

**LIMITS ON SPACE WEAPONS: INCORPORATING THE LAW OF WAR INTO  
THE *CORPUS JURIS SPATIALIS***

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**Abstract**

Article III of the Outer Space Treaty applies the principles of international law to the territory of outer space. This paper investigates international law sources for limits on “space weaponization” found in the laws of war. Through analysis of both customary and treaty made limitations on space weapons, the paper presents a more unified theory of the *corpus juris spatialis* as called for by Article III. Furthermore, definition of these limits allows for a more focused debate on “space weaponisation.”

**I. Introduction**

In the past two years the world has seen China successfully test an ASAT weapon on a defunct weather satellite, Iran successfully launch a rocket that achieved Earth orbit, and the United States successfully intercept and destroy a failed military reconnaissance satellite. These events and others have prompted renewed interest in an old debate, that of space security. The current tenor of this debate focuses on space weapons, which has been highlighted by a new draft treaty on space weapons that was submitted to the 2008 Conference on Disarmament by Russia and China.<sup>1</sup>

While a push for new governing principles may be valuable, it is vital to understand the current base line restrictions in place that govern space weapons. In order to do so one must examine not only international space law but also international law on the use of force (*jus ad bellum*) and international humanitarian law (*jus in bello*). It is important to note that Article III of the Outer Space Treaty incorporates the application of international law and specifically the Charter of the United Nations in outer space, making it a vital part of the *corpus juris spatialis*.<sup>2</sup> While

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<sup>1</sup> See Sergey Lavrov, Prepared Statement, Statement by H.E. Mr. Sergey Lavrov at the Plenary Meeting of the Conference on Disarmament (Feb. 12, 2008) and Yang Jiechi, Prepared Statement, Message from Foreign Minister Yang Jiechi of the People’s Republic of China to the Conference on Disarmament (Feb. 12, 2008). The treaty can be found in CONFERENCE ON DISARMAMENT, LETTER DATED 12 FEBRUARY 2008 FROM THE PERMANENT REPRESENTATIVE OF THE RUSSIAN FEDERATION AND THE PERMANENT REPRESENTATIVE OF

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CHINA TO THE CONFERENCE ON DISARMAMENT ADDRESSED TO THE SECRETARY-GENERAL OF THE CONFERENCE TRANSMITTING THE RUSSIAN AND CHINESE TEXTS OF THE DRAFT “TREATY ON PREVENTION OF THE PLACEMENT OF WEAPONS IN OUTER SPACE AND THE THREAT OR USE OF FORCE AGAINST OUTER SPACE OBJECTS (PPWT)” INTRODUCED BY THE RUSSIAN FEDERATION AND CHINA, U.N. Doc. CD/1839 (2008).

<sup>2</sup> Treaty on the Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other

the principles that flow from the Outer Space Treaty are important guiding legal principles, it is crucial to acknowledge the incorporation of international law made by the treaty. By applying the body of international law in space it is possible to achieve a holistic view of the law applicable in outer space.

This paper will briefly address the areas of *jus ad bellum* and *jus in bello* in order to analyze the current restrictions on space weaponry that can be found in the law of war. The principles and rules found in this body of law were developed to apply to the traditional areas of warfare, mainly land, sea, and air. Not all rules are directly translatable into the space environment, but many can be applied through analogy. More importantly the underlying humanitarian principles that form the foundation of these rules are translatable and will serve as the basis for the extension of the law of war into space.

## II. Peaceful Purposes and *Jus ad Bellum*

The principle of the peaceful uses of outer space can be found throughout the literature on space law; however, the Outer Space Treaty only uses the term “peaceful purposes” to refer to outer space in the preamble of the treaty.<sup>3</sup> It is used in the body of the treaty to refer to the Moon and other celestial bodies but not to outer space in general.<sup>4</sup> There is, however, strong support for the term applying to outer space via customary international law from the term’s use in the preambles to both the Declaration of Legal Principles

Governing the Activities of States in the Exploration and Use of Outer Space<sup>5</sup> and in the Outer Space Treaty<sup>6</sup> to its use in laws, policies, and official statements of numerous States dealing with their respective space programs.<sup>7</sup>

While the principle of the use of outer space for peaceful purposes has most likely entered customary international law, the content of that term is somewhat nebulous, because different nations apply it in different ways. However, a base line meaning can be attributed to the term through an

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<sup>5</sup> Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space, preamble, UN GA res. XVIII, preamble, U.N. Doc. A/RES/18/1962 (1962). See Bin Cheng, *United Nations Resolutions on Outer Space: “Instant” Customary International Law*, 5 INDIAN J. INT’L L. 23 (1965).

