
Legality of the Deployment of Conventional Weapons in Earth Orbit: Balancing Space Law and the Law of Armed Conflict

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Abstract

*The Bush Administration of the United States recently released a revised National Space Policy. Although the revised National Space Policy can be interpreted as a step towards the weaponization of space, it does not necessarily weaponize space. It nonetheless brings to the forefront important legal issues concerning the basing of conventional weapons in space. The present international law matrix on the issue of space-based weapons is to be found in international space law, principally in the Outer Space Treaty, where certain prohibitions apply to nuclear weapons and to weapons of mass destruction. Space must also be used for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development. Space objects must be registered in accordance with the Registration Convention. The UN collective security system and the customary right of self-defence govern the use of force or *jus ad bellum*. The means and methods through which self-defence is exercised are in turn governed by international humanitarian law. Should space be weaponized the basing of these weapons and their use will be subject*

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not only to international space law but also to the UN Charter and to international humanitarian law. The interface between these legal regimes consequently gains in importance, possibly forcing a reinterpretation of certain space treaties along with a correction in state practice.

1 Introduction

In October 2006, the Bush Administration of the United States released a revised National Space Policy.¹ According to commentators, the National Space Policy of the Bush Administration presents a more ‘unilateralist vision of the US role in space’.² The revised policy clearly reaffirmed that the US Government’s space capability is vital to US national interests while asserting unequivocally that the United States will preserve its rights, capabilities, and freedom of action in space by dissuading or deterring others ‘from either impeding those rights or developing capacities intending to do so’, take those actions ‘necessary to protect its space capabilities’, ‘respond to interference’, and ‘deny, if necessary, adversaries the use of space capabilities hostile to U.S. national interests’.³ Although the revised National Space Policy can be interpreted as a step towards the weaponization of space, it is observed that it does not necessarily weaponize space.⁴ As Hitchens observed:

While the new policy stops short of endorsing a strategy of warfighting in, from and through space as advocated by U.S. Air Force Space Command, it does show a clear emphasis on military action not only to protect U.S. space assets, but also to deny enemy use of space. Once again, the concept of a space control strategy that includes offensive action against space systems being used in a hostile manner is not new; such language appears in the Clinton policy as well. Both [National Space Policies] could be read as endorsing the potential use of anti-satellite weapons.

The US National Space Policy calls for a debate on the most pertinent question on the issue, namely, the lawfulness of the deployment of conventional weapons in outer space under public international law.⁵ In the 1967 Treaty on the Principles Governing

¹ Executive Office of the US President, ‘U.S. National Space Policy’, 10 Oct. 2006, available at: <http://ostp.gov/html/US%20National%20Space%20Policy.pdf> (last accessed 25 Dec. 2006). The previous National Space Policy document was released under the Clinton Administration in 1996, as contained in Presidential Decision Directive NSC-49/NSTC-8 of 14 Sept. 1996.

² ‘The United States considers space systems to have the rights of passage through and operations in space without interference. Consistent with this principle, the United States will view purposeful interferences with its space systems an infringement on its rights’: Hitchens, ‘The Bush National Space Policy: Contrasts and Contradictions’, 17 Oct. 2006, available at: www.worldsecurityinstitute.org/showarticle.cfm?id=177 (last accessed 25 Dec. 2006).

³ US National Space Policy, *supra* note 1. In order to achieve these goals, the revised National Space Policy calls upon the Secretary of Defense to provide ‘timely space access for national security purposes’, ‘space capabilities to support continuous, global strategic and tactical warning as well as a multi-layered and integrated missile defences’, and ‘develop capabilities, plans and options to ensure freedom of action in space’ and, ‘if directed, deny such freedom of action to adversaries’: *ibid.*

⁴ ‘While the [National Space Policy] could easily be read to endorse a strategy of fighting in, from and through space it does not explicitly articulate such a strategy’: Hitchens, *supra* note 2, at 6.

the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (the 'Outer Space Treaty'), Article IV is very specific in that it prohibits the placement of nuclear weapons and other weapons of mass destruction in orbit around the Earth and establishes, during times of peace, somewhat of a demilitarization of celestial bodies.⁶

What is absent from Article IV and the other provisions of the Outer Space Treaty is any specific provision on the deployment of conventional weapons, being weapons that would not be classified as nuclear weapons or weapons of mass destruction, in orbit around the Earth that may be directed against targets in orbit, on the surface of the Earth or other celestial bodies. Perhaps, except during the debates on the terms of the Outer Space Treaty, the United Nations deliberations and the principal multilateral treaties on the law of outer space have partaken in this silence. Consequently, this article first reviews the international norms applicable to the deployment of conventional weapons in orbit around the Earth, whether by a state or a private entity, and the corresponding legal or policy solutions that may be considered desirable by the international community. Particular attention is paid to the legality of such a deployment in the context of the provisions of the Outer Space Treaty, other multilateral space treaties, the international law of armed conflict, and customary international law. In an ancillary way, the article will also touch upon the legality of the use of conventional weapons in Earth orbit.⁷ Secondly, the article analyses the effect that such deployment of weapons may have in relation to the interpretation of the certain

⁵ It is noteworthy that there is no definition of the concept of 'deployment' in international law and, specifically, the Treaty Between the USA and the USSR on the Limitation of Anti-Ballistic Missile Systems, 2 Oct. 1972, 944 UNTS 13, which entered into force on 3 Oct. 1972, does not have a definition of the term 'space based', and state practice on this issue is not discernable: see, e.g., Smith, 'Legal Implications of a Space-Based Ballistic Missile Defense', (1985) 52 *California Western Int'l LJ* (1985) 64. It is also not defined in space law: see Vlasic, 'The Legal Aspects of Peaceful and Non-peaceful Uses of Outer Space', in B. Jasani (ed.), *Peaceful and Non-Peaceful Uses of Space: Problems of Definition for the Prevention of an Arms Race* (1991), at 45. The concept of 'space' or, specifically, the delimitation between airspace and outer space, is also not defined in space law: see Kopal, 'The Question of Defining Outer Space' 8 *J Space L* (1980) 134; and Cheng, 'The Legal Regime of Airspace and Outer Space: The Boundary Problem – Functioning versus Spatialism' 7 *Annual of Air & Space L* (1982) 339. However, it is commonly accepted that, if an object completes a full orbit around the Earth without the addition of energy then it is considered to be in outer space: see, e.g., A.F. Inglis and A. Luther, *Satellite Technology: An Introduction* (2nd edn., 1997). The word 'deployment' also has a slightly different temporal connotation from 'space based' that implies a degree of some sort of permanence. The word 'deploy' in its ordinary meaning simply implies to bring into position for military action. Consequently, if broadly interpreted the deployment of a weapon does not necessarily imply a complete orbit or a concept of permanence that is presupposed with the term 'space based' and includes a weapon travelling through outer space without completing an orbit around the Earth. Broadly interpreted the word 'deployment' may also include the act of deploying.

⁶ Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, 27 Jan. 1967, 610 UNTS 205; 18 UST 2410; 4 ILM 386, which entered into force on 10 Oct. 1967 (the 'Outer Space Treaty').

⁷ It is interesting to note that the deployment of weapons has in the past been judicially contested, specifically in the case of *Greenham Women Against Cruise Missiles v. Reagan*, 591 F Supp 1332 (1984); 1984 US Dist. LEXIS 24690. It is also to be noted that this judicial contestation was not successful, it being determined by the Court that under domestic law such deployment was a non-justiciable political question.

space treaties, namely the Outer Space Treaty and the Registration Convention and state practice.

One of the principal arguments in this article is that both the possible weaponization of outer space and the development of space-capable Earth-based weapons create a fundamental change in circumstances (*rebus sic stantibus*) that forces the need for a reinterpretation of the space law treaties and a correction in state practice. The doctrine permits the evolution of the interpretation and application of a conventional norm of international law as contained in a treaty where, due to the change in circumstances, the norm becomes either outdated or no longer valid, or if its applicability would result in an unjust or onerous situation for a party to the treaty. This doctrine must however be applied very cautiously as it must not affect the stability of treaties.⁸

Article 62 of the Vienna Convention on the Law of Treaties codifies the *rebus sic stantibus* doctrine, detailing two conditions for its applicability. The first condition is that the relevant circumstances as they existed at the time of the ratification of the treaty by the parties were an essential basis of the consent of the parties to be bound by the treaty. The second condition is that the effect of the change radically transforms the extent of the obligations to be performed under the treaty.

When applying the principles of law of armed conflict to space law, the prospect of the weaponization of outer space can be said to have transformed radically certain obligations to be performed under the Outer Space Treaty and the Convention on Registration of Objects Launched into Outer Space (the ‘Registration Convention’).⁹ Further, it may be said that, at the time of the signing of the Outer Space Treaty and the Registration Convention, outer space was not weaponized, nor was it being weaponized, and that the consent of states at the time of their ratification of the relevant treaties was based on such circumstances. On the other hand, one may also suggest that the wording of Article IV of the Outer Space Treaty may perhaps imply, when interpreted *in contrario*, that states might have contemplated the possibility of the weaponization of outer space in prohibiting the deployment of nuclear weapons and other weapons of mass destruction in outer space and the deployment of military installations on celestial bodies. If the weaponization of outer space was in fact contemplated at the time of the Outer Space Treaty in 1967, then there may perhaps be some scope for somewhat weakening the application of the *rebus sic standibus* doctrine when considering the issue in the context of the 1976 Registration Convention. Nonetheless the fact remains that at the time of the drafting of the Outer Space Treaty there were no weapons based in Earth orbit.

⁸ See, e.g., C. Emanuelli, *Droit International Public* (2004), at 113.

⁹ Convention on Registration of Objects Launched into Outer Space, 12 Nov. 1974, 1023 UNTS 15, 28 UST 695, TIAS 8480, which entered into force on 15 Sept. 1976 (the ‘Registration Convention’), Art. II(1).

2 Lawfulness of Military Uses of Outer Space

A Article IV of the Outer Space Treaty

1 Introduction

Article IV of the Outer Space Treaty provides that:

State Parties to the Treaty undertake not to place in orbit around the Earth any object 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.

The Moon and other celestial bodies shall be used by all State Parties to the Treaty exclusively for peaceful purposes. The establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military manoeuvres on celestial bodies shall be forbidden. The use of military personnel for scientific research or for any other peaceful purposes shall not be prohibited. The use of any equipment or facility necessary for peaceful exploration of the Moon and other celestial bodies shall also not be prohibited.

