FRAMEWORK OF INTERNATIONAL LAW REGULATING THE DEVELOPMENT AND DEPLOYMENT OF ANTI-SATELLITE WEAPONS

A. Article 2(4) of the United Nations Charter

Article 2(4) of the U.N. Charter[7] provides a general rule governing the use of force among States, which reads, "[a]ll Members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the Purposes of the United Nations."

Here, the application of Article 2(4), of the U.N. Charter, in outer space makes it unlawful for any State to interfere in a hostile manner with the space assets of another State.[8]

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[6] *See generally* Frank M. Walsh, *Forging A Diplomatic Shield for American Satellites: the Case for Reevaluating the 2006 National Space Policy in Light of A Chinese Anti-Satellite System*, 72 J. AIR L. & COM. 759 (2007); Scheetz, *supra* note 5.

[7] U.N. Charter, art. 2 (4).

[8] *See* Christopher M. Petras, *The Use of Force in Response to Cyber-Attack on Commercial Space Systems -- Reexamining "Self-Defense" in Outer Space in Light of the Convergence of U.S. Military and Commercial Space Activities*, 67 J. AIR L. & COM. 1213, 1258 (2002); *see also* Ivan A. Vlasic, *Space Law and the Military Applications of Space Technology*, *in* PERSPECTIVES ON INTERNATIONAL LAW 385, 394 (Nandasiri Jasentuliyana ed., 1995).

B. Article 1(1)(a) of the Limited-Test-Ban Treaty

The Limited-Test-Ban Treaty[9] is usually considered the first legally binding document renouncing the military use of outer space,[10] as well as the first step towards the "denuclearization of outer space."[11] Article 1(1) of this Treaty reads:

> Each of the Parties to this Treaty undertakes to prohibit, to prevent, and not to carry out any nuclear weapon test explosion, or any other nuclear explosion, at any place under its jurisdiction or control:
> (a) in the atmosphere; beyond its limits, including outer space; or under water, including territorial waters or high seas […]

Nevertheless, as the International Court of Justice's decision in the Nuclear Test Case[12] suggests, the treaty's prohibitions cannot "be regarded as declaratory of general international law."[13]

C. The Preamble and Article I, II and IV of the Outer Space Treaty

Signed in 1967, the Outer Space Treaty[14] is considered the first international agreement that deals exclusively with outer space. The Treaty has been described as the Magna Carta of international agreements pertaining to outer space.[15] Signed

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[9] Limited-Test-Ban Treaty, *supra* note 2.

[10] See Glenn Harlan Reynolds, *The Moon Treaty: Prospects for the Future*, 52 SPACE POLICY 115 (1995); *see also* Petras, *supra* note 8.

[11] G.S. Raju, *Military Use of Outer Space: Towards Better Legal Controls*, *in* MAINTAINING OUTER SPACE FOR PEACEFUL PURPOSES 90, 92 (Nandasiri Jasentuliyana ed., 1984). *See also* Petras, *supra* note 8.

[12] Nuclear Test Case (Austl. v. Fr.), 1974 I.C.J. 253 (Dec. 20).

[13] *See* Bin Cheng, Lectures at the Institute of Public International Law and International Relations, University of Thessaloniki: Outer Space: The International Legal Framework--the International Legal Status of Outer Space, Space Objects, and Spacemen (Sept. 1979), *in* 10 THESAURUS ACROASIUM 41 (1981), *reprinted in* BIN CHENG, STUDIES IN INTERNATIONAL SPACE LAW 383, 408-09 (Clarendon Press 1997). *See also* Christopher M. Petras, *"Space Force Alpha" Military Use of the International Space Station and The Concept of "Peaceful Purposes"*, 53 A.F. L. REV. 135, 149, (2002).

[14] Outer Space Treaty, *supra* note 3.

[15] Ambassador Peter Jankowitsch of Austria, Chairman of the United Nations Committee on the Peaceful Uses of Outer Space (UN-COPUS), Opening remarks to the

and/or ratified by over one hundred nations,[16] the treaty "placed restrictions on military activities in space," and also "provided the principles on which subsequent outer space treaties were drafted."[17]

Within the preamble of the Outer Space Treaty are several phrases that indicate a desire that space activities be carried out peacefully.[18] For instance, it recognizes the "common interest of all mankind in the progress of the exploration and use of outer space for peaceful purposes," and that the use of outer space should be carried out "for the benefit of all peoples."[19]

In addition, the Outer Space Treaty states that the "exploration and use of outer space . . . shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind."[20] Moreover, outer space "is not subject to national appropriation"[21] and "shall be used . . . for peaceful purposes."[22] Note that the Treaty is framed mainly in terms of exploration and use, not preservation of the space environment.[23]

The extent to which military use of outer space is restricted by the Outer Space Treaty, has been greatly debated. The main focus of this dispute, however, rests on the interpretation of the term "peaceful purposes," as provided in Article IV of the Outer Space Treaty. Some nations argue that the term should be

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Committee on its Twenty-Fifth Anniversary, U.N. Coc. A/AC. 105/PV, 230, at 7, 8 (1982); *reprinted in* 10 J. SPACE L. 41, 41. *See also* Richard A. Morgan, *Military Use of Commercial Communication Satellites: A New Look at the Outer Space Treaty and "Peaceful Purposes"*, 60 J. AIR L. & COM. 237, 296 (1994).

[16] *See* Major John E. Parkerson, Jr., *International Legal Implications of the Strategic Defense Initiative*, 116 MIL. L. REV. 67 (1987). *See also* Anderson, *supra* note 4, at 24.

[17] *See* Anderson, *supra* note 4, at 24.

[18] *Id.* at 25.

[19] Outer Space Treaty, *supra* note 3, at preamble.

[20] Outer Space Treaty, *supra* note 3, at art. I.

[21] *Id.* at art. II.

[22] *Id.* at art. IV.