<sup>6</sup> Outer Space Treaty, *supra* note 2, preamble.

<sup>7</sup> For example: United States: U.S. National Space Policy, N.S.P.D. 49 (2006) (“The United States is committed to the exploration and use of outer space by all nations for peaceful purposes, and for the benefit of all humanity.”); Russian Federation: Government of Russian Federation Resolution of May 15, 1995 N 468 Moscow, *available at* [http://www.unoosa.org/oosa/SpaceLaw/national/russian\\_federation/resolution\\_468\\_1995E.html](http://www.unoosa.org/oosa/SpaceLaw/national/russian_federation/resolution_468_1995E.html) (“The Russian Space Agency (RSA) is a federal body of executive power which ensures implementation of the state policy in the field of research and use of outer space for peaceful purposes. . .”); China: Statement by Hu Xiaodi to the U.N. First Committee, October 15, 2002, in General Assembly Records, 57<sup>th</sup> Session, 1<sup>st</sup> Committee, 12<sup>th</sup> Meeting, UN Doc. A/C.1/57/PV.12 (Oct. 15, 2002) (“Using outer space for peaceful purposes reflects the common will and fundamental interests of the international community.”); Iran: *Iran rocket launch non-military – ambassador*, RIA NOVISTI, February 8, 2008, <http://en.rian.ru/world/20080208/98732321.html> (“The recent launch of an Iranian research rocket was strictly for peaceful purposes, and was designed to obtain meteorological data, the Islamic republic’s ambassador to Moscow said on Friday.”).

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Celestial Bodies art. III, Jan. 27, 1967, 610 U.N.T.S. 205 [hereinafter Outer Space Treaty].

<sup>3</sup> Outer Space Treaty, *supra* note 2, preamble,

<sup>4</sup> *Id.*, art. IV.

analysis of international law on the use of force.<sup>8</sup> The Outer Space Treaty, in art. III, states that international law, and specifically the U.N. Charter shall be applicable in outer space “in the interest of maintaining international peace and security.” The adoption of the U.N. Charter is a watershed moment in the law concerning the use of force as it marks a change from *jus ad bellum* to *jus contra bellum*.<sup>9</sup> Art. 2(4) of the Charter adopts the rule that States “shall refrain from the threat of or use of force against the territorial integrity or political independence of any state.”<sup>10</sup> In fact Art. 2(3) of the convention uses the phrase “international peace and security” (later echoed in the Outer Space Treaty) when it requires states to use “peaceful means” to settle disputes.<sup>11</sup> The U.N. Charter does not however place a unilateral ban on the use of force in all situations. Self defense<sup>12</sup> and force used by direction of the Security Council are still allowed.<sup>13</sup> Essentially, the U.N. Charter outlaws the aggressive use of force,<sup>14</sup> and the aggressive use of force has become an international crime.<sup>15</sup> The repetition of the words “international peace and security” in the Outer Space Treaty is evidence that if nothing else peaceful purposes refers back to norms on force enunciated in the U.N. Charter.

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<sup>8</sup> This is not to say that this is what “peaceful purposes” means. The analysis is meant to take into account what peaceful purposes means at a minimum.

<sup>9</sup> Yoram Dinstein, *Notes on War*, 27 HARV. J. L. & PUB. POL’Y 877, 880 (2003-2004).

<sup>10</sup> U.N. Charter, art. 2(4).

<sup>11</sup> *Id.* at art. 2(3).

<sup>12</sup> *Id.* at art. 51

<sup>13</sup> *Id.* at art. 42.

<sup>14</sup> *Id.* at art. 1(1).

<sup>15</sup> See generally ANTONIO CASSESE, INTERNATIONAL CRIMINAL LAW 110-125 (2003).