The temporal applicability of Article IV is critical to the correct understanding of its normative function. Article IV of the Outer Space Treaty has at times been interpreted as creating a demilitarization of certain sectors. A thorough deconstruction of Article IV reveals its normative functions and limits. Article IV contains various norms of different nature. The first paragraph has an arms control function prohibiting the placing in orbit around the earth of weapons of mass destruction, the installation of these on celestial bodies, or the stationing of these in outer space. The normative function of the second paragraph is of a different nature, being centred around the concept of peaceful purposes. Within the *corpus* of public international law, the determination of the legitimacy of the purpose of the use of force is a *jus ad bellum* question. Consequently the normative nature of the second paragraph of Article IV is that of a *jus ad bellum* norm. Thus the second paragraph creates only a partial demilitarization that specifically applies during times of peace. This interpretation is based in the following rationale. The ‘peaceful purposes’ concept as it is also found in the preamble to the Outer Space Treaty has been interpreted by some states and commentators to mean ‘non-aggression purposes’.¹⁰ Although some states and commentators have suggested ‘peaceful purposes’ to mean ‘non-military purposes’, it is noteworthy that such a view does not correspond with the state practice of deploying military or dual-use communications and remote sensing satellites in orbit around the Earth.¹¹ One may ask in reading Article IV what the word ‘exclusively’ adds to the concept as the Moon and other celestial bodies are to be used by all States Parties to the Treaty ‘exclusively for peaceful purposes’. The answer

¹⁰ See, e.g., 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). See also S.H. Lay and H.J. Taubenfeld, *The Law Relating to the Activities of Man in Space* (1970), at 97; and C.Q. Christol, *The Modern International Law of Outer Space* (1982), at 29–30.

¹¹ United Nations, *Summary Record of the U.N. Committee on the Peaceful Uses of Outer Space* (1966) UNDoc. A/AC.105/C.2/SR.66, at 6 (statement of the Permanent Representative of the Soviet Union); and Lee, ‘The *Jus ad Bellum* in Spatialis: The Exact Content and Practical Implications of the Law on the Use of Force in Outer Space’, 29 *J Space L* (2003) 93, at 97–98.

is found slightly further in the examples given in the second paragraph of Article IV, which defines such a requirement as prohibiting the establishment of military bases, installations, and fortifications, the testing of any type of weapons, and the conduct of military manoeuvres. It is important to note that the obligations under Article IV of the Outer Space Treaty have to be considered in the context of Chapter VII of the Charter of the United Nations. This is because Article 103 of the Charter specifically provides that obligations arising from the Charter are to prevail over any provision of other treaties, including the Outer Space Treaty. Article 103 of the Charter provides that:

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.¹²

Further, Article III of the Outer Space Treaty provides that:

State Parties to the Treaty shall carry on activities in the exploration and use of outer space, including the Moon and other celestial bodies, in accordance with international law, including the Charter of the United Nations, in the interest of maintaining international peace and security and promoting international cooperation and understanding.

2 Application of Article IV

It is interesting to consider the effects Article III of the Outer Space Treaty has on the effect of the prohibitions in Article IV. On the one hand, the specific reference to the Charter of the United Nations suggests that some primacy or priority is to be given to compliance with the Charter and, accordingly, any inconsistency between the Outer Space Treaty and the Charter would cause the terms of the latter to prevail over the former. On the other hand, Article III of the Outer Space Treaty provides that it is the entire corpus of international law and not only the Charter of the United Nations that applies to activities in the exploration and use of outer space. The Vienna Convention on the Law of Treaties provides that later treaties prevail over earlier ones, subject to the operation of Article 103 of the Charter.¹³ Given the above, it is apparent that *obligations* arising from the Charter of the United Nations would prevail over any rights or obligations contained in the Outer Space Treaty, as otherwise the terms of the Outer Space Treaty would prevail over the terms of the Charter of the United Nations in the event of any inconsistency.

Within this context, the prohibitions contained in Article IV of the Outer Space Treaty would prevail over any other treaty, save for any obligation arising under the Charter of the United Nations. Article 2(4) of the Charter provides that states are to refrain ‘from the threat or use of force against the territorial integrity or political independence of any state, or use such threat or force in any other manner inconsistent with the purposes of the United Nations’. This obligation prohibiting the use of force by states has been held to be an obligation *erga omnes*, as the principle is considered to be *jus cogens* and thus binding on all states as a customary norm.¹⁴ The only provision

¹² Emphasis added. This requirement is reinforced by Art. 30(1) of the Vienna Convention on the Law of Treaties (VCLT), 23 May 1969, 1155 UNTS 331, 8 ILM 679, which entered into force on 27 Jan. 1980.

¹³ *Ibid.*, Art. 30.

¹⁴ *Military and Paramilitary Activities in and against Nicaragua (Merits)* [1986] ICJ Rep 14. See also VCLT, *supra* note 12, Art. 53, for the effect of *jus cogens* on the treaty obligations of states.

of the Charter of the United Nations that provides for an *obligation* to use force arises under Article 42, which authorizes its Security Council to 'take action by air, sea and land forces' where necessary to maintain or restore international peace and security.¹⁵ States are under an express obligation to comply with decisions of the Security Council, including decisions arising from Article 42 of the Charter of the United Nations.¹⁶ To the extent that Article IV of the Outer Space Treaty does not constitute *jus cogens*, a decision made by the Security Council to use military force in outer space would prevail over any prohibitions or obligations under Article IV of the Outer Space Treaty.¹⁷

On the subject of self-defence, Article 51 of the Charter of the United Nations provides that:

Nothing in the present Charter shall impair the inherent *right* of individual or collective self-defence if an armed attack occurs against a Member of the United Nations, until the Security Council has taken measures necessary to maintain international peace and security. Measures taken by Members in the exercise of this right of self-defence shall be immediately reported to the Security Council and shall not in any way affect the authority and responsibility of the Security Council under the present Charter to take at any time such action as it deems necessary in order to maintain or restore international peace and security.

As self-defence, even collective self-defence, is expressed as a *right* rather than an *obligation*, Article 103 of the Charter of the United Nations would have no application on Article 51. The Vienna Convention on the Law of Treaties provides that a later treaty, such as the Outer Space Treaty, prevails over an earlier treaty, such as the Charter of the United Nations, in the event of any inconsistency, subject only to Article 103 of the Charter.¹⁸ In this context, the prohibitions contained in Article IV of the Outer Space Treaty would arguably prevail in all circumstances except where the Security Council decided expressly or impliedly that military action, including the deployment and the use of force in contravention of Article IV of the Outer Space Treaty, was sanctioned under Article 42 of the Charter of the United Nations. On the other hand, while this position would be correct in the context of the effects of Article IV of the Outer Space Treaty on Article 51 of the Charter of the United Nations, such a discussion must also take into account that the right to individual and collective self-defence has an existence as a *jus cogens* norm of customary international law external to the terms of Article 51.¹⁹ This can be seen from the actual wording of Article 51 of the Charter, which provides for the recognition of the 'inherent right' to self-defence rather than providing for the right to self-defence within its own terms.

¹⁵ In *Certain Expenses of the United Nations* [1962] ICJ Rep 151, at 167, the ICJ noted that use of military force may also be lawfully conducted with the consent of the subject state or based on the right of self-defence as provided under Art. 51 of the Charter.

¹⁶ See *ibid.*, Arts 25 and 48.

¹⁷ See Lee, *supra* note 11, at 98–111.

¹⁸ VCLT, *supra* note 12, Art. 30.

¹⁹ See, e.g., S.A. Alexandrov, *Self-Defence Against the Use of Force in International Law* (1996), Y. Dinstein, *War, Aggression and Self-Defence* (2nd edn., 2001); Gill, 'The Temporal Dimension of Self-Defence: Anticipation, Pre-emption, Prevention and Immediacy', 11 *J Conflict Security L* (2006) 361, at 363; and Ochoa-Ruiz and Salamanca-Aguado, 'Exploring the Limits of International Law Relating to the Use of Force in Self-defence', 16 *EJIL* (2005) 499.

Principles that are expressed as *jus cogens* norms, or peremptory norms of general international law, have effects that prevail over express and implied terms of treaties in the event of any inconsistency. To that end, Article 53 of the Vienna Convention on the Law of Treaties provides that:

A treaty is void if, at the time of its conclusion, it conflicts with a peremptory norm of general international law. For the purposes of the present Convention, a peremptory norm of general international law is a norm accepted and recognised by the international community of States as a whole as a norm from which no derogation is permitted and which can be modified only by a subsequent norm of general international law having the same character.

Accordingly, unless Article IV of the Outer Space Treaty is also of itself a *jus cogens* norm of general international law, the right to individual and collective self-defence as a *jus cogens* norm would prevail over the prohibitions contained in the Outer Space Treaty, if such a prohibition actually exists. With this construction, it is apparent that the lawful use of force by one or more states as sanctioned under Article 42 or 51 of the Charter of the United Nations would not be bound by the limitations contained in Article IV of the Outer Space Treaty, particularly in relation to the deployment of nuclear weapons and weapons of mass destruction and the partial demilitarization of the Moon and other celestial bodies. However, the unlawful use of force by one or more states, namely military acts of aggression, would be bound by the terms of Article IV of the Outer Space Treaty. It is also noteworthy that, if Article IV of the Outer Space Treaty is of itself a *jus cogens* norm, then the right to individual and collective self-defence could perhaps conceivably be confined by its terms.