[23] See David Tan, *Towards a New Regime for the Protection of Outer Space as the "Province of All Mankind"*, 25 YALE J. INT'L L. 145, 165-66 (2000). *See also* Scheetz, *supra* note 5, at 59.

understood to mean "non-military," while others argue that it should mean "non-aggressive."[24]

III. STATUS QUO: THE DEVELOPMENT AND DEPLOYMENT OF ANTI-SATELLITE WEAPONS DO NOT CONTRAVENE INTERNATIONAL LAW

A. The Development and deployment of anti-satellite weapons do not contravene international treaties

i. The Outer Space Treaty and other international treaties have not explicitly banned the development and deployment of anti-satellite weapons

As discussed in the previous part of this paper, Article IV, of the Outer Space Treaty, does not represent a complete restriction on the placement of weapons in outer space.[25] Article IV prohibits only the placement of nuclear weapons and other weapons of mass destruction in outer space *sensu stricto* and is silent on the subject of conventional weapons.[26] Also, the development and deployment of anti-satellite weapons do not contravene other relevant international treaties. In other words, the current international law regime for outer space has failed to prohibit weaponization of space by failing to address conventional space weaponry.[27]

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[24] Michael N. Schmitt, *Bellum Americanum: The U.S. View of Twenty-First Century War and Its Possible Implications for the Law of Armed Conflict*, 19 MICH. J. INT'L L. 1051, 1087 (1998). *See also* Petras, *supra* note 8, at 139.

[25] *See, e.g.,* Gyula Gal, *"Threat or Use of Force" -- Observations to Article 2 of the U.N. Charter and Article III of the Outer Space Treaty*, 17 J. SPACE L. 54, 55-57 (1989). *See also* Jackson Maogoto & Steven Freeland, *the Final Frontier: the Laws of armed Conflict and Space Warfare*, 23 CONN. J. INT'L L. 165, 180 (2000).

[26] Michel Bourbonnière, *Legality of the Deployment of Conventional Weapons in Earth Orbit: Balancing Space Law and the Law of Armed Conflict*, 18 EUR. J. INT'L L. 873, 888 (2007).

[27] *See* Scheetz, *supra* note 5, at 63.

ii. Developing and deploying anti-satellite weapons do not contravene the Outer Space Treaty as long as they are used non-aggressively

Currently, there are two competing interpretations of the "peaceful purpose" provision,[28] of the Outer Space Treaty, submitted by space law scholars: "non-military" and "non-aggressive."[29] However, although it may seem to still be a disputable issue within the international community, since some space law commentators and developing countries argue in favour of the "non-military" interpretation, the reality has, unfortunately, been different.[30] In fact, a consensus has already been established among spacefaring nations that the term "peaceful" should be interpreted as "non-aggressive,"[31] while no State has ever formally protested against this interpretation.[32]

Specifically, the United States has, from the very beginning of the space age up to the present day, maintained the official position that "peaceful" means "non-aggressive" and not "non-military,"[33] and has therefore determined that pursuing space weapons is not only permitted by the Outer Space Treaty, but is also consistent with the aims of the Treaty.[34] A position also

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[28] Outer Space Treaty, *supra* note 3, at preamble.

[29] *See, e.g.*, Richard A. Morgan, *supra* note 15, at 240-241 and 304; BRUCE A. HURWITZ, THE LEGALITY OF SPACE MILITARIZATION 58, n.20 (1986); Eilene Galloway, *International Institutions to Ensure Peaceful Uses of Outer Space*, IX ANNALS AIR & SPACE L. 310 (1984).

[30] *See* Bin Cheng, *The 1967 Outer Space Treaty: Thirtieth Anniversary*, XXIII AIR & SPACE L. 156, 159 (1998). *See also* Maogoto & Freeland, *supra* note 25, at 179.

[31] *See* Morgan, *supra* note 15, at 303.

[32] *See* CHENG, STUDIES IN INTERNATIONAL SPACE LAW, *supra* note 13, 522(1997).

[33] *See* US Congress, Treaty on Outer Space: Hearings before the Senate Committee on Foreign Relations, 90th Cong. (1967), at 22, 59 (statement of Arthur J. Goldberg, US Ambassador to the UN); Bin Cheng, *Definitional Issues in Space Law: the "Peaceful Use" of Outer Space, including the Moon and other Celestial Bodies*, *reprinted in* Cheng, STUDIES IN INTERNATIONAL SPACE LAW, *supra* note 13, at, 513, 515; *See also* S.H. LAY AND H.J. TAUBENFELD, THE LAW RELATING TO THE ACTIVITIES OF MAN IN SPACE 97 (1970); and C.Q. CHRISTOL, THE MODERN INTERNATIONAL LAW OF OUTER SPACE 29-30 (1982). Petras, *supra* note 8, at 1254; Morgan, *supra* note 15, at 303-304, n.353-55.

[34] *See* White House Fact Sheet, National Space Policy (Sept. 1, 1996), *available at* http://www.fas.org/spp/military/docops/national/nstc-8.htm; Commission to Assess U.S. National Security Space Mgmt. and Org., Report of the Commission to Assess United States National Security Space Management and Organization (2001), 13-27, 27-36 *available at* http://www.fas.org/spp/military/commission/chapter2.pdf, http://www.fas.org/spp/military/commission/chapter3.pdf.

accepted by the Soviet Union.[35] This argument is reinforced by the actual state practices of the two superpowers, which quickly established that "peaceful" included passive military means.[36] In contrast, although much of the developing world objects to this interpretation,[37] and prefers to read "peaceful" as meaning "non-military,"[38] no State has ever formally protested the passive military use interpretation, as would be required to prevent a rule of customary international law from being established.[39]

In a nutshell, a consensus can be considered to be concluded in favour of the "non-aggressive" interpretation,[40] leading to the understanding that all military activities in outer space are permissible, unless specifically prohibited by treaty or customary international law.[41] Adopting this view, any non-aggressive device would therefore comply with the "peaceful purposes" provision of the Outer Space Treaty, even if the device is military in nature.[42]

iii. Anti-satellite weapons may need to be deployed in exercising the right of self-defence

The U.N. Charter has supremacy over all international treaties,[43] a concept also recognized in the Outer Space Treaty.[44] Article 51 of the Charter, recognizes that states have the right

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[35] *See* Tannenwald, *supra* note 4, at 373.