The exact meaning of aggression is often debated, but guidance can be found in the Definition of Aggression adopted by the U.N. General Assembly in 1974.<sup>16</sup> This resolution defines aggression as “the use of force by a State against the sovereignty, territorial integrity or political independence of another State, or in any other manner inconsistent with the Charter of the United Nations.”<sup>17</sup> Since one of the UN Charter’s purposes is to maintain international peace and security, States may use force in a way that disturbs international peace and security. Such actions would include the use of force from space or in space when not consistent with the exceptions found within the UN Charter. Furthermore, in light of the assertion by the United States that “purposeful interference” with its space systems “will be viewed as an infringement on our sovereign rights,” any attack on one of these spacecraft would be considered an attack on the sovereignty of the U.S. and possibly on its territorial integrity.<sup>18</sup>

Since peaceful purposes can be construed to, at least, mean nonaggressive, then any use of a weapon in space would have to conform to the exceptions to the ban on the use of force found in the U.N. Charter. This first is the use of force when authorized by the Security Council. Under this exception the Security Council may authorize the use of force in order to maintain international peace and security. The second, and more limiting, exception is force used in self defense. The U.N.

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<sup>16</sup> The Definition of Aggression, U.N.G.A. Res. 3314 (1974).

<sup>17</sup> *Id.* at art 1.

<sup>18</sup> U.S. DEPARTMENT OF DEFENSE SPACE POLICY, DEPARTMENT OF DEFENSE DIRECTIVE 3100.10, at 4.2.1, (July 9, 1999).

Charter states that States have an “inherent right” to self-defense.<sup>19</sup> States may use force to defend themselves or to defend others; however, there are accepted limitations to this exception: necessity, proportionality, and immediacy.<sup>20</sup> Therefore weapons used in self defense must be able to conform to this paradigm. This is especially important with the idea of proportionality, which disallows States from responding in self-defense in a disproportionate manner. The requirement of immediacy could also be relevant in space due to physics which could cause delay in mobilizing weapons. The necessity requirement allows States to respond with force only when a peaceful settlement of the dispute cannot be negotiated.<sup>21</sup> While necessity is a very important limitation on the recourse to force, it does not add any limitations to what weapons can be used to respond.

Since the U.N. Charter (via art. III of the Outer Space Treaty) applies to the actions of nations in outer space, then the principle of non-aggression also applies. This places an affirmative duty on States not to station weapons of an aggressive nature in outer space. It does not prohibit States from placing weapons of a defensive nature in space (unless some further meaning can be attributed to the term “peaceful purposes”) or from placing weapons required by order of the Security Council in order to maintain international peace and security. Of course the difference between an aggressive weapon and a defensive weapon can almost always be found in its use. The proportionality rule is really

the only factor under *jus ad bellum* in determining the legality of a weapon, and even this limitation is lacking as more often than not it will be an issue of the use of a weapon rather than the weapon itself. If a weapon can never respond in a proportional manner, then any response from it in self defense would violate international law and such a weapon would be illegal whether placed in space or terrestrially.<sup>22</sup> The factor of immediacy would not necessarily make a weapon illegal. If a weapon cannot be mobilized in time to make an initial and immediate response to an act of aggression, then it could still be legally used during a protracted conflict.

#### **IV. Weapons in Space and Jus in Bello**

International humanitarian law seeks to keep civilians from being the target of attack and to reduce the suffering of combatants.<sup>23</sup> This is accomplished through a variety of rules that States agree to apply in times of international armed conflict. Those that are most important to the space weapons debate are those that govern the potential weapons and their use and those banning specific types of weapons. It should also be noted that space assets can enhance a states ability to fulfill its humanitarian responsibilities under the law of international armed conflict.

##### A. Weapons banned by their Nature

While some weapons are banned specifically, weapons are generally restricted in *jus in bello* due to their nature. The ICJ has recognized two

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<sup>19</sup> UN Charter, art. 51.

<sup>20</sup> YORAM DINSTEIN, WAR AGGRESSION AND SELF-DEFENCE 237-243 (2005).

<sup>21</sup> *Id.* at 237.

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<sup>22</sup> *But see* Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, 1996 I.C.J. 266 (July 8) *and infra* at 6.