The ambit and scope of the restrictions in Article IV of the Outer Space Treaty are also contingent upon whether one interprets the text restrictively or expansively. This is because a restrictive interpretation of the provisions may lead one to argue that the ‘exclusively peaceful purposes’ norm is restricted to the specific military activities therein enumerated and prohibited, namely, the establishment of military bases, installations, and fortifications, the testing of any type of weapons, and the conduct of military manoeuvres on celestial bodies. In applying the logic applied by the Permanent Court of International Justice in the *Steamship Lotus* case, one may then argue that what is not specifically prohibited under this enumeration remains permitted in law.²⁰ Considering that the right of self-defence remains applicable, one can argue that these restrictions only apply during times of peace and the preparation for these activities for the exercise of the right of self-defence remains permissible. In deconstructing the norm of ‘exclusively peaceful purposes’ in Article IV of the Outer Space Treaty, it is interesting to note that within the enumeration of the prohibited activities the word ‘attack’ is not used. The omission of the word ‘attack’ strengthens the argument that the prohibitions in Article IV apply only to peacetime military activities. In international law, the word ‘attack’ is a concept of the law of armed conflict and is defined in Article 49(1) of Additional Protocol I to the Geneva Conventions as being an act of violence against an adversary. In accordance with Article 49(2) of Additional Protocol I, an attack may be done either as an offensive or a defensive operation irrespective

²⁰ *SS Lotus (France v. Turkey)* (1927), PCIJ Ser. A., No. 10.

of the territory or the international space where it is conducted.²¹ It is also important to note that these prohibited activities under Article IV of the Outer Space Treaty are not preceded by words presupposing that these are generic enumerations through the use of the words 'like' or 'such as'. The prohibited activities are simply stated, which leads one to presuppose that the list is closed and limited to these specific activities. From a grammatical perspective, the enumeration is not open-ended through the use of such words as 'like' or such expressions as 'and other similar activities', giving further credence to the restrictive interpretation theory.

Under an expansive interpretation, these enumerations must be seen as simply examples of generic activities that are prohibited, or examples that do not restrict the 'exclusively peaceful purposes' wording. Under a restrictive interpretation both the 'peaceful purposes' and the 'exclusively peaceful purposes' norms remain fundamentally *jus ad bellum* norms with very little *jus in bello* application. In interpreting the 'exclusively peaceful purposes' concept as a *jus ad bellum* norm, the enumeration of the restricted activities within the treaty article does not necessarily apply as a restriction to the means and methods of conducting legitimate acts of self-defence. The only application of the 'peaceful purposes' or 'exclusively peaceful purposes' norms during an armed conflict with space-related activities is to prevent the conduct of individual or collective self-defence from mutating into a form of aggression in violation of the territorial integrity or political independence of a state. It is to be noted that states are generally reluctant to give expansive interpretations to normative dispositions that could restrict their scope or freedom of action on issues of national security.

3 Article IV in Practice: The Strategic Defence Initiative

On 23 March 1983, President Reagan announced that the United States was to launch the Strategic Defence Initiative, a research programme to develop the capability to 'intercept and destroy strategic ballistic missiles before they reached our soil or that of our allies'.²² Most proposals developed at the time involved the targeting of chemical-based orbital or ground-produced lasers at ballistic missiles through mirrors in orbit, though one proposal involved the detonation of a small nuclear device to produce x-ray lasers aimed at multiple incoming missiles, a system called Excalibur.²³

It is clear from the terms of Article IV of the Outer Space Treaty that any proposal of the Strategic Defence Initiative that relied on nuclear weapons for laser generation would contravene its express prohibition on the deployment and use of nuclear weapons in outer space.²⁴ Equally clear is the fact that Article IV of the Outer Space Treaty (OST) does not prohibit the deployment and use of conventional space weapons that have a nuclear power source, as these are not considered to be weapons of

²¹ Additional Protocol I to the Geneva Conventions of 12 Aug. 1949, and relating to the Protection of Victims of International Armed Conflict, 8 June 1977, 1125 UNTS 3, 16 ILM 1391, Art. 47.

²² The White House, 'Address by President Reagan', *Weekly Compilation of Presidential Documents* 19, No 12, 28 Mar. 1983, at 442–448.

²³ Beck, "Star Wars": An International Legal Analysis', 3 *Can-Am LJ* (1986) 169, at 176–178.

²⁴ Such a deployment would also be prohibited by the terms of the 1963 Treaty Banning Nuclear Weapons Tests in the Atmosphere, in Outer Space and Under Water.

mass destruction in the OST sense of the term. Otherwise, the use of particle-beam or laser weaponry in space would not be excluded under a narrow or restrictive interpretation of the terms of Article IV OST.²⁵ This conclusion that the Strategic Defence Initiative was consistent with the terms of Article IV OST was reached by a number of commentators.²⁶ However, an expansive reading of Article IV OST has also led some commentators to take the view that the deployment of the Strategic Defence Initiative contravened Article IV OST.²⁷ Politically and historically, this debate over the terms of Article IV became overshadowed by the debate over the terms of the 1972 Anti-Ballistic Missile Treaty and some recognition on the part of the United States and the Soviet Union that outer space was already substantially militarized, but it did place the terms and effects of Article IV into sharp focus.²⁸

B Article I of the Outer Space Treaty

1 Nature of the Obligations in Article I of the Outer Space Treaty

The Outer Space Treaty, the earliest and most important of the international treaties concerning the law of outer space, has a number of general and specific provisions dealing with military uses of outer space.²⁹ In a general sense, it provides that outer space ‘shall be for exploration and use by all countries without discrimination of any kind, on a basis of equality and in accordance with international law’.³⁰ Further, such exploration and use of outer space is required to be ‘carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development’.³¹

Nandasiri Jasentuliyana points out a doctrinal debate concerning the interpretation of Article I(1) where some scholars argue that the text falls short of creating a legal obligation but that the state practice indicates that there is a general obligation to co-operate when carrying out space activities.³² In a legal opinion submitted by the US Department of State to the Senate Foreign Relations Committee during hearings prior to Senate approval of the Outer Space Treaty, it was stated that Article I(1) ‘does not undertake to set any terms or conditions on which international cooperation would take place’.³³ The Committee attached an understanding in its report stating ‘it is

²⁵ See, e.g., Goedhuis, ‘Some Observations on the Efforts to Prevent Military Escalation in Outer Space’, 10 *J Space L* (1982) 18; and Meredith, ‘The Legality of a High-technology Missile Defense System: The Anti-Ballistic Missile and Outer Space Treaties’, 78 *AJIL* (1984) 418, at 418–423.

²⁶ See Beck, *supra* note 23; Meredith, *supra* note 25; Gallagher, ‘Legal Aspects of the Strategic Defense Initiative’, 111 *Military L Rev* (1986) 11; and Bernhardt, Gresko, and Merry, “Star Wars” versus Star Laws: Does SDI Conform to Outer Space Law?, 15 *J Legis.* (1988) 251.

²⁷ See Lippman, ‘The Strategic Defense Initiative and the Militarization of Space: Scientific Responsibility and Citizen Resistance’, 9 *Dickinson J Int'l L* (1991) 177.

²⁸ Parkerson, ‘International Legal Implications of the Strategic Defense Initiative’, 116 *Military L Rev* (1987) 67.

²⁹ Some of these principles were contained in the Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space, GA Res 1962 (XVIII), adopted on 13 Dec. 1963.

³⁰ Outer Space Treaty, *supra* note 6, Art. I.

³¹ *Ibid.*

³² N. Jasentuliyana, *International Space Law and the United Nations* (1999), at 174–175.

³³ US Congress, *supra* note 10 .

the understanding of the Committee on Foreign Relations that nothing in Article I Paragraph 1 of the Treaty diminishes or alters the right of the United States to determine how it shares the benefits and results of its space activities'.³⁴ This opinion was shared by the Soviet Union.³⁵ Carl Q. Christol sees Article I (1) as having an interpretive effect on the other provisions of the Outer Space Treaty, arguing that 'although Article 1(1) does not obligate a state to share specific space acquisitions, it may serve as an even more important general interest: the ... guidance offered by Article 1(1) clearly conditions the meaning to be given to all other treaty terms'.³⁶ Other publicists and commentators have argued that Article 1(1) does have a normative effect.³⁷ This interpretation is based on the use of the word 'shall' or, as in the French text 'devoir', which it is argued creates an imperative obligation on states.³⁸ If Article 1(1) is taken to go beyond a simple interpretive nature and in fact have a normative effect, this may be seen to be a modification of the principle developed within the *Steamship Lotus* case to the effect that in international law what is not specifically prohibited is permitted.³⁹ Such an effective Article 1(1) would in fact impose a necessary attribute to a space activity upon which the legitimacy of the activity would be contingent on it being 'carried out for the benefit and in the interests of all countries'. However, it can be argued cogently that Article I(1) does not create a presumption of illegitimacy simply because the space object has not been specifically designed to bring 'benefit' to the international community at large or that its mission has not been articulated as such.⁴⁰ At best, Article 1(1) creates a treaty obligation, in that it acknowledges that states must evaluate their space activities by considering not only their own national interests but also the wider benefit and interest of the international community, and suffice it to say that such a disposition cannot be ignored.⁴¹

Conceptually, and *prima facie*, some might find it difficult to see how military applications and uses of outer space can be said to be 'for the benefit and in the interests of all countries' as required by Article I of the Outer Space Treaty.⁴² This is because

³⁴ *Ibid.*

³⁵ UN, *supra* note 11.

³⁶ C.Q. Christol, *Space Law: Past Present and Future* (1991), at 70.

³⁷ L. Peyrefitte, *Droit de l'Espace* (1993), at 59; Gorove, 'Freedom of Exploration and Use in the Outer Space Treaty', 1 *Denver J Int'l L & Policy* (1971) 93; He, 'The Outer Space Treaty in Perspective', 25 *J Space L* (1997) 93; and Lee, 'Definitions of "Exploration" and "Scientific Investigation" with Focus on Mineralogical Prospecting and Exploration Activities', paper presented at the 56th International Astronautical Congress, Fukuoka, Japan, 17–21 Oct. 2005.

³⁸ Note that Art. XVII of the Outer Space Treaty provides that its 'English, Russian, French, Spanish and Chinese texts are equally authentic'.

³⁹ *SS Lotus*, *supra* note 20.

⁴⁰ Dore, 'International Law and the Preservation of the Oceans and Outer Space as Zones of Peace: Progress and Problems', 15 *Cornell Int'l LJ* (1982) 54.

⁴¹ See Gorove, 'Implications of International Space Law for Private Enterprise', 7 *Annals Air & Space L* (1982) 319, at 321; and Lee, 'Commentary Paper on Discussion Paper Titled "Commercial Use of Space, including Launching" by Prof. Dr. Armel Kerrest', in China Institute of Space Law, *2004 Space Law Conference: Paper Assemblé* (2004), at 220–231.