[36] *See* STUDIES IN INTERNATIONAL SPACE LAW, *supra* note 13, at 515-16, 528-29; Ivan A. Vlasic, *The Legal Aspects of Peaceful and Non-Peaceful Uses of Outer Space*, *in* PEACEFUL AND NON-PEACEFUL USES OF OUTER SPACE 37, 44-45 (1991) [hereinafter PEACEFUL AND NON-PEACEFUL USES OF OUTER SPACE].

[37] *See* Tannenwald, *supra* note 4, at 373, n. 25.

[38] *See* Morgan, *supra* note 15, at 296.

[39] Tannenwald, *supra* note 4, at 373.

[40] *See* Morgan, *supra* note 15, at 303.

[41] PEACEFUL AND NON-PEACEFUL USES OF OUTER SPACE, *supra* note 36, at 37, 38, & 45.

[42] Cynthia B. Zhang, *Do as I Say, not as I Do -- is Star Wars Inevitable? Exploring the future of International Space Regime in the Context of the 2006 U.S. National Space Policy*, 34 RUTGERS COMPUTER & TECH. L.J. 422, 449 (2008).

[43] Article 103 of The U.N. Charter states: "In the event of a conflict between the obligations of the Members of the United Nations under the present Charter and their obligations under any other international agreement, their obligations under the present Charter shall prevail." U.N. Charter art. 64. *See also* Zhang, *supra* note 42, at 436.

[44] *See* Zhang, *supra* note 42, at 436.

of self-defence when facing "an armed attack,"[45] which is also applicable to the regulation of outer space.[46]

Article IV of the Outer Space Treaty prohibits States from stationing weapons of mass destruction or nuclear weapons in outer space; it does not, in any way, invalidate the inherent right of national self-defence pursuant to customary law and Article 51 of the U.N. Charter.[47] In other words, the "non-aggressive" device has left room to permit armed assets that are capable of self-defence. [48]

Since a State's inherent right to self-defence encompasses military support and application missions, whether terrestrial or space-based,[49] deploying non-aggressive anti-satellite weapons in outer space would therefore not violate the Outer Space Treaty.

iv. The Preamble of the Outer Space Treaty is not legally binding

Apart from the previous arguments listed above, it is also worthy to note that even if the "non-military" interpretation of the "peaceful use" expression in the preamble of the Outer Space Treaty is adopted, the development and deployment of anti-satellite weapons do not contravene international law, since a preamble of a treaty is not legally binding.[50] Therefore, the phrase of "peaceful use" can only be used as persuasive evidence of the drafters' intent.[51]

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[45] U.N. Charter art. 51.

[46] *See* Tannenwald, *supra* note 4, at 397.

[47] *See* CHRISTOL, supra note 33, at 37.

[48] *See* Zhang, *supra* note 42, at 449.

[49] *Id*. at 449.

[50] *See* Anderson, *supra* note 4, at 24; Markoff, *supra* note 4, at 11; Tannenwald, *supra* note 4, at 404.

[51] See Markoff, *supra* note 4, at 11.

v. The Outer Space Treaty, outdated as it may be, does not need an interpretation "in the light of its object and purpose"

Some scholars acknowledge[52] the fact that conventional space weapons are not explicitly banned by the text of the Outer Space treaty, yet they argue[53] that the text of the treaty has became vague[54] as technology advances; thus, the treaty needs to be interpreted "in the light of its object and purpose,"[55] as stipulated under the Vienna Convention of Law of Treaties.[56] Nevertheless, this argument cannot stand since the interpretation of a treaty should always be initially centred on the actual text of the agreement, with an emphasis on the analysis of the words used,[57] closely followed with the subsequent "object and purpose" approach in the interpretation process.[58] A typical argument of these scholars[59] might look like the following:[60]

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[52] *See, e.g.,* Bourbonnière, *supra* note 26, at 881; Kimberly M. Schlie, *Developing and Deploying Laser Weaponery in Space: Is it Legal?*, 4 DEPAUL INT'L L.J. 17, 157 (2000); Alex B. Englehart, *Common Ground in the Sky: Extending the 1967 Outer Space Treaty to Reconcile U.S. and Chinese Security Interests*, 17 PAC. RIM L. & POL'Y J. 133, 142 (2008).

[53] Adam G. Quinn, *The New Age of Space Law: the Outer Space Treaty and the Weaponization of Space*, 17 MINN. J. INT'L L. 475, 487, 491 ("[t]he Outer Space Treaty is inadequate to govern space [… and] is irrelevant to modern space policies.").

[54] *Id*. at 496 (arguing that without proper interpretation, "the [Outer Space] Treaty itself may actually be invalid under the Vienna Convention on the Law of Treaties. . . [due to a] fundamental change in circumstances.").

[55] Article 31.1 of The Vienna Convention on the Law of Treaties states: "A treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose." Vienna Convention on the Law of Treaties, art. 31.1, May 23, 1969, 1155 U.N.T.S. 331 [hereinafter Vienna Convention].

[56] Vienna Convention, *supra* note 55, at art. 31.

[57] Gerald Fitzmaurice, *The Law and Procedure of the International Court of Justice 1951-54: General Principles and Sources of International Law*, XXXV B.Y.I.L. 204-07 (1959).

[58] ULF LINDERFALK, ON THE INTERPRETATION OF TREATIES: THE MODERN INTERNATIONAL LAW AS EXPRESSED IN THE 1969 VIENNA CONVENTION ON THE LAW OF TREATIES, 202-3 (Springer, 2007).

[59] *See, e.g*., Quinn, *supra* note 53, 496; Bourbonnière, *supra* note 26, at 888-9; Lieutenant Colonel John C. Kunich, USAF, *Planetary Defense: the Legality of Global Survival*, 41 A.F. L. REV. 119, 134-135 (1997); Morgan, *supra* note 15, at 311-312.