<sup>23</sup> *Id.* at 257.

cardinal principles that “constitut[e] the fabric of humanitarian law.”<sup>24</sup> The first is that civilians must not be the object of attacks, so States “must consequently never use weapons that are incapable of distinguishing between civilian and military targets.”<sup>25</sup> The second principle is that “it is prohibited to cause unnecessary suffering to combatants.”<sup>26</sup> Both of these principles place substantial limitations on the potential space weapons, the first more so than the second.

The first principle states that the weapon must be able to be effectively targeted so that it will only damage military targets and not civilian targets. This could be a crucial limitation on both space based weapons and on weapons used against space based assets. In the first instance a weapon launched to the Earth from space must be reasonably precise; it must be able to re-enter the Earth’s atmosphere and hit a legal target.<sup>27</sup> The technical problems of re-entry are amplified if a weapon has limited maneuverability. For instance a Soyuz capsule recently reentered and landed 420 km from its target site.<sup>28</sup> If a technical problem such as this were to be recurring on a weaponized reentry vehicle, it could affect the legality of a space based weapon. Also, a weapon designed to take advantage of the physics of space in order to attack large

swaths of the Earth’s surface would be illegal due to the fact that it would be “incapable of distinguishing between civilian and military targets.”<sup>29</sup> A weapon that cannot be effectively targeted is illegal.

In the second case of a weapon used against a space based asset, the weapon must also be able to be targeted with discrimination. Assuming that the weapon is able to be targeted correctly, the creation of debris could be considered an indiscriminate effect. If a weapon destroys an object on orbit, it is feasible that the resulting debris could cause damage to civilian assets in space. It could be reasonably argued that the State has perpetrated an indiscriminate attack, which can be defined as an attack “which employs a method or means of combat the effects of which cannot be limited as required” under Additional Protocol I.<sup>30</sup> The protocol specifically places limits on attacks on civilian objects<sup>31</sup> and attacks that cause “widespread, long-term and severe damage” to the environment.<sup>32</sup> It should be noted that Additional Protocol I does limit these restrictions’ applicability to land, sea, and air combat.<sup>33</sup> However, these limitations are echoed in other treaties and in customary international law. For instance, the International Committee of the Red Cross states that it is customary international law that attacks must be limited as required by

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<sup>24</sup> *Id.*

<sup>25</sup> *Id.*

<sup>26</sup> *Id.*

<sup>27</sup> For a discussion of legitimate military targets see YORAM DINSTEIN, CONDUCT OF HOSTILITIES UNDER THE LAW OF INTERNATIONAL ARMED CONFLICT 82-140 (2004).

<sup>28</sup> *Soyuz Bumpy Re-Entry Caused By Technical Glitch*, SPACE DAILY, May 22, 2008, [http://www.spacedaily.com/reports/Soyuz\\_Bumpy\\_Re\\_Entry\\_Caused\\_By\\_Technical\\_Glitch\\_999.html](http://www.spacedaily.com/reports/Soyuz_Bumpy_Re_Entry_Caused_By_Technical_Glitch_999.html).

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<sup>29</sup> Legality of the Threat or Use of Nuclear Weapons, *supra* note 22, at 257.

<sup>30</sup> Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I), art. 51(4) 1125 U.N.T.S. 3 [hereinafter Additional Protocol I].

<sup>31</sup> *Id.* at art. 52.

<sup>32</sup> *Id.* at art. 55.

<sup>33</sup> *Id.* at art. 49(3).

international law.<sup>34</sup> Liability for such attacks would be covered under the liability convention, such actions taken during a time of international armed conflict could trigger other forms of state responsibility<sup>35</sup> and the violation might even rise to the level of a war crime with individual criminal responsibility. For instance the International Criminal Court has jurisdiction over war crimes, including:

Intentionally launching an attack in the knowledge that such attack will cause . . . damage to civilian objects or widespread, long-term and severe damage to the natural environment which would clearly be excessive in relation to the concrete and direct military advantage anticipated.<sup>36</sup>

It could be argued that an ASAT weapon that created space debris that damaged civilian objects in orbit during wartime could be a war crime if it met the excessiveness threshold. It could also be argued that the damage to the natural environment during an armed conflict could be a war crime, as it would most certainly be long-term. The question would be whether it was widespread and severe.