⁴² See Neuneck and Rothkirch, 'The Possible Weaponisation of Space and Options for Preventative Arms Control', 55 *German J Air & Space L* (2006) 501, at 501–516, in which it is argued that, in reference to these provisions of Art. I of the Outer Space Treaty that 'security in space should not be pursued exclusively in the national interest by only one State or group of States'.

military activities may, by their very nature, be directed by one state against the interests and welfare of one or more other states, including the use of force and other acts of aggression or to defend itself against perpetrators of acts of aggression.⁴³ Therefore, in order to determine the legality of the deployment of conventional weapons in Earth orbit, it is prudent first to determine the legal content and effect of the ‘interest and for the benefit of all countries’ requirement and, further, to ascertain whether any such requirement is imposed on military means or military ends of states.

2 For the Benefit and in the Interest of All Countries

The crucial determination to be made in interpreting the normative provision of the Outer Space Treaty requiring space activities to be ‘for the benefit and in the interest all countries’ is the determination of the ambit of the norm, namely whether it imposes a positive and specific obligation ‘regarding the sharing the benefits of space exploration and use’ or is merely an expression of desire that the activities should be ‘beneficial’, in contrast to being harmful ‘in a general sense’.⁴⁴ Stephen Gorove, who had analysed this provision in detail, preferred the latter and regarded most satellite operations and applications, such as telecommunications, television broadcasting, remote sensing, and power generation, as being beneficial in a general sense and, consequently, were sufficient to satisfy the requirements of Article I without the need to share any further benefit.⁴⁵ In so doing, Gorove pointed to a number of factors that persuaded him to that view, which has been shared by commentators from both industrialized and developing states.⁴⁶ Accordingly, the word ‘benefit’ is not to be interpreted in its restrictive economic sense as pertaining to a financial gain or profit, or in its altruistic sense. The normative connotation of the concept of ‘benefit’ in the Outer Space Treaty is generally accepted as a broadly perceived advantage, and there are numerous reasons for this.

First, the basis and criteria for determining what is of ‘benefit’ to a particular state are almost entirely subjective determinations. What may be considered beneficial to one state may well be detrimental to another. Further, what may be considered beneficial today may be considered detrimental tomorrow with the aid of new information and the help of hindsight, and vice versa.⁴⁷ This is unlikely to have been the intended outcome of the drafters of the Outer Space Treaty. Also, as Jasentuliyana has argued, there is no judicial or other authority or standard by which to judge the respect of this duty by states.⁴⁸

The ‘benefit’ or advantage to be drawn from the activity is not the only criterion of evaluation of the legitimacy of the space activity. The ‘interest’ of the international community within the space activity must also be considered. The term ‘interest’ is broader than ‘benefit’ with a larger scope of applicability and does not necessarily

⁴³ UNGA Res 3314 (XXIX).

⁴⁴ See Gorove, *supra* note 41, at 321.

⁴⁵ See Gorove, *supra* note 37.

⁴⁶ See, e.g., Williams, ‘Las empresas privadas en el espacio ultraterrestre’, 8 *Revista del Centro de Investigación y difusión Aeronáutico-Espacial* (1983) 39; and Castillo Argañarás, ‘Benefits Arising From Space Activities and the Needs of Developing Countries’, 43 *Proceedings College L Outer Space* (2000) 50, at 57.

⁴⁷ He, *supra* note 37, at 104.

⁴⁸ Jasentuliyana, *supra* note 32, at 176.

include the concept of an advantage. In fact there might very well be a cost in developing, defending or protecting an ‘interest’. However, both must be present in the evaluation of the space activity as they are textually linked with the conjunction ‘and’. Furthermore, the benefits and interests of all states must include, by definition, the state that is conducting that particular exploration and use of outer space, the Moon, and/or the celestial bodies.⁴⁹ Accordingly, the ‘interests’ of that state may be interpreted as including not only commercial or economic interests, but also national security interests. To exclude these from the normative ambit would be unreasonable, as it would entail the negation of the applicability of the norm to the space actor itself. The interpretation of the norm is further complicated by the use of the word ‘all’. At first it is easy to interpret the word ‘all’ as referring to the totality of the states in the international community as, grammatically speaking, the word ‘all’ refers to an entire quantity. Such an interpretation, although perhaps grammatically correct, would however be facile and unreasonable when interpreted within the context of the Outer Space Treaty and in consideration of the reality of the governance of the international community. It is to be noted that the Outer Space Treaty does not provide a body or a mechanism through which the opinion of the international community may be voiced or even determined. Furthermore, such an interpretation of the word ‘all’ would yield an overbearing effect to the norm as it would presuppose and entail a right of veto of any state that would not share in the perceived benefit and interest.

Secondly, it is also important to note that Article I simply states ‘for the benefit and in the interest of all countries’ and not ‘all *the* countries’.⁵⁰ The word ‘all’ can also grammatically and more reasonably be interpreted as referring to collective values that are generally recognized and accepted within the international community. Perhaps the best examples of such collective ‘benefit and interests’ are those embodied within the Charter of the United Nations, such as the collective security system.⁵¹

Thirdly, Article I of the Outer Space Treaty must not be interpreted in isolation but in accord with Article III of the Outer Space Treaty, which completes Article I by indicating that such an interest pertaining to the exploration and use of outer space includes the obligation that such activities must conform to the ‘interest of maintaining international peace and security’. It is therefore ‘for the benefit and interest of all countries’ that there be a capacity and ability to maintain international peace and security, including in outer space, on the Moon, and other celestial bodies, in accordance with the Charter of the United Nations.

Fourthly, when Article I is read in conjunction with Article IV of the Outer Space Treaty, the question arises whether the provisions of Article I pertaining to the ‘interest and for the benefit of all countries’ apply to the means used or to the ends sought, consequently

⁴⁹ Gorove, *supra* note 41, at 321.

⁵⁰ Italics added.

⁵¹ Art. 1 of the UN Charter outlines the Purposes of the UN as to ‘maintain international peace and security, and to that end: to take effective collective measures for the prevention and removal of threats to the peace, and for the suppression of acts of aggression’. Further, Art. 2(4) of the Charter requires states to ‘refrain in their international relations from the threat or use of force’. On the concept of a global public interest in international space law see Monserrat Filho, ‘Why and How to Define Global Public Interest’, 43 *Proceedings College L Outer Space* (2001) 24.

perhaps even creating an *obligation de résultat*.⁵² Article IV clearly prohibits certain military activities from occurring in outer space. Should the norm in Article I pertaining to ‘the benefit and in the interest of all countries’ be applied to the ends derived from such activities, then, again, it must be noted that the existing body of space law provides no mechanism for any sharing or distribution of such benefits. This is the case even though one would have thought that, should this be the case, serious objections would be raised by most states. If the object of the norm were the means themselves, then the requirement would be no more than a negative prohibition on states conducting activities that are detrimental to the interests of the international community. José Monserrat Filho, for example, in advocating the view that all space activities must be subject to the ‘global public interest’, suggested that this ‘does not admit any form of exploitation and use of the outer space [that is] capable of causing bad and damage [sic] to a State and to people, to the whole humankind or to part of it, as well as hurting their legitimate interests’.⁵³ This interpretation is perhaps overbearing as it could lead to a conflict with other norms or rights of states, such as the right of self-defence as a *jus cogens* norm of customary international law.⁵⁴

The foregoing analysis may be crystallized to produce the most likely outcome, namely that Article I(1) of the Outer Space Treaty may be interpreted as creating a general legal principle that is imposed on the activity rather than the results derived thereof. If the provision does impose a specific and positive duty but such a duty is imposed on the activity instead of the results derived therefrom, then the duty may be interpreted as a negative duty of ensuring that the activity is not in violation of values which are generally accepted as being for the benefit and interest of the international community. Consequently, although the ‘peaceful purposes’ normative provision of the Outer Space Treaty legitimates the ends of military activity in outer space as a *jus ad bellum* norm, namely that the ends of the space military activity must be non-aggression, Article I of the Outer Space Treaty completes the ‘peaceful purposes’ norm as it legitimates the military activity and capacity itself. After all, all members of the international community would benefit from peace.⁵⁵

⁵² Such a distinction was made by Armel Kerrest in the context of Art. VI of the Outer Space Treaty: see Kerrest, ‘Commercial Use of Space, including Launching’, in China Institute of Space Law, 2004 *Space Law Conference: Paper Assemblé* (2004) 199, at 200.

⁵³ Monserrat Filho, *supra* note 51, at 24 (italics added).

⁵⁴ Alfred P. Rubin argued that ‘[t]here is no doubt in my mind that international society has restricted the authority of treaty-makers in some ways. The ways the international legal order restricts the authority of states to conclude treaties are most evident when considering things like self-defence. No treaty would stop a group from defending itself, and the allegation that self-defence is forbidden by the positive law would be dismissed out of hand by any group supporting those seeking to exercise the “right”’: Rubin, ‘*Actio Popularis, Jus Cogens and Offenses Ergo Omnes*’, 35 *New Eng L Rev* (2001) 273. See also Alexandrov, *supra* note 19; Dinstein, *supra* note 19; Gazzini, ‘The Rules on the Use of Force at the Beginning of the XXI Century’, 11 *J Conflict Security L* (2006) 319; Danilenko, ‘International *Jus Cogens*: Issues of Law-Making’, 2 *EJIL* (1991) 42, at 44; Murphy, ‘Force and Arms’, in O. Schachter and C.C. Joyner (eds), *United Nations Legal Order* (1995), at 255, in which he argued that many states, including the US, take the legal position that Art. 2(4) is a peremptory norm, or *jus cogens*, of customary international law; and *Military and Paramilitary Activities*, *supra* note 14, at 100.

⁵⁵ As some commentators noted, it is too easy to ‘overlook the very real benefit to world peace served by some military activities … the role of strategic deterrence in world peace and the role played by military space activities in enhancing the deterrence capability of a nation’: Reed and Norris, ‘Military Use of the Space Shuttle’, 13 *Akron L Rev* (1979–1980) 681.

C Compliance with International Law

As discussed above, Article III of the Outer Space Treaty requires space activities to be conducted in accordance with international law, including the Charter of the United Nations. In turn, the Charter of the United Nations provides that any obligation under the Charter overrides any rights or obligations under any other treaty.⁵⁶ Consequently, the provisions of the Outer Space Treaty must be interpreted in a manner that is coherent with, and subject to the terms of, any obligations arising from the Charter of the United Nations.