[60] *See generally* Quinn, *supra* note 53; Bourbonnière, *supra* note 26; Kunich, *supra* note 59; Morgan, *supra* note 15; Englehart, *supra* note 52.

a. The Vienna Convention provides that a treaty shall be interpreted in the light of its object and purpose

The Scholars who advocate[61] that the Outer Space Treaty should be interpreted first point to Article 31.1 of the Vienna Convention, which provides that "[a] treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose."[62] Pursuant to this provision, these scholars argue[63] that the "object and purpose" of a treaty is the most important background against which the meaning of any particular treaty provision should be measured.[64] Thus, where a treaty's text is vague and ambiguous, it needs to be interpreted so as to safeguard its object and purpose.

b. The Outer Space Treaty is outdated, and the text of the Treaty becomes vague as technology advances

These scholars[65] would then point to the preamble of the Outer Space Treaty, where the drafters' purpose is indicated: "[The State Parties of this treaty] [r]ecognizing the common interest of all mankind in the progress of the exploration and use of outer space for peaceful purposes…"[66]

They argue that the goals set forth in the preamble to the treaty remain equally valid today.[67] Nonetheless, technology has changed to such an extent that the text of the treaty is no longer capable of fulfilling those goals,[68] as demonstrated by a broad consensus throughout the international community, there are "some deficiencies in the existing outer space architecture which

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[61] *Id.*

[62] Vienna Convention, *supra* note 55, at art. 31.

[63] *See* Kunich, *supra* note 59, at 134-138.

[64] *See* MALCOLM NATHAN SHAW, INTERNATIONAL LAW, 839 (2006).

[65] *See generally* Quinn, *supra* note 53; Englehart, *supra* note 52.

[66] Outer Space Treaty, *supra* note 3, preamble.

[67] *See* Englehart, *supra* note 52, at 143. *See also* Press Release, The White House, President Bush Announces New Vision for Space Exploration Program (Jan. 14, 2004) http://georgewbush-whitehouse.archives.gov/news/releases/2004/01/20040114-3.htm.

[68] Englehart, *supra* note 52, at 142.

could be strengthened through . . . improving or enhancing the implementation and universalisation of existing agreements."[69]

Furthermore, these scholars argue that the actual meaning of the text of the Outer Space Treaty has increasingly become vague as technology advances.[70] They argue that in 1967, when the Outer Space Treaty was signed, the contracting States had sufficient reason to believe that by banning nuclear weapons and WMDs they were actually banning all space weapons from being placed in outer space.[71] Back in 1967, the stationing of nuclear weapons in orbit was the only significant military threat that most contracting States could envision in space.[72] There was real fear and concern that nuclear weapons would soon be stationed in space,[73] and thus a ban would be best for both superpowers, at that time, and for humanity at large.[74] Moreover, the idea of conventional weaponry in orbit was science fiction at the time, and thus did not merit serious attention in the treaty.[75] Nevertheless, these weapons are being actively pursued currently,[76] and have posed threats which are at least as serious today as the stationing of nuclear weapons in space was in 1967.

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[69] *See* Letter Dated 14 August 2008 from the President of the Conference on disarmament on behalf of the 2008 presidents addressed to the secretary-General of the Conference Transmitting the reports of the seven coordinators submitted to the president of the conferences on the work done during the 2998 session on agency items 1 to 7, U.N. Doc. CD/1846, 15 Aug. 2008.

[70] *See, e.g.*, Englehart, *supra* note 52, at 145; Quinn, *supra* note 53, at 477-478.

[71] *See* Englehart, *supra* note 52, at 145; Quinn, *supra* note 53, at 496.

[72] Englehart, *supra* note 52, at 144.

[73] The U.S. Department of State, Narrative of Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, http://www.state.gov/t/isn/5181.htm#narrative (last visited Jan. 16, 2010).

[74] *Id.*

[75] Englehart, *supra* note 52, at 144.

[76] *See* Andrew T. Park, *Incremental Steps for Achieving Space Security: The Need for a New Way of Thinking to Enhance the Legal Regime for Space*, 28 HOUS. J. INT'L L. 871, 881 (2006); Englehart, *supra* note 52.

c. Interpreting the Outer Space Treaty is therefore needed to safeguard its object and purpose correctly understood by the international community

Finally, scholars advocating for an interpretation of the Outer Space Treaty have reached the conclusion that interpreting the treaty according to its object and purpose[77] is the only way to fulfil the spirit of the treaty in the 21st century. Additionally, they point out that the International Court of Justice pays attention to the advancement of technology when interpreting a treaty, by taking the state of present-day scientific knowledge into account. For instance, the International Court of Justice stated in the *Case concerning Kasikili/Sedudu Island*[78] that: "[i]n order to illuminate the meaning of words agreed upon in 1890, there is nothing that prevents the Court from taking into account the present-day state of scientific knowledge."[79] Consequently, the international community also needs to consider and balance the present-day state of scientific knowledge with that existing in 1967.

Pursuant to the arguments above, these scholars conclude[80] that the Outer Space Treaty should be interpreted in accordance with its object and purpose, with all anti-satellite weapons banned from being deployed in outer space.

Nevertheless, this author submits that the "object and purpose" interpretation should not be employed until textual interpretation fails. When an advocate uses the object and purpose of a treaty in accordance with the provisions of the Vienna Convention, Article 31, the object and purpose is not considered independently of other means of interpretation.[81] The object and purpose is always used in relation to conventional language ("the ordinary meaning"); it is always a second step in the interpretation process.[82]

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[77] *See* Englehart, *supra* note 52, at 143.

[78] Case concerning Kasikili / Sedudu Island (Botswana v. Namibia), 1999 I.C.J. 19, at para. 20 (December 13) (Judgment).

[79] SHAW, *supra* note 64, at 40.

[80] *See, e.g.*, Englehart, *supra* note 52, Quinn, *supra* note 53.

[81] *See* LINDERFALK, supra note 58.

[82] *Id.*

vi. The "non-military v. non-aggressive" debate and the making of future customary law

Detached and apathetic to the "non-military v. non-aggressive debate," many scholars tend to adopt a pragmatic view of the current situation,[83] as they argue that the debate is a "redundant argument"[84] and rather meaningless. They submit that since outer space has been, and continues to be, used for an expanding array of military activities,[85] it is likely that space will increasingly be utilized to further the military and strategic aims of specific countries, particularly as military and space technology continues to evolve and develop.[86] Consequently, a fully developed rule in customary international law may emerge that legalizes the development and deployment of anti-satellite weapons, superseding all "non-military" arguments, unless concrete steps are taken to stop this trend.