The I.C.J.'s second cardinal principle on humanitarian law is that an attack cannot cause unnecessary

suffering. This principle can also be found in the Additional Protocol I to the Geneva Conventions which prohibits State parties from "employ[ing] weapons, projectiles and material and methods of warfare of a nature to cause superfluous injury or unnecessary suffering."<sup>37</sup> The ICJ interpreted this to be a ban on weapons that cause "harm greater than that unavoidable to achieve legitimate military objectives."<sup>38</sup> Any such weapon would be illegal in outer space.

Of course, these restrictions are often difficult to apply since many weapons have the capability of both being used in a legal manner and being used in an illegal manner. Thus a weapon that *could* be used in a nondiscriminatory manner or in a way that would cause unnecessary suffering is not banned under *jus in bello* if it can *also* be used in a discriminatory manner and cause limited suffering. In such a case it is the illicit use of the weapon that is outlawed and not the weapon itself.

## B. Specific Weapons

### i. *Conventional Weapons*

In the Outer Space Treaty there is no ban on the stationing or use of conventional weapons in outer space.<sup>39</sup> This does not, however, give States free license to use or station weapons in outer space.<sup>40</sup> Any such weapons must still be

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<sup>34</sup> INTERNATIONAL COMMITTEE OF THE RED CROSS, CUSTOMARY INTERNATIONAL HUMANITARIAN LAW 40 (2005).

<sup>35</sup> DRAFT ARTICLES ON RESPONSIBILITY OF STATES FOR INTERNATIONALLY WRONGFUL ACTS, WITH COMMENTARIES, art. 1, *available at* [http://untreaty.un.org/ilc/texts/instruments/english/commentaries/9\\_6\\_2001.pdf](http://untreaty.un.org/ilc/texts/instruments/english/commentaries/9_6_2001.pdf).

<sup>36</sup> Rome Statute of the International Criminal Court, July 1, 2002, art. 82(b)(iv), 2187 U.N.T.S. 90.

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<sup>37</sup> Additional Protocol I, *supra* note 30, at art. 35(2).

<sup>38</sup> Legality of the Threat or Use of Nuclear Weapons, *supra* note 22, at 257.

<sup>39</sup> However Article IV of the Outer Space Treaty does prohibit the stationing of conventional weapons on the moon or other celestial bodies. Outer Space Treaty, *supra* note 2, art. IV.

<sup>40</sup> Hague Regulations Respecting the Laws and Customs of War on Land (Annex to Hague Convention IV, 1907), Art. 22, *available at*

permissible under international law. There are several restrictions on the uses of specific conventional weapons in outer space. Poison,<sup>41</sup> weapons that cause non-detectable fragments in their victims,<sup>42</sup> incendiaries when used in the vicinity of civilians,<sup>43</sup> and weapons whose sole purpose are blind combatants<sup>44</sup> are all prohibited to some extent under international law. While it would not be technologically feasible to station some of these weapons in space, if the technology were available they would none the less be prohibited.<sup>45</sup>

Of note are restrictions placed on unsecured naval mines. These are contact mines that are not secured by a mooring or anchor and have the ability to be swept away in a current. According to the Hague Convention VIII these mines must be disabled within an hour of release, due to the way in which they might move and destroy non military objectives.<sup>46</sup> While the ban is

not directly translatable to space due to physics, the principle behind this ban is. By analogy, it is probably impermissible to put a weapon in space that would target at random and might destroy a civilian satellite, which may not be a legitimate military objective. The principle could be extended by an analogy to torpedoes which must be disabled if they miss their targets.<sup>47</sup> A weapon in space that misses its target and still poses a threat due to its capabilities might also be illegal (e.g. a warhead being used as an ASAT that misses its mark). However, there probably would not be a ban on a purely kinetic kill weapon that entered orbit as a piece of space debris, as that debris would be no different from the other debris around it (whereas a warhead would still have the potential to explode). While these rules are extended by analogy, it is the underlying principle that States must discriminate amongst targets that governs.