D Article 2(4) of the Charter of the United Nations

At the risk of being unintentionally trite, the Charter of the United Nations created a collective security system. Article 2(4) of the Charter provides that states are to refrain ‘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’. As discussed above, this principle has been found by the International Court of Justice to be binding on all states not only as an international customary norm but also as a norm of *jus cogens*.⁵⁷ One of the two exceptions to this principle is the use of force as authorized by the Security Council under Article 42 of the Charter ‘to maintain or restore international peace and security’ if there is a ‘threat to the peace, breach of the peace, or act of aggression’ for which economic and trade sanctions would be inadequate.⁵⁸ The other exception is the collective right to individual or collective self-defence as recognized in Article 51 of the Charter ‘until the Security Council has taken measures necessary to maintain international peace and security’. In any event, the right of states to individual and collective self-defence is also well established in customary international law.⁵⁹

In practice, the use of force can be legally justified where:

1. it is intended and restricted to individual or collective self-defence, including arguably pre-emptive self-defence;
2. it is mandated by a decision of the Security Council of the United Nations under Article 42 of its Charter; or
3. contentiously, it is used in support of humanitarian interventions.⁶⁰

In observing state practice since 1945 involving the use of force, one might initially be drawn to the conclusion that this principle is honoured more in its breach than its

⁵⁶ UN Charter, Art. 103.

⁵⁷ *Military and Paramilitary Activities*, *supra* note 14 .

⁵⁸ UN Charter, Arts 39 and 42.

⁵⁹ The right to self-defence has been well established by commentators in customary international law: see, e.g., Gill, *supra* note 19; Ochoa-Ruiz and Salamanca-Aguado, *supra* note 19; and Picone, ‘L’evolution du droit international coutumier sur l’emploi de la force entre obligation “erga omnes” et authorisation du Conseil de Securité’, in E. Cannizzaro *et al.* (eds), *Customary International Law on the Use of Force* (2005), at 305–320.

⁶⁰ *Ibid.* See also Simma, ‘NATO, the UN and the Use of Force: Legal Aspects’, 10 *EJIL* (1999) 1; A. Cassese, ‘*Ex iniuria ius oritur*: Are We Moving towards International Legitimisation of Forceful Humanitarian Countermeasures in the World Community?’, 10 *EJIL* (1999) 23; and Reisman, ‘Unilateral Action and the Transformations of the World Constitutive Process: The Special Problem of Humanitarian Intervention’, 11 *EJIL* (2000) 3.

observance. Nonetheless, as the International Court of Justice stated in *Military and Paramilitary Activities in and Against Nicaragua (Merits)*, ‘if a State acts in a way *prima facie* incompatible with a recognised rule, but defends its conduct by appealing to the exceptions or justifications contained within the rule itself, then whether or not the State’s conduct is in fact justifiable on that basis, the significance of that attitude is to confirm rather than to weaken the rule’.⁶¹ Consequently, it can be cogently proffered, and most publicists would agree, that the use of force on Earth is at present primarily and legitimately used by states in those three circumstances.

It must be noted that, except for the prohibition of the use of military force as an act of aggression, the Charter of the United Nations does not impose any restrictions on any other military activities. For example, Article 2(4) of the Charter, which imposes a duty on states to refrain from using force in their international relations, is not weapon-specific.⁶² If anything, Chapters VI and VII of the Charter suggest that military activities not involving the use of force in the context of peacekeeping may be permissible in the interest of maintaining international peace and security.⁶³ As a result, it can be argued that such activities would not only be lawful, but also characterized as being in the interest of maintaining international peace and security within the language of the Outer Space Treaty. It may thus be argued that the deployment of conventional weapons by a state for such purposes in Earth orbit respects the normative structure of the Outer Space Treaty.

E Legality of Deploying Conventional Weapons in Outer Space

From the above analysis, it is apparent that the deployment of conventional weapons in outer space, even in orbit around the Earth, is not prohibited by the corpus of international space law. This is because Article IV of the Outer Space Treaty 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. The specificity in referring to nuclear weapons and weapons of mass destruction may be considered to be a deliberate exclusion of conventional weapons on the part of the framers of Article IV of the Outer Space Treaty from the scope of its application. Further, as discussed above, there is a real possibility that the deployment of such conventional weapons in outer space would not contravene the duties and obligations imposed under Articles I and IX of the Outer Space Treaty.

Such a conclusion is subject to the *caveat* that Article IV of the Outer Space Treaty requires the Moon and other celestial bodies to be used exclusively for ‘peaceful purposes’, and specifically prohibits the establishment of military bases, installations, and fortifications, the testing of any type of weapons, or the conduct of any military manoeuvres on the Moon and celestial bodies. Some states, such as the former Soviet Union, interpreted the phrase ‘exclusively for peaceful purposes’ as prohibiting all military activities emanating from the Moon, with the exception of those which are specifically permitted within the Outer Space Treaty. As Jasentuliyana pointed out, advocates of this

⁶¹ *Military and Paramilitary Activities*, *supra* note 14, at para. 186.

⁶² *Ibid.*, at para. 39.

⁶³ See *Certain Expenses of the United Nations*, *supra* note 15.

theory cite in their support the Statute of the International Atomic Energy Agency that differentiates 'peaceful' from 'military' uses of atomic energy making all military activities non-peaceful.⁶⁴ Ivan Vlasic also pointed out that in early interpretations of the Outer Space Treaty the Soviet publicists had preferred to interpret 'peaceful' as meaning 'non-military'.⁶⁵ Conversely, the Western states have consistently interpreted the word 'peaceful' to exclude only acts of aggression.⁶⁶ The 1979 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (the 'Moon Agreement') further prohibits 'any threat or use of force or any other hostile act or threat of hostile act' and using celestial bodies 'in order to commit any such act or to engage in any such threat'.⁶⁷ Such prohibitions in the Moon Agreement apply not only to the Moon and other celestial bodies in the Solar System but also to the orbits around them and trajectories to and around them.⁶⁸ These prohibitions, however, would have limited legal effect in the context of the lawful use of military force as sanctioned by the Security Council under Article 42 of the Charter of the United Nations or as part of the exercise of the *jus cogens* right to self-defence as recognized by Article 51 of the Charter. The operation of these two principles prevails over the prohibitions contained in Article IV of the Outer Space Treaty and Article 3 of the Moon Agreement, the former as a result of the operation of Articles 25 and 103 of the Charter of the United Nations, the latter as a result of the operation of Article 53 of the Vienna Convention on the Law of Treaties. Furthermore, the Moon Agreement was never intended to modify the *jus cogens* right of self-defence.

F Deployment of Conventional Weapons by Private Actors

The legality of the deployment of conventional weapons in earth orbit by a private entity is, however, legally somewhat dubious. Belligerent rights, namely the application of military force within the international community, may be exercised only by states to be consistent with international law.⁶⁹ Consequently, non-state actors cannot use these arguments to justify the legality of the deployment of weapons in outer space, though commentators have suggested that state actors have the inherent right to use force in self-defence against non-state actors.⁷⁰ Should non-state actors ever place conventional weapons in earth orbit, the use of such weapons during an international armed conflict would be legally questionable, subject to the norms concern-

⁶⁴ Jasentuliyana, *supra* note 32, at 105–106.

⁶⁵ Vlasic, *supra* note 5, at 39.

⁶⁶ Christol provided an excellent description of the drafting history of the Outer Space Treaty with the possible interpretations of 'peaceful purposes' and the various proposals of the US and the Soviet Union: Christol, *supra* note 10, at 22–26.

⁶⁷ Agreement governing the Activities of States on the Moon and Other Celestial Bodies, 5 Dec. 1979, 1363 UNTS 3, 18 ILM 1434, which entered into force on 11 July 1984 (the 'Moon Agreement'), Art. 3(2).

⁶⁸ *Ibid.*, Art. 1(1) and (2). It must, however, be noted that as of 1 Jan. 2006, only 12 states had ratified the Moon Agreement and that the only space powers to be among this group were Australia and France: see the UN Office of Outer Space Affairs, available at: www.unoosa.org/oosa/en/SpaceLaw/moon.html (last accessed 29 June 2007).

⁶⁹ See, e.g., Gazzini, *supra* note 54; Alexandrov, *supra* note 19; and Dinstein, *supra* note 19.

⁷⁰ See, e.g., Bothe, 'Terrorism and the Legality of Pre-Emptive Force', 14 *EJIL* (2003) 227; Ruy and Verhoeven, 'Attacks by Private Actors and the Right of Self-defence', 10 *J Conflict Security L* (2005) 289; and Myjer and White, 'The Twin Towers Attack: An Unlimited Right to Self-defence?', 7 *J Conflict Security L* (2002) 5.

ing the direct participation in hostilities by civilians and mercenaries. The principles recognized in the *Hostages Trial (United States of America v. Wilhelm List)* at the end of the Second World War may apply to military operations in outer space, namely:

The rule is established that a civilian who aids, abets or participates in the fighting is liable to punishment as a war criminal under the laws of war. Fighting is legitimate only for combatant personnel of a country. It is only this group that is entitled to treatment as prisoners of war and incurs no liability beyond detention after capture or surrender.⁷¹

Further, Article VI of the Outer Space Treaty requires that:

States Parties to the Treaty shall bear international responsibility for national activities in outer space, including the Moon and other celestial bodies, whether such activities are carried on by governmental agencies or by non-governmental entities and for assuring that national activities are carried out in conformity with the provisions set forth in the present Treaty. The activities of non-governmental entities in outer space, including the Moon and other celestial bodies, shall require authorisation and continuing supervision by the appropriate State Party to the Treaty.

It is clear from the terms of Article VI that states are required to ensure that activities of private entities are subject to 'authorization' and 'continuing supervision' and that they are to bear international responsibility for such activities.⁷² Accordingly, the states would be required to ensure that the military activities of private entities, including the deployment and use of conventional weapons in Earth orbit, conform to the principles of international law.

G *Draft Treaty on the Prevention of the Deployment of Weapons and the Threat or Use of Force in Outer Space*

On 26 June 2002, China and Russia jointly submitted to the United Nations Conference on Disarmament the outline of a draft Treaty on the Prevention of the Deployment of Weapons in Outer Space and the Threat or Use of Force Against Outer Space Objects.⁷³ The draft treaty provides for three basic obligations:

- not to deploy or station any weapon of any kind in outer space and on celestial bodies;
- not to resort to the threat or use of force against outer space objects; and
- not to assist or encourage other states to participate in such prohibited activities.