B. The development and deployment of anti-satellite weapons do not contravene international customary law

Under the current international framework, the development and deployment of anti-satellite weapons contravene not only the international treaties, but also customary international law. Custom comprises two elements: the usage or practice of customary international law (State practice), and *opinio juris sive necessitatis*, the belief that the usage is a legal right (*opinio juris*).[87] In this case, however, no State practice or *opinio juris* exists in forming an international customary law banning the development and deployment of anti-satellite weapons.

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[83] *See* Maogoto & Freeland, *supra* note 25, at 181.
[84] *Id*.
[85] *See* Cheng, *supra* note 30, at 159.
[86] Maogoto & Freeland, *supra* note 25.
[87] Continental Shelf (Libya v. Malta), 1985 I.C.J. 13, 20 (June 3).

i. No State practice exists to form an international customary law banning anti-satellite weapons

a. Space-faring nations have not stopped developing anti-satellite weapons

Although the space-faring nations stopped testing anti-satellite weapons in 1985,[88] they never stopped developing these weapons.[89] In fact, the development of anti-satellite weapons is actively pursued by these nations. For instance, the U.S. government has declared: "[p]urposeful interference with U.S. space systems will be viewed as an infringement on our sovereign rights. The U.S. may take all appropriate self-defence measures, including, . . . the use of force, to respond to such an infringement on U.S. rights."[90] Several U.S. government publications have similarly called space a "vital national interest," a traditional governmental term of art for objectives of such importance that armed force would be used to protect them.[91] "Space was also of growing importance to the U.S. military, as evidenced by the 1982 creation of a separate Space Command within the U.S. Air Force."[92] Moreover, in 2006 the

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[88] *See, e.g.,* Walsh, *supra* note 6, at 760, n.3; Lori Damrosch, *The Future of International Law*, 101 AM. SOC'Y INT'L L. PROC. 233, 235 (2007) (stating that "the Soviet Union ended its [anti-satellite weapon] testing in 1982, and the last U.S. test was in 1985."); Michael W. Taylor, *Trashing the Solar System One Planet at a Time: Earth's Orbital Debris Problem*, 20 GEO. INT'L ENVTL. L. REV. 1, 11. (2007).

[89] *See* Englehart, *supra* note 52, at 133.

[90] U.S. Dep't of Defense, *"U.S. Department of Defense, Dir. 3100.10" Space Policy*, *in* DEPARTMENT OF DEFENSE DICTIONARY OF MILITARY AND ASSOCIATED TERMS 253 (1999).

[91] John M. Logsdon, George Washington University's Space Policy Institute, Reflections On Space As A Vital National Interest, 2 (2003) (citing The White House, A National Security Strategy for a New Century (1999) and U.S. DOD, Quadrennial Defense Review Report (2001)) 45, *available at* http://www.gwu.edu/%7Espi/assets/docs/space_as_a_national_interest.pdf.

[92] Major Elizabeth Seebode Waldrop, *Integration of Military and Civilian Space Assets: Legal and National Security Implications*, 55 A.F. L. REV. 157, 160 (2004). A unified Command, the United States Space Command (USSPACECOM), was created in 1985, including three service component commands-the Air Force Space Command (created in 1982), the Naval Space Command (created in 1983), and the Army Space Command (created in 1988). *See* COLIN S. GRAY, AMERICAN MILITARY SPACE POLICY: INFORMATION SYSTEMS, WEAPON SYSTEMS & ARMS CONTROL 115 (1982); Anderson, *supra* note 4, at 20; Burrus M. Carnahan, *The Legality of A High-Technology Missile Defense System: The ABM and Outer Space Treaties*, 78 AM. J. INT'L L. 418, 422, n 43; Lieutenant General Thomas S. Moorman, Jr., United States Air Force, *Space, a New*

U.S. government announced a new National Space Policy (2006 Space Policy).[93] It is estimated that the United States also invested approximately $1 billion in developing anti-satellite weapons, in that year.[94] In addition, Russia sees "space warfare as a distinct possibility in the future."[95]

Similarly, China has also expressed its determination in developing military satellites. In 2003, a Chinese military official commented on China's army already integrating the concept of space force strength,[96] indicating that Chinese space programs are significantly driven by military and security considerations,[97] and "the Chinese space program has always been under the command of senior officers of the People's Liberation Army."[98] China's Central Committee has given "its highest priority to the development" of anti-satellite weapons since 1998;[99] this nation has invested between $1.4 and $2.2 billion on its space program over the past decade.[100]

Strategic Frontier, AIRPOWER J., 14, 18 (Spring 1992); Mikula, *supra* note 5, at 554 (noting that "the Army, Navy, and Air Force. . . . fall[s] under the overall control of the United States Space Command.").

[93] U.S. Office of Science & Technology Council, United States National Space Policy 1 (2006), www.fas.org/irp/offdocs/nspd/space.pdf [hereinafter "2006 Space Policy"].

[94] *See* David A. Koplow, *ASAT-Isfaction: Customary International Law and the Regulation of Anti-Satellite Weapons*, 30 Mich. J Int'l L 1187, 1194 (2009); *see also* National Public Radio (NPR), *Does China Test Signal Weapons Race?*, *Talk of the Nation: Science*, Jan. 26, 2007, http://www.npr.org/templates/transcript/transcript.php?storyId=7039546 (noting that Ms. Victoria Samson, a research analyst at the Center for Defense Information, stated that "[w]e looked at the budget request from last year, and there could be $1 billion for programs that could have that kind of [anti-satellite] space weapons capability.").

[95] *See* Maogoto & Freeland, *supra* note 25, at 169; *see also* Michael R. Gordon & David S. Cloud, *U.S. Knew of China's Missile Test, but Kept Silent*, N.Y. TIMES, Apr. 23, 2007, at A1; Peter Spiegel, *U.S. Gauges the Threat to Satellites*, L.A. TIMES, Apr. 22, 2007, at A1.