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<http://www.icrc.org/ihl.nsf/0/1d1726425f6955aec125641e0038bfd6> [hereinafter Hague Regulations]; Additional Protocol I, *supra* note 30, art. 35(1).

<sup>41</sup> Hague Regulations Respecting the Laws and Customs of War on Land (Annex to Hague Convention IV, 1907), *supra* note 40 Art. 23(a). The ban has been recognized most recently in article 3(a) of the Statute of the International Tribunal for the Former Yugoslavia *available at* <http://www1.umn.edu/humanrts/icty/statute.html>.

<sup>42</sup> Protocol on Non-detectable Fragments (Protocol I), Oct. 10, 1980, 1342 U.N.T.S. 168.

<sup>43</sup> Protocol on Prohibitions or Restrictions on the Use of Incendiary Weapons (Protocol III), Oct. 10 1980, 1342 U.N.T.S. 171.

<sup>44</sup> Protocol on Blinding Laser Weapons (Protocol), Oct. 13 1995, 35 I.L.M. 1213.

<sup>45</sup> *See generally* DAVID WRIGHT, LAURA GREGO, & LISBETH GRONLUND, *THE PHYSICS OF SPACE SECURITY A REFERENCE MANUAL* (2005).

<sup>46</sup> Convention (VIII) relative to the Laying of Automatic Submarine Contact Mines, Oct. 18 1907, art. 1(1) *available at* <http://www.yale.edu/lawweb/avalon/lawofwar/hague08.htm>. *See also* SAN REMO MANUAL ON

## *ii. Nuclear Weapons and Weapons of Mass Destruction*

It is well known that the Outer Space Treaty creates an affirmative ban on the stationing of nuclear weapons and weapons of mass destruction in space.<sup>48</sup> The term weapons of mass destruction generally encompass nuclear, chemical, and biological weapons.<sup>49</sup> Additionally, the Nuclear Test Ban treaty prohibits State parties from causing nuclear

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INTERNATIONAL LAW APPLICABLE TO ARMED CONFLICTS AT SEA art. 80-81 (1994) *available at* <http://www.icrc.org/ihl.nsf/FULL/560?OpenDocument> [hereinafter SAN REMO MANUAL].

<sup>47</sup> Convention (VIII) relative to the Laying of Automatic Submarine Contact Mines, *supra* note 46, at art. 1(1) and SAN REMO MANUAL, *supra* note 46, at art. 79.

<sup>48</sup> Outer Space Treaty, *supra* note 2, at art. IV.

<sup>49</sup> DINSTEIN, *supra* note 27, at 73-80.

explosions in outer space.<sup>50</sup> So it seems that the use of nuclear weapons in space (aside from transit of a nuclear warhead which is an accepted and legal practice) is completely foreclosed. However, the International Court of Justice's (ICJ) *Advisory Opinion on Legality of the Threat or Use of Nuclear Weapons* might have created an exception to this rule. The ICJ ruled that in general the use of nuclear weapons would be "contrary to the rules of international law applicable in armed conflict, and in particular the principles and rules of humanitarian law."<sup>51</sup> However, the court states that a State may use a nuclear weapon when the "very survival of a State would be at stake."<sup>52</sup> Since the court treats this as a moment of necessity in which both customary and treaty law can be suspended it is feasible that the Outer Space Treaty and the Limited Test Ban Treaty could also be suspended and that a State may, during "an extreme circumstance of self-defence" use a nuclear weapon in space.<sup>53</sup>

### C. Space assets furthering humanitarian responsibilities

It should be noted that the regimes of *jus ad bellum* and *jus in bello* are related but separate bodies of law. While a State has the responsibility not to engage in the threat of or use of force, if it does so the principles of *jus in bello* still apply to both sides of the conflict. This is due to the different goals of the two regimes. *Jus ad bellum* seeks to protect international peace and security

<sup>50</sup> Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water, Oct. 10, 1963, Art. 1, 480 U.N.T.S. 43.

<sup>51</sup> Legality of the Threat or Use of Nuclear Weapons, *supra* note 22, at 266.