⁷¹ *Hostages Trial (United States of America v. Wilhelm List et al.)* (1949) 8 Law Reports of Trials of War Criminals 56, at 111. See also Additional Protocol I to the Geneva Conventions, Arts 1(2), 43.1, 43.2 and 51.3. For an excellent analysis of this principle see Schmitt, "Direct Participation in Hostilities" and 21st Century Armed Conflict", in H. Fischer et al. (eds), *Crisis Management and Humanitarian Protection* (2004), at 505–529.

⁷² See Kerrest, *supra* note 52 ; Back-Impallomeni, 'Article VI of the Outer Space Treaty', in United Nations, *Proceedings of the United Nations/Republic of Korea Workshop on Space Law* (2003) 348, at 348–351; and Lee, 'Liability Arising from Article VI of the Outer Space Treaty: States, Domestic Law and Private Operators', 48 *Proceedings College. I Outer Space* (2005) 216.

⁷³ UN Conference on Disarmament, 'Letter Dated 27 June 2002 from the Permanent Representative of the People's Republic of China and the Permanent Representative of the Russian Federation to the Conference on Disarmament Addressed to the Secretary-General of the Conference Transmitting the Chinese, English and Russian Texts of a Working Paper Entitled 'Possible Elements for a Future International Legal Agreement on the Prevention of the Deployment of Weapons in Outer Space, the Threat or Use of Force Against Outer Space Objects'', UNDoc CD/1679 (2002).

The prospect of success in the formulation of such a treaty is limited, due to the consensus nature of decision-making in the Conference on Disarmament and the continuing opposition of the United States to the adoption of such a treaty.⁷⁴ However, the significance of such a proposal being submitted by China and Russia as well as the support given to it by a substantial number of states in the Conference on Disarmament suggests that the existing body of international space law, in particular Article IV of the Outer Space Treaty, indeed does not adequately prohibit the militarization and weaponization of outer space with conventional weapons.⁷⁵

4 The Registration of Space Objects

A *The Registration Convention and Resolution 1721B*

Generally speaking, all space objects launched into outer space are subject to the requirement or desirability of a registration process. The Outer Space Treaty establishes a presumption of the existence of domestic registry of space objects that record the launch of space objects by states, even though the terms of the Treaty itself do not provide for the creation of such registries. In particular, Article V of the Outer Space Treaty provides that states are obliged to return to the 'state of registry' astronauts that have returned to Earth by an emergency landing. Article VIII of the Outer Space Treaty provides that the state of registry has both the right and the obligation to retain jurisdiction and control over space objects launched into outer space.

The Registration Convention expands on this principle by elaborating a somewhat detailed and mandatory process to register such space objects in an appropriate domestic registry of space objects. Further, states are required to furnish such registration data to the Secretary-General of the United Nations.⁷⁶ States which have not yet acceded to the Registration Convention may register space objects on a voluntary basis in accordance with General Assembly Resolution 1721B.⁷⁷ Registration with the Secretary-General of the United Nations in accordance with Resolution 1721B is publicized through what is referred to as the 'Resolution Register', while publication under the auspices of the Registration Convention is made upon the 'Convention Register'.⁷⁸ The requirements for registration in Resolution 1721B are less stringent than those required under the Registration Convention. Resolution 1721B simply calls

⁷⁴ See US Mission in Geneva, 'Remarks by Ambassador Eric M. Javits to the Conference on Future Security in Space', available at: www.usmission.ch/press2002/0529javitssecurityinspace.html (last accessed 3 July 2007).

⁷⁵ UN Conference On Disarmament, 'Letter Dated 7 March 2007 from the Permanent Representative of the Russian Federation and the Permanent Representative of China to the Conference on Disarmament Addressed to the Secretary-General of the Conference Transmitting the Third Revised and Amended Version as of 12 February 2007 of the Compilation of Comments and Suggestion to the Working Paper on PAROS Contained in Document CD/1679 Dated 28 June 2002', UNDoc CD/1818 (2007).

⁷⁶ Registration Convention, *supra* note 9, Art. IV.

⁷⁷ GA Res 1721B (XVI).

⁷⁸ Schmidt-Tedd and Gerhard, 'Registration of Space Objects: Which are the Advantages for States Resulting from Registration', in M. Benkő and K.-U. Schrogel (eds), *Space Law: Current Problems and Perspectives for Future Regulation* (2005), at 122.

upon states that launch objects into orbit or beyond to furnish information promptly to the United Nations for the registration of space objects on a public register maintained by the Secretary-General. For example, it is to be noted that the time allotted to the launching states differs in the texts. While Resolution 1721B calls for states to furnish registration details ‘promptly’ to the United Nations, the Registration Convention requires a state to maintain an ‘appropriate registry’ recording its launches and its subsequent international disclosure is to be accomplished in accordance with Article IV of the Registration Convention ‘as soon as practicable’.⁷⁹ Furthermore, while Resolution 1721B is silent as to the contents of the information subject to international disclosure, the Registration Convention outlines within its Article IV the information which is to be placed on its domestic register of space objects and furnished to the United Nations.

B *Registration of Military Space Objects*

The applicability of the duty to place on its domestic registry weapons deployed in outer space under the auspices of the Registration Convention is unequivocal. Nonetheless, the evolution of military technology capable of delivering military force to, in, and from outer space will force a corresponding evolution in the interpretation and subsequent applicability of the registration of space objects. In so far as the Registration Convention is concerned, the prospect of the use of force to, in, and from space compels a reinterpretation of the term ‘appropriate registry’ within its Article II, thus yielding a revision of the applicability of Article IV to military space objects. Due to the development of military space technology, it may no longer be ‘appropriate’ to maintain a single national registry for all space objects. In other words, a clear distinction must now be made in the system of registering space objects between civilian and military space objects. In establishing such a distinction, the applicability of the requirement for international publication of data from a national registry established in Article IV of the Registration Convention to military space objects in general and in particular to the deployment of space weapons becomes somewhat debatable. This polemic is highlighted by the fact that the United Nations register of space objects is, in accordance with Article III, to be fully open and accessible to all. Consequently, there are numerous arguments that both compel and justify a reinterpretation of the term ‘appropriate registry’ under Article II, and the subsequent duty to internationally disclose details of military space objects under Article IV of the Registration Convention and they are outlined as follows.

First, it is important to note, as Ivan A. Vlasic has observed and commented on the normative value of the Registration Convention, for through ‘their domination of the negotiating process in [the United Nations Committee for the Peaceful Uses of Outer Space], the superpowers made sure that the [Registration] Convention would allow maximum concealment of their military space activities while preserving the appearance of complete disclosure’.⁸⁰ Vlasic also astutely notes that a US Senate document

⁷⁹ Registration Convention, *supra* note 9, Art. IV(1).

⁸⁰ Vlasic, ‘Disarmament Decade, Outer Space and International Law’, 26 *McGill LJ* (1981) 190.

points out that the descriptions registered in accordance with the Registration Convention have tended to be vague and close to meaningless.⁸¹ The Registration Convention does not oblige a 'launching State', as defined in Article I, to provide each spacecraft with appropriate identification that would facilitate the determination of the state of origin in the determination of state liability, only that an 'appropriate designator of the space object or its registration number' is noted on the 'appropriate register'.⁸² When one analyses the application of the Registration Convention to weapons deployed in outer space, the *issues* identified by Vlasic gain in importance and become significant to arguments questioning the normative viability and application of Article IV to such weapons. This fact is further emphasized in the light of Vlasic's observation that 'no space mission has ever been reported by these powers as serving military purposes'.⁸³ As is demonstrated later in this article, the exercise of belligerent rights presupposes the duties upon combatants of identification and of distinguishing between civilian and military space objects, which conflicts with the registration practices identified by Vlasic.⁸⁴ This point is extremely important to any state, military, and space power that would claim the moral, ethical, and legal 'high ground' during an international armed conflict.

The difficulty in reconciling the text of the Registration Convention with the duties imposed by international law upon the exercise of belligerent rights is exacerbated by the vague wording and definitional lacunae of the Registration Convention. The text of the Registration Convention simply states within its Article II that, '[w]hen a space object is launched into earth orbit or beyond, the launching state shall register the space object'. The Registration Convention speaks generically about 'space objects' without ever differentiating between the civil and military functions of the space objects. This definitional *lacuna* permeates the disclosure duties under Article IV of the Registration Convention, thus rendering problematic the normative disposition of its provisions *vis-à-vis* weapons in space.

⁸¹ *Ibid.*

⁸² Registration Convention, *supra* note 9, Art. IV(1).

⁸³ Vlasic, *supra* note 80, at 191. Furthermore, according to the Secretariat of the UN Committee on the Peaceful Uses of Outer Space ('COPUOS'), in observing state practice, there is a significant decrease in the registration of space objects. In 1990 a total of 165 objects were launched into outer space, of which 160 were registered (9% unregistered), while in 2004 72 objects were launched into outer space, of which 50 were registered (30.5% unregistered objects): see A/AC.105/C.2/2005/CPR.10. The Legal Sub-Committee agreed that it was important to urge greater adherence to the Registration Convention, *supra* note 9, as it noted with concern that in recent years there had been a marked decrease in the registration of objects launched into outer space: United Nations, *Report of the Legal Sub-Committee on its Forty-Fifth Session*, 3–13 April 2006 (2006), at 133. It is to be noted that one contributing factor to this state practice is simply that states which are not party to the Registration Convention are under no obligation to register their space objects. It is to be noted that 46 states have ratified the Registration Convention, four have signed but not ratified it, and two international intergovernmental organizations, namely the European Space Agency and the European Organization for the Exploitation of Meteorological Satellites, have declared their acceptance of the rights and obligations provided for in the Registration Convention: see United Nations, *Register of Space Objects*, United Nations Office of Outer Space Affairs, available at: www.unoosa.org/oosa/en/SORregister/index.html (last accessed 18 Apr. 2007).

⁸⁴ Additional Protocol I to the General Conventions, *supra* note 21, Art. 43.3.