[96] Leonard David, Pentagon Report: China's Space Warfare Tactics Aimed at U.S. Supremacy, Space (2003) http://www.space.com/news/china_dod_030801.html.

[97] *See* James Perry, *Operation Allied Force: The View from Beijing*, 14(2) AEROSPACE POWER J. 79, 81-82 (Summer 2000); *see also* Maogoto & Freeland, *supra* note 25, at 169.

[98] Maogoto & Freeland, *supra* note 25, at 186; *See* China in Space, China's Spacecraft, SPACE TODAY, http:// www.spacetoday.org/China/ChinaSatellites.html (last visited Jan. 16, 2010); *See* Gabriele Garibaldi, The Chinese Threat to American Leadership, http://www.asianresearch.org/articles/2435.html (last visited June 14, 2010).

[99] Walsh, *supra* note 6, at 767; *See* Paul Beaver, *China Develops Anti-satellite Laser System*, JANE'S DEF. WKLY., Dec. 2, 1998, at 18; Paul Richter, *China May Seek Satellite*

b. Space-faring nations have recently carried out new tests of anti-satellite weapons in outer space

In recent years, space-faring nations have restarted testing anti-satellite weapons, after such tests ceased in 1985. On January 11, 2007, China shot down one of its satellites using a ground-based ballistic missile known as an anti-satellite weapon.[101] On February 20, 2008, America destroyed a defunct spy satellite using a warship-based missile.[102]

ii. No opinio juris exists in forming an international customary law banning anti-satellite weapons

a. Space superpowers have stopped testing anti-satellite weapons for various reasons other than fearing a contravention of international law

The space powers have stopped testing anti-satellite weapons since 1985 for several decades.[103] Also, during the late 1980s, the United States and the former Soviet Union negotiated to end the space arms race by freezing tests of anti-satellite weapons.[104]

Laser, Pentagon Warns, L.A. TIMES, Nov. 28, 1998 http://articles.latimes.com/1998/nov/28/news/mn-48519.

[100] *See* Marcia S. Smith, Cong. Research Serv., Doc. No. RS21641, China's Space Program: An Overview 4 (2005); Walsh, *supra* note 6, at 768.

[101] Tim Reid, *"Star Wars" Missile Test Heralds New Arms Race in Space*, LONDON TIMES, Jan. 19, 2007, *available at* http://www.timesonline.co.uk/tol/news/world/asia/article1294519.ece; Zhang, *supra* note 42, at 427.

[102] *See* Koplow, *supra* note 94, at 1210; Catherine Elsworth & Richard Spencer, *Protests after US shoots down rogue spy satellite*, THE DAILY TELEGRAPH, Feb. 21, 2008, http://www.telegraph.co.uk/news/worldnews/1579552/Protests-as-US-shoot-down-rogue-spy-satellite.html; Ewen MacAskill, *US plans missile launch to destroy rogue spy satellite*, THE GUARDIAN, Feb. 15, 2008, http://www.guardian.co.uk/world/2008/feb/15/usa1.

[103] *See, e.g.*, Walsh, *supra* note 6, at 760, n.3; Damrosch, *supra* note 88, at 235; Taylor, *supra* note 88, at 11 unrelared. *See also* Mark Kaufman & Dafna Linzer, *China Criticized for Anti-Satellite Missile Test*, WASH. POST, Jan.19, 2007, at A1, *available at* http://www.washingtonpost.com/wpdyn/content/article/2007/01/18/AR2007011801029.html.

[104] *See* Koplow, *supra* note 94, at 1219. *See also* Harold Jackson, *Reagan now ready to end space arms race: US set to offer a freeze on tests of anti-satellite weapons*, THE GUARDIAN, Sep. 22, 1984.

Scholars[105] advocating that the development or deployment of anti-satellite weapons contravenes international law, argue that the arms race ended, and negotiations[106] began, in the 1980s. At such time, the space powers began to realize that such tests were in contravention of international law, and that anti-satellite weapons tests could produce thousands of pieces of space debris, making it much riskier to put either commercial or military satellites into low-Earth orbits.[107] For example, the Soviet representative to the United Nations Committee on the Peaceful Uses of Outer Space, unofficially acknowledged that the space debris problem affecting the "space environment must be dealt with immediately, rather than leaving it until late in the day as had happened with the Earth's environment."[108] Similarly, former U.S. Vice President Al Gore indicated that the problems of orbital debris and radioactive pollution from space-based nuclear reactors merit international concern.[109]

However, the previous argument can hardly stand, since environmental concerns have never been a major reason for the space powers to stop the arms race. In fact, the negotiations were started for "practical purposes" rather than fearing a contravention of international law as a result of environmental problems. The United States, for instance, stopped testing anti-satellite weapons in the 1980s when it experienced "technical problems" which "forced a delay in the testing of its anti-satellite weapons."[110] Moreover, it is also significant to note that while the space superpowers stopped testing anti-satellite weapons from 1985 to 2007, at the same time they were investing heavily in developing these weapons, as discussed above.

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[105] *See, e.g*. Koplow, *supra* note 94.

[106] *See* Englehart, *supra* note 52, at 141.

[107] *See* David Tan, *supra* note 23, at 165; Scheetz, *supra* note 5, at 59.

[108] Press Release, U.N., Outer Space Committee Considers Agenda of Legal Sub-Committee (1986) OS/1259 3; H.A. Baker, *Liability for Damage Caused in Outer Space by Space Refuse*, 12 ANNALS cited in David Tan, *Towards a New Regime for the Protection of the Outer Space as "Province of All Mankind"*, 25 YALE J. INT'L L. 145, 153 (2000); AIR & SPACE L. 183 (l988).

[109] *See* Albert Gore, Jr., *Outer Space, the Global Environment, and International Law: Into the Next Century*, 57 TENN. L. REV. 329, 334 (1990).