<sup>52</sup> *Id.*

<sup>53</sup> *Id.*

while *jus in bello* seeks to protect combatants and civilians. This is important because the question of whether it is a violation of international space law for a State to use a remote sensing satellite to image its opponent's territory while waging an aggressive war could be asked. When analyzing this issue, it is vital to remember that a State has a duty to attack with discrimination. Thus while a State is violating international law by engaging in an illegal use of force, it must still uphold its duties under international humanitarian law.<sup>54</sup> If a state can use a reconnaissance satellite to reduce the loss of life to a civilian population when targeting its weapons (whether space based or not), it is required to do so due to the high priority that international law places on the protection of human life. It is incumbent on a State to do "everything feasible to verify that the objectives to be attacked are military objectives."<sup>55</sup> The objective of this rule most certainly authorizes and requires the use of satellite imagery, satellite navigation systems, satellite communication systems, and even meteorological data gathered by satellite.

### D. The Duty to Distinguish

Another general principle in *jus ad bello* is that combatants should distinguish themselves from civilians: "Parties to the conflict shall at all times distinguish between the civilian population and combatants and between civilian objects and military objectives."<sup>56</sup> In order to do this belligerents must behave in such a manner that military objectives are not

<sup>54</sup> DINSTEIN, *supra* note 27, at 4-5.

<sup>55</sup> Additional Protocol I, *supra* note 30, at art. 57(2)(a)(i).

<sup>56</sup> *Id.* at art. 48

confused with civilian objects. For instance, combatants must carry their arms openly and wear “fixed distinctive emblem” so that they will not be confused with civilians.<sup>57</sup> Military ships and aircraft must also bear markings that distinguish them from civilian ships and aircraft.<sup>58</sup> This general principle may apply in space as well, but it is unclear how.<sup>59</sup> With current technology military emblems and markings on a spacecraft would not *de facto* serve to distinguish military spacecraft from civilian spacecraft. This objective could be achieved by the use of signals sent on a certain frequency, but States would be very resistant to the idea of broadcasting the location of a target to their enemies. At present, it seems best that states rely on the U.N. Registry of Spacecraft in order to distinguish military from civilian space crafts.

However, it is unclear what the effect of a State registering a military spacecraft as a civilian spacecraft would be. While camouflage and legitimate ruses of war are allowed, it is generally not acceptable for a State to disguise a military objective as a civilian object. An analogy can be drawn from the rules of naval warfare. Warships are allowed to fly false neutral flags when at war as a disguise.<sup>60</sup> However, they may not fly

false flags during an attack or false flags that identify them as certain classes of ships such as hospital vessels, Red Cross vessels, or civilian passenger vessels.<sup>61</sup> In light of the underlying principle on these rules, it is unlikely that a state would be allowed to register a military spacecraft as a civilian spacecraft as a ruse of war. However, it might be acceptable if a state were to make declarations about its military space assets at the onset of an armed conflict.

## V. Conclusion

Outside of those weapons expressly forbidden, much of the body of law is concerned with of the legality of use of a weapon more than the legality of the weapon itself, since a weapon that *can* be used illegally is not illegal unless it *cannot* be used legally. Unfortunately, not all of the principles of the laws of war can be applied directly to the space environment due to the significantly different physical attributes of outer space as compared to land, sea, and air. However, the laws of war as applicable in the traditional arenas of warfare can serve as guiding principles for limitations on space warfare. Space is a feasible arena for war, and despite the wisdom of such actions, it is important to be able to identify the law applicable to belligerents in such operations. This holds true not just for the issue of space weapons, but for the full gamut of military space operations.

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<sup>57</sup> Hague Regulations, *supra* note 40, art. 1.

<sup>58</sup> Rules concerning the Control of Wireless Telegraphy in Time of War and Air Warfare. Drafted by a Commission of Jurists at the Hague, December 1922 - February 1923, pt. II art. 3, available at

<http://www.icrc.org/ihl.nsf/FULL/275?OpenDocument>; SAN REMO MANUAL, *supra* note 46, art. 13(g).

<sup>59</sup> It is important to note that rules affecting the duty to distinguish would affect all military space craft and not just space weapons, since all military craft would be considered a military objective.

<sup>60</sup> SAN REMO MANUAL, *supra* note 46, art. 110.

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<sup>61</sup> *Id.*