Like all treaties, the Registration Convention cannot be read in a vacuum and must be balanced with other rights and obligations of states. Belligerent rights involving the deployment and use of conventional weapons in outer space are found in a body of law called international humanitarian law or the law of armed conflict, or *jus in bello*. One of the fundamental normative foundations upon which the architecture of law of armed conflict rests is the notion of ‘combatant’.⁸⁵ Combatant status in the battle space is contingent upon being a member of the armed forces of a belligerent state and commanded by a person responsible for his or her subordinates. Combatants must distinguish themselves from the civilian population, wear fixed recognizable signs, carry their arms openly, and conduct their operations in accordance with the laws of war. Weapons that are used in the exercise of belligerent rights such as combat aircraft must be identified as such. Presumably, these rules also apply to the exercise of belligerent rights in, through, or from outer space. Consequently, should a state deploy a weapon in space, the weaponized space object must bear the appropriate military markings to conform to existing principles of the law of armed conflict. From this perspective, the law of armed conflict is more demanding than the Registration Convention, which does not impose mandatory markings of any kind on any space objects.⁸⁶ One of the effects of these markings is the facilitating of legal responsibility, which is also one of the functions of the Registration Convention.

This being said, combatants also benefit from the right to use a ruse of war such as camouflage, concealment, or deception. These are permissible methods of warfare that are designed to mislead an enemy or to induce him to act in an incautious or unwary manner.⁸⁷ A ruse of war is differentiated from a prohibited act of perfidy in that the ruse does not betray the confidence of an enemy with respect to a protected status under the law with the intent to capture, kill, or wound the enemy.⁸⁸ An act of perfidy betrays the confidence of an enemy, leading him to believe that he or she is obliged under international law to grant the individual or the asset protection in accordance with the law applicable to international armed conflicts. The feigning of civilian or non-combatant status is generally recognized as being an act of perfidy subject to the possible exception of Article 44(3) *in fine* of the Additional Protocol I.⁸⁹ Consequently and with the exception of certain specific restrictions such as the misuse of a flag of truce, the determination of whether an act is perfidious in nature is at times contextually determined.

⁸⁵ The Hague Convention IV Respecting the Laws and Customs of War on Land: Regulations Concerning the Laws and Customs of War on Land, 18 Oct. 1907, 41, which entered into force on 26 Jan. 1910, Art. 1, as reprinted in A. Roberts and R. Guelff (eds), *Documents on the Laws of War* (3rd edn., 2000), at 73. See also Additional Protocol I to the Geneva Conventions, *supra* note 21, Art. 43.

⁸⁶ Art. V of the Registration Convention, *supra* note 9, provides that ‘[w]henever a space object launched into earth orbit or beyond is marked with the designator or registration number’ and the use of the word ‘whenever’ makes this provision clearly voluntary rather than mandatory in nature.

⁸⁷ The Hague Convention IV: Regulations, *supra* note 85, Art. 24.

⁸⁸ Additional Protocol I to the Geneva Conventions, *supra* note 21, Art. 37.

⁸⁹ Additional Protocol I to the Geneva Conventions, *supra* note 21, Art. 44(3): ‘[c]ombatants are obliged to distinguish themselves from the civilian population while they are engaged in an attack or in a military operation preparatory to an attack’. See also P. Verri, *Dictionary of the International Law of Armed Conflict* (1992), at 84.

It is now important to determine the legal consequences of the feigning of civilian status with a space weapon. A grave breach of international humanitarian law is a violation of the law in which states are under the obligation not only to prevent but also to institute penal action against both the perpetrators of the act and those who ordered the act to be committed, for these are regarded as war crimes.⁹⁰ Article 85(3)(f) of Additional Protocol I establishes that an act of perfidy is a grave breach when the perfidious act involves the misuse of the distinctive emblem of the red cross, red crescent, or red lion and sun or other protective signs recognized by the Geneva Conventions or Additional Protocol I. The feigning of civilian status is excluded from this list. Consequently, the act of feigning civilian status with a space weapon would not be a grave breach, but simply a breach, thus simply a punishable act contrary to the law of armed conflict. Parties to a conflict are obliged to take measures necessary to suppress all breaches.⁹¹ Furthermore, the issue of command responsibility also comes into play, for the fact that the breach of Additional Protocol I is committed by a subordinate does not absolve their superiors from penal or disciplinary responsibility if they knew or had information which would have enabled them to conclude in the circumstances at the time that he was committing or was going to commit such a breach and not take all feasible measures within their power to repress the breach.⁹² In such a case, commanders also have a duty to suppress and report to competent authorities breaches of Additional Protocol I.⁹³ States must also require any commander who is aware that subordinates or other persons under his control are about to commit such a breach to take such steps as are necessary to prevent such violations and, where appropriate, to initiate disciplinary or penal action against such violators.⁹⁴ Thus weapons that are deployed in outer space cannot be concealed through a weak registration process as civilian satellites, as this could arguably constitute an act of perfidy by giving a weapon the legal illusion of being a protected civilian object and a breach and punishable violation of the laws of war. Neither should the weapon as deployed in outer space be internationally disclosed as such through the disclosure requirements of Article IV of the Registration Convention, yielding such important information to an enemy as the nodal period inclination, apogee, perigee, and function of the weaponized space object, for such information can be used for space control missions and targeting purposes.⁹⁵ The practice of states in military operations has always been shrouded in a veil of secrecy, and it is interesting to note that Vlasic also suggested that this premise nonetheless permeates the Registration Convention. This is perhaps appropriate for, during international armed conflicts, states have never made public the location of military assets.⁹⁶ It can be argued, as Vlasic does, that the drafting of the Registration

⁹⁰ Additional Protocol I, *supra* note 21, Art. 85(5).

⁹¹ *Ibid.*, Art. 86(1).

⁹² *Ibid.*, Art. 86(2).

⁹³ *Ibid.*, Art. 87(1).

⁹⁴ *Ibid.*, Art. 87(3).

⁹⁵ Registration Convention, *supra* note 9, Art. VII.

⁹⁶ The policy of the US Department of Defense in relation to journalists embedded in military units reflects this need: see, e.g., B. Katovsky and T. Carlson, *Embedded: The Media at War in Iraq* (2003).

Convention assures that this practice may continue in outer space as the notification to the Secretary General is only to be done ‘to the greatest extent feasible and as soon as practicable’.⁹⁷

C Interaction between the Registration Convention and the International Law of Armed Conflict

It must also be noted that Article VI of the Registration Convention creates a duty of co-operation on all states upon request in the determination of international liability in cases of damage caused by space objects that, despite their registration, cannot be identified. Consequently, the pertinent question would be to determine when a space object, duly registered by a state, may legitimately have not furnished sufficient information under the Registration Convention as required in Article IV. After all, a treaty provision must be interpreted and complied with ‘in good faith in accordance with the ordinary meaning to be given to the terms of the treaty’.⁹⁸ It follows that an interpretation of the Registration Convention that would deny a clearly stated duty internationally to furnish detailed information concerning space objects could be deemed to be unreasonable.⁹⁹ Strange though it can appear, the answer to this question and the reconciliation of these rights and duties can be found in the customary rules concerning the conflict of norms.

In attempting to apply the Registration Convention to space military operations during an international armed conflict, one quickly finds oneself caught up in a quagmire of conflicting norms. On the one hand, the Registration Convention is silent on the function of the space object to which its Article IV norms apply and maintains this silence on the question of its applicability during times of armed conflict. It might appear to be textually and grammatically correct to interpret Article IV of the Registration Convention as applying, despite the time lag in the notification process, at all times, to all registered satellites that are civilian, military, or both, even during an international armed conflict. The correctness of this interpretation is nonetheless questionable, as the effect of this interpretation would create a conflicting normative situation with duties and rights applicable to the exercise of belligerent rights recognized under international law.

In attempting to resolve this conflict of norms, the first question which needs to be asked is whether this is a conflict of norms of equal value. Four arguments justify the applicability of the law of armed conflict principles over the provisions of the Registration Convention. First, although the Registration Convention has been signed or acceded to by numerous states, its status as customary international law remains highly debatable. On the other hand, the Geneva Conventions and the Hague Conventions that make up the primary corpus of the law of armed conflict have been

⁹⁷ Registration Convention, *supra* note 9, Art. VII.

⁹⁸ VCLT, *supra* note 12, Art. 31.

⁹⁹ The Legal Sub-Committee to the COPUOS has considered that a state which is a party to the Registration Convention has a duty to register its space objects, stating in its 2006 report that ‘the non-registration of space objects constituted ... a violation of international law’: United Nations, *supra* note 83, at para. 137.

universally recognized and declared by the International Court of Justice and others to be important rules of customary international law.¹⁰⁰ The laws of war are certainly more universally recognized as norms of customary international law than the Registration Convention. As the International Court of Justice recently stated in describing the importance of international humanitarian law:

With regard to international humanitarian law, the Court recalls that in its *Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons*, it stated that 'a great many rules of humanitarian law applicable in armed conflict are so fundamental to the respect of the human person and "elementary considerations of humanity" ...', that they are 'to be observed by all States whether or not they have ratified the conventions that contain them, because they constitute intransgressible principles of international customary law' (I.C.J. Reports 1996 (I), p. 257, para. 79). In the Court's view, these rules incorporate obligations, which are essentially of an *erga omnes* character.¹⁰¹

Secondly, although it can be argued, as Christol eloquently argues, that certain international space law norms may have reached the status of *jus cogens*. Examples of these may include Article I(1) of the Outer Space Treaty where it is stated that outer space is to be the 'province of all mankind', Article 1(2) concerning the principle of freedom to use and explore outer space, including the Moon and other celestial bodies, by all states, and the *res communis* principle of Article II preventing the national appropriation or claims of sovereignty by states.¹⁰² Respectfully, even if this is indeed the case, it is very doubtful that the normative provisions of the Registration Convention have reached the same status. Although the argument concerning the *jus cogens* status of Articles I and II of the Outer Space Treaty can be considered cogent, the argument weakens when analysed in the light of the judgment of the International Court of Justice in the *Advisory Opinion on the Legality of the Use by a State of Nuclear Weapons in Armed Conflict*, in which neither nuclear weapons nor the principle of nuclear deterrence were considered to be banned in international law, while Article IV of the Outer Space Treaty saw fit to prohibit them from being deployed in outer space.

Thirdly, it is doubtful that the Registration Convention was ever intended to modify the rights of belligerents in an international armed conflict.

¹⁰⁰ *Legality of the Use by a State of Nuclear Weapons in Armed Conflict* [1996] ICJ Rep 226, at para. 77; *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory*, ICJ, available at: www.icj-cij.org/docket/index.php?pi=3&p2=4&code=mwp&case=131&k=5a (last accessed 19 Apr. 2007), at para. 86; International Military Tribunal, *Trial of the Major War Criminals before the International Military Tribunal* (1947), Nuremberg; i, at 254; and United Nations, 'Report of the Secretary General on Aspects of Establishing an International Tribunal for the Prosecution of Persons Responsible for Serious Violations of International Humanitarian Law Committed in the Territory of the Former Yugoslavia since 1991' (3 May 1993), UN Doc S/25704, 32 ILM 1159.