[110] *Id.*

b. No State has expressed the view that developing and deploying anti-satellite weapons would contravene international law

As anti-satellite weapons remain one of the main aspirations that the space powers pursue in their space policies, no State has ever expressed the view that developing and deploying anti-satellite weapons would contravene international law.

Some scholars[111] point to China's 2007 anti-satellite weapon test,[112] and argue that since the international community responded negatively against the test, it could be considered that such weapons would contravene international law. Specifically, they argue that shortly after the test, China was criticized by the United States[113] and Japan.[114] The U.S. expressed its belief that China's development and testing of such weapons is inconsistent with the spirit of cooperation,[115] and labeled the event "regrettable," "very troubling,"[116] "destabilizing,"[117] as well as complained that it was "inconsistent with the spirit of cooperation that both countries aspire to in the civil space area."[118] Japan cast doubt over China by stating: "if

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[111] *See, e.g.,* Koplow, *supra* note 94, at 1215-1264.

[112] On January 11, 2007, China shot down one of its satellites using a ground-based ballistic missile known as an anti-satellite weapon. *See* Tim Reid, *supra* note 101.

[113] *See, e.g.*, *U.S. Criticizes Chinese Anti-Satellite Weapons Test*, THE ASSOC. PRESS (2007).

[114] *See Chinese Foreign Ministry spokesman denies knowledge of anti-satellite weapons test*, THE ASSOC. PRESS, Jan. 20, 2007.

[115] Richard Spencer, *Chinese Missile Destroys Satellite in Space*, THE TELEGRAPH, Jan. 19, 2007, *available at* http://www.telegraph.co.uk/news/worldnews/1539948/Chinese-missile-destroys-satellite-in-space.html.

[116] Christina Rocca, Ambassador, U.S. Permanent Representative to the United Nations, Prevention of an Arms Race in Outer Space, Statement to the Conference on Disarmament (Feb. 13, 2007), http:// www.usmission.ch/Press2007/0213PAROS.html (last visited June 30, 2009) (expressing the U.S. government's view that China's 2007 ASAT test was "regrettable"); *see also* Marc Kaufman & Dafna Linzer, China Criticized for Anti-Satellite Missile Test, Wash. Post, Jan. 19, 2007, at A1 (quoting U.S. administration official saying: "It's unfortunate that China is going down this path .... This sort of thing is such a throwback to the Cold War.").Theresa Hitchens, *U.S.-Sino Relations in Space: From "War of Words" to Cold War in Space?* 5 CHINA SECURITY 12, 25 (Winter 2007). *See also* Koplow, *supra* note 94, at 1237.

[117] Wade Boese, *Chinese Satellite Destruction Stirs Debate*, ARMS CONTROL TODAY, Mar. 2007, at 27, 28. *See also* Koplow, *supra* note 94, at 1238.

[118] Space Security 2008, *supra* note 2, at 55 (quoting a U.S. official calling the Chinese test "inconsistent with the spirit of cooperation that both countries aspire to in the

we could call this a peaceful use" on the legitimacy of the test.[119] The European Union, United Kingdom, Australia, Canada, India, South Korea, and Taiwan also joined in protesting over the test.[120] Even China itself promised after the test that it will conduct no more anti-satellite tests,[121] and reiterated that it was against the militarization of space.[122]

The flaw of the above argument, again, is that these criticisms, harsh they might be, were made mainly out of political concerns rather than based on international legal beliefs. Above all, among these criticisms, no State has ever expressed the position that developing and deploying anti-satellite weapons contravene international law.[123] In contrast, several nations, Britain for instance, expressly declared that they do not believe China's test has contravened international law.[124] The U.S. reacted strongly against the Chinese test, but it did not label the test "illegal" or "inconsistent with" any particular legal obligations.[125] In fact, the U.S. position is contradictory. As delivered in the 2006 Space Policy,[126] the U.S. states that it "will oppose the development of new legal regimes or other restrictions that seek to prohibit or limit U.S. access to or use of space."[127]

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civil space area"); *see also* Richard Weitz, *U.S. Allies Criticize China's Anti-Satellite Weapon Test; Media Notes Concerns About U.S. Space Policies*, 13 WMD INSIGHTS 2, 3 (2007) (quoting NASA spokesperson Jason Sharp as saying: "We believe China's development and testing of such weapons is inconsistent with the constructive relationship that our presidents have outlined, including on civil space cooperation").

[119] Chisaki Watanabe, *Allies protest China's Anti-Satellite Test as Militarization of Space*, THE ASSOCIATED PRESS, Jan. 19, 2007 (quoting Japanese Foreign Minister Taro Aso).

[120] *See* Koplow, *supra* note 94, at 1239.

[121] *See China has no plans for more anti-satellite test, Japan's former defense chief says*, THE ASSOCIATED PRESS, Feb. 12, 2007.

[122] Chisaki, *supra* note 119.

[123] *See* Koplow, *supra* note 94, at 1237 (stating that the international community "criticize each other's ASAT experiments [... as] unwise, unwelcome, adverse for international peace and security -- but not illegal.").

[124] *Id.* at 1240 (noting that "Tom Kelly, the spokesperson for Britain's Prime Minister Tony Blair, stated that: 'We are concerned about the impact of debris in space and we expressed that concern. We don't believe that this does contravene international law.'"); *See also* Chisaki, *supra* note 119.

[125] *See* Koplow, *supra* note 94, at 1238.

[126] See 2006 Space Policy, *supra* note 93.

[127] *Id.*

IV. A LONG WAY TO GO FOR THE FUTURE TOTAL-BAN TREATY

A. Some nations and scholars suggest that a new treaty governing the use of outer space should be signed based on the Antarctic Treaty model

As discussed above, military and civilian uses of outer space have overlapped from the outset, blurring the line between fortress and sanctuary.[128] Consequently, space has, arguably, already been militarized.[129] As the militarization of space intensifies, scholars and government officials have begun to evaluate the possibility of having the space powers sit down and negotiate a stricter treaty, banning the development and deployment of all anti-satellite weapons.[130] Specifically, Russia and China have pressed the international community for such a treaty,[131] and China's recent weapon test has been interpreted as an attempt to redefine the "rules of the game" to bring the United States to the negotiating table.[132]

The ideal model for the new treaty, favored by most nations[133] and scholars,[134] is the Antarctic Treaty. Taking the Ant-

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[128] DETLEV WOLTER, COMMON SECURITY IN OUTER SPACE AND INTERNATIONAL LAW 31 (2006).

[129] *See* MICHAEL E. O'HANLON, NEITHER STAR WARS NOR SANCTUARY: CONSTRAINING THE MILITARY USES OF SPACE 8 (2004).

[130] *See* Gordon, *supra* note 95; Joseph Kahn, *China confirms anti-satellite test*, NEW YORK TIMES, Jan. 23, 2007, *available at* http://www.nytimes.com/2007/01/23/world/asia/23cnd-china.html (noting that "China's intentions in conducting this test may have been more diplomatic in nature, designed to pressure the United States to negotiate a treaty to ban weapons in space," and "Russia and China have pressed for the international treaty that would limit the use of space for military purposes.").

[131] Jacob M. Harper, *Technology, Politics, and the New Space Race: the Legality and Desirability of Bush's National Space Policy Under the Public and Customary International Laws of Space*, 8 CHI. J. INT'L L. 681, 682 (2008). *See* Scheetz, *supra* note 5, at 66; Tannenwald, *supra* note 4, at 377; Englehart, *supra* note 52, at 133.

[132] *See, e.g.,* Kahn, *supra* note 130 (reporting that "Xu Guangyu, a former Chinese army officer and an official at the government-run China Arms Control and Disarmament Association, said the anti-satellite test amounted to an attempt to redefine the 'rules of the game' and bring the United States to the negotiating table."); Harper, *supra* note 131, at 682.

[133] *See* Mikula, *supra* note 5 (noting that "Russia and China […] claim to desire complete demilitarization."); Zhang, *supra* note 42, at 435 (noting that "Eisenhower advocated that the basic tenants of the Antarctic Treaty should also apply to outer space."); Tannenwald, *supra* note 4, at 413.

arctic analogy[135] for outer space, supporters of this notion suggest that the new treaty should be made parallel to the Antarctic Treaty,[136] which has prevented the militarization of Antarctica by banning all military activities there,[137] as provided by Article I of the Antarctic Treaty:[138]

> Antarctica shall be used for peaceful purposes only. There shall be prohibited, inter alia, any measures of a military nature, such as the establishment of military bases and fortifications, the carrying out of military maneuvers, as well as the testing of any type of weapons.

Similar considerations suggest that outer space should be demilitarized like the Moon and other celestial bodies,[139] as provided by Article 3 of the Agreement on the Activities of States on the Moon and Other Celestial Bodies,[140] and that "peaceful purposes" mean no militarization of any sort:

> 1. The moon shall be used by all States Parties exclusively for peaceful purposes.
>
> 2. Any threat or use of force or any other hostile act or threat of hostile act on the moon is prohibited. . . .
>
> 3. States Parties shall not place in orbit around or other trajectory to or around the moon objects carrying nuclear weapons or any other kinds of weapons of mass destruction or place or use such weapons on or in the moon.

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[134] *See generally* Zhang, *supra* note 42; Tan, *supra* note 23; Major Robert A. Ramey, *Armed Conflict on The Final Frontier: The Law of War in Space*, 48 A.F. L. REV. 1 (2000).

[135] *See* Tannenwald, *supra* note 4, at 373 (arguing that outer space, like Antarctica, is among the last unclaimed territories).

[136] *See* Quinn, *supra* note 53, at 483.

[137] See Tannenwald, *supra* note 4, at 374.

[138] Antarctic Treaty, Dec. 1, 1959, 12 U.S.T. 794, 402 U.N.T.S. 71; *see also* Tannenwald, *supra* note 4, at 413.

[139] *See* M.J. Peterson, *The Use of Analogies in Developing Outer Space Law*, 51 INT'L ORG. 245, 257-60 (1997).

[140] Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, *opened for signature* Dec. 18, 1979, 1363 U.N.T.S. 21 at arts. 3.1-3.3 [hereinafter Moon Treaty].

> 4. The establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military manoeuvres on the moon shall be forbidden. . . .

B. With the major powers of the world reluctant to sign, the possibility of the signature of a Total-ban Treaty is scarce

Amid suggestions for the adoption of a stricter treaty, this author is of the view that the possibility for a accepting a hardline treaty banning all anti-satellite weapons in the near future is scarce. The main obstacle, as many scholars[141] have pointed out, is the United States' uncompromising position[142] in which it refuses to talk, and instead seeks to preserve "freedom of action" in space.[143]

Another obstacle, albeit one less obvious, is that China and Russia are also reluctant to completely ban space weapons. This sentiment is reflected in the treaty proposal titled, "Treaty on Prevention of the Placement of Weapons in Outer Space and of the Threat or Use of Force against Outer Space Objects," submitted by the two nations to the Conference on Disarmament on 2008.[144] As pointed out by the United States, the draft has not banned the research, development, production or storage of anti-satellite weapons, nor has it banned the test

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[141] *See* Zhang, *supra* note 42, at 428; Walsh, *supra* note 6, at 795; Park, *supra* note 76, at 899.

[142] *See* Scheetz, *supra* note 5, at 66 (noting that "the United States has […] a general unwillingness to agree to a weapons-free space environment."). *See generally* Englehart, *supra* note 52.

[143] *See* Kahn, *supra* note 130 (reporting that "President Bush authorized a new space policy that seeks to preserve 'freedom of action' in space, and he said that the United States reserves the right to use force against countries that seek to disrupt American satellites.").

[144] *See* Letter from the Permanent Representative of the Russian Federation and the Permanent Representative of China to the Conference on Disarmament (Feb. 12, 2008), 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, Conference on Disarmament, CD/1839 (2008); Letter from the Permanent Representative of China to the Conference on Disarmament (Feb. 12 2008), Addressed to the Secretary-General of the Conference Transmitting A Message from the Minister For Foreign Affairs of China to the Conference on Disarmament, Conference on Disarmament, CD/1836 (2008).