¹⁰¹ *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory*, *supra* note 100, at para. 157.

¹⁰² Christol, 'Judge Manfred Lachs and the Principle of *Jus Cogens*', 22 *J Space L* (1994) 33. Christol also points out that, in 1986, the representative of Chile to the Legal Sub-Committee of COPUOS urged that the terms of Arts I, II, III and IV of the Outer Space Treaty and Art. 11(1) of the Moon Agreement 'occupied *jus cogens* status': at 44. Considering that the Moon Agreement has been ratified by only 12 states, much doubt must be placed on this claim.

Fourthly, in case of a conflict of norms, the general principle is that the more specific norm has precedence over the more general norm, or *lex specialis derogat legi generali*.¹⁰³ Consequently, it can be cogently argued that the duty internationally to disclose detailed information on space objects, as contained in Article IV of the Registration Convention, does not apply to the deployment by states of conventional weapons in outer space. However, the Registration Convention would be completely applicable to private individuals or corporations which desired to provide security services in outer space, as these entities or persons may not legitimately exercise belligerent rights under the international law of armed conflict. Further, states are required under Article VI of the Outer Space Treaty to ensure the continuing compliance of such private individuals and entities with the provisions of the Registration Convention.

It is important to note that, in state practice, registers of civil and military aircraft are maintained separately, military aircraft being registered with a military authority and civilian aircraft with a civilian authority. With the probability of the weaponization of space, the time is perhaps propitious for the registration process to evolve and to conform to state practice in the registration of military aircrafts. Consequently, the registration of a space-deployed weapon should occur under a national state registry established under a military authority in accordance with the Registration Convention, but would otherwise be considered exempt from the duty to furnish details of such a space object to the Secretary-General of the United Nations. Such a registration structure would completely respect the normative structures and rights of states both within the space law normative matrix and that of the law of armed conflict.

D Separability of the Duty to Register Military Space Objects with the Secretary-General of the United Nations

Article 44 of the Vienna Convention on the Law of Treaties recognizes the separability of treaty provisions, save that a treaty may nonetheless expressly provide otherwise and the Registration Convention does not do so. Article 44(3) deals with the issue at hand, imposing the following three conditions on the separability of treaty provisions from the remainder of that treaty:

- 1 those clauses are separable from the remainder of the treaty with regard to their application;
- 2 it appears from the treaty or is otherwise established that acceptance of those clauses was not an essential basis of the consent of the other party or parties to be bound by the treaty as a whole; and
- 3 continued performance of the remainder of the treaty would not be unjust.

It can be seen that the non-applicability of the duty to furnish registration information on space weapons to the United Nations under Article IV of the Registration Convention respects these three conditions of separability. First, the Article IV duty is

¹⁰³ See, e.g., Simma and Pulkowski, 'Of Planets and the Universe: Self-Contained Regimes in International Law', 17 EJIL (2006) 483; and J. Pauwelyn, *Conflict of Norms in Public International Law: How WTO Law Relates to Other Rules of International Law* (2003).

clearly separable from the remainder of the treaty as it does not negate or interfere in any way whatsoever with the registration of a space object on a national registry or any other duties created within the Registration Convention. Secondly, the existing registration practice of states as described by Vlasic unequivocally demonstrates that international disclosure is subject to the national security interests of states. Thirdly, it is difficult to see how the refusal to furnish registration data to the United Nations on a space-based weapon would cause or result in an unjust continued performance of the Registration Convention.

E Rules of Engagement

The deployment of weapons in outer space does remain subject to the duty of having due regard to the corresponding interests of other states, whether based on Article IX of the Outer Space Treaty or as a norm of customary international law. In this sense, the deployment of military weapons in outer space, although perhaps not subject to the duty to furnish registration information to the United Nations under Article IV of the Registration Convention, would nonetheless be subject, when launching, deploying, and using such weapons, to the duty to heed, pay attention to, and take care of the rights of other states to have access to, navigate in, and use outer space. This duty to have due regard is equally applicable during times of peace and of armed conflict and must be reflected in the rules of engagement as applicable to space-based weapons.

During times of armed conflict, a space-faring belligerent state would also have to observe its duties towards non-combatants, civilians, and civilian objects in outer space in accordance with the law of armed conflict. On this point, the duties imposed by Additional Protocol I are of particular importance. Belligerents have a duty to take precautions to protect civilian objects from the effect of attacks.¹⁰⁴ Consequently, considering that a space-deployed weapons system is a legitimate military objective that can be subject to attack, such systems cannot be based in outer space within orbital parameters that could be considered to be near a civilian satellite.¹⁰⁵ This principle was described by the International Court of Justice as one of the two ‘cardinal principles’ of the law of armed conflict.¹⁰⁶ This is further supported in space law by the legal duty under the Outer Space Treaty to have due regard to the corresponding interest of other states in the conduct of space activities.¹⁰⁷ However, orbital mechanics render the applicability of this principle of international humanitarian law problematic. For example, the debris field resulting from the recent Chinese anti-satellite weapon test may, in the near future, have an impact on civil and commercial satellites in a large area of orbital space. The implementation of ‘protected’ or ‘distinct’ military zones versus civil and commercial zones in outer space is hard to define or describe, and even

¹⁰⁴ Additional Protocol I, *supra* note 21, Arts 51 and 52.

¹⁰⁵ *Ibid.*, Art. 48. Furthermore, the use of civilian objects to shield military objectives is known as counter-targeting; see Schmitt, ‘Fault Lines in the Law of Attack’, in S. Breau and A. Jachec-Neale (eds), *Testing the Boundaries of International Humanitarian Law* (2006), at 298.

¹⁰⁶ *Legality of the Use by a State of Nuclear Weapons in Armed Conflict*, *supra* note 100, at para. 78.

¹⁰⁷ Outer Space Treaty, *supra* note 6, Art. IX.

more difficult to implement. Despite this difficulty, the legal norms pertaining to the use of force must be respected and the legal threshold allowing for the use of a space capable weapons system that uses kinetic kill and/or which results in fragmentation, debris, or shrapnel thus remains very high.

4 Demilitarized Zones and State Practice

It is difficult to predict how states will deal with the OST demilitarized zones during an armed conflict, as the OST remains silent on the issue. This difficulty is exacerbated by the fact that there are few historical precedents dealing with state practice and military operations in demilitarized zones. This is perhaps due to both the rarity of these zones and the fact that such zones are generally of low strategic and economic value. Nonetheless there is perhaps one historical precedent of interest that occurred during World War II, namely the case of the Archipelago of Spitsbergen, some of the most northerly islands of our planet. This historical precedent indicates a state practice to the effect that demilitarized zones do not pre-empt the rights of states to self-defence. In 1920 the Treaty of the Archipelago of Spitsbergen¹⁰⁸ recognized the full and absolute sovereignty of Norway over the Archipelago, comprising, with Bear Island or Beeren-Eiland, all the islands situated between 10° and 35° longitude East of Greenwich and between 74° and 81° latitude North, especially West Spitsbergen, North-East Land, Barents Island, Edge Island, Wiche Islands, Hope Island or Hopen-Eiland, and Prince Charles Foreland, together with all islands great or small and rocks appertaining thereto. Article 9 of this Treaty demilitarized the subject archipelago stating '[s]ubject to the rights and duties resulting from the admission of Norway to the League of Nations, Norway undertakes not to create nor to allow the establishment of any naval base in the territories specified in Article 1 and not to construct any fortification in the said territories, which may never be used for warlike purposes'. Although the terminology of the Treaty is pre-UN Charter using the concept of 'warlike purposes' and not 'peaceful purposes', the example remains nonetheless very interesting and pertinent to analysing the OST. After the invasion of Norway by Germany in 1940, German forces attempted to use the archipelago for military purposes. In 1941 the German forces, including the Luftwaffe, the Kriegsmarine, and the Abwehr, constructed meteorological installations on the archipelago. On 14 May 1942, the allied forces recaptured the archipelago.¹⁰⁹ In September 1943, the Germans retook part of the archipelago,¹¹⁰ and occupied it for three days. In 1944 a German submarine again attacked the archipelago. In 1944 the Germans again placed meteorological installations on the archipelago. It is interesting to note that the 11 occupants of this meteorological installation were the last German combatants to

¹⁰⁸ Available at: www.austlii.edu.au/au/other/dfat/treaties/1925/10.html.

¹⁰⁹ Operation Fritham.

¹¹⁰ Operation 'Zitronella' or 'Silizien': 9 Sept. 1943. The battleships *Tirpitz* and *Scharnhorst* bombarded and occupied the island of Spitzbergen for 3 days.

surrender at the end of the Second World War, four months after the end of the hostilities on the European continent.¹¹¹

5 Conclusion

The deployment of conventional weapons in Earth orbit may be consistent with the framework established by international space law, the law of armed conflict, and the Charter of the United Nations. Such deployments are lawfully permitted when they can be demonstrated to benefit and/or serve the interests of all states, subject to the collective security architecture as created under the Charter of the United Nations. While the Outer Space Treaty presupposes a national registry for space objects and the Registration Convention establishes the foundations of such registry and the international sharing of the information recorded on such registries, these treaties must be harmonized with the law of armed conflict when dealing with space-deployed conventional weapons. The most efficient way of harmonizing these normative structures is to have a dual domestic registry system, providing for a registry for civilian space objects with registration details furnished to the Secretary-General of the United Nations, and a military registry, which is not subject to obligations of international disclosure and publication.

At this juncture, it goes without saying though is worth saying nonetheless that, while an activity that is prohibited by law should not occur, it is facile to argue that what is not prohibited by law should occur. In other words, simply because an activity is legal does not necessarily mean that the activity must be done or is being encouraged to be done by anyone, least of all by those who do suggest the legality of such an activity. In considering the above legal analysis, it is important to keep in mind, within the international political realm and in outer space in particular, that the legality of an activity is but one consideration for a state in determining whether it should be done.

¹¹¹ W. Dege., War North of 80: The Last German Arctic Weather Stations of World War II. (2003), at 361.