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The Applicability of the *Jus in Bello* Rules of International Humanitarian Law to The Use of Outer Space

Steven Freeland[1]

Abstract

The Outer Space Treaty confirms that the principles of international law apply to the use and exploration of outer space. Given the development of technology, outer space is more frequently being used during the course of armed conflict, particularly through the use of sophisticated satellite technology, notwithstanding the 'peaceful purposes' provisions of that Treaty. Not only does this give rise to international law issues relating to the use of force, but it also requires an understanding of how and to what extent the international law principles of *jus in bello* – international humanitarian law – also apply to the conduct of these outer space activities. This paper examines a number of specific aspects of the *jus in bello* principles as they relate to the use of outer space. Although international humanitarian law does apply to activities in outer space, the principles may not be specific enough to provide appropriate regulation for the increasingly diverse ways in which outer space could be used during the course of armed conflict. There is therefore a growing need to reach a consensus on additional space law regulation directly applicable to the conduct of armed conflict which may involve the use of space technology.

Introduction

One of the fundamental principles in the *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies* (*Outer Space Treaty*)[2] is that activities in the exploration and use of outer space shall be carried out 'in accordance with international law, including the Charter of the United Nations'.[3] One of the primary reasons for the inclusion of this provision was the concern among many States that outer space would become a new arena for international conflict. As Bin Cheng aptly put it, 'outer space brought with it a whole new ball game.'[4] Many of the fundamental principals that formed the basis of the *Outer Space Treaty* were concluded at a time when the world was in the midst of uncertainty and mistrust, largely as a result of the prevailing geopolitical environment of the Cold War. Almost as soon as Sputnik I was launched in October 1957, the international community was concerned about the use of outer space for military purposes, as well as the fear that it could perhaps ultimately be used as a theatre of war. In December 1958, the United Nations emphasised the need 'to avoid the extension of present national rivalries into this new field'.[5]

By 1961, the General Assembly had recommended that international law and the United Nations Charter should apply to 'outer space and celestial bodies'.[6] This was repeated in General Assembly Resolution 1962, which set out a number of important principles that were ultimately embodied in the *Outer Space Treaty*.[7] Specific reference to the United Nations Charter was important, given that the maintenance of international peace and security is the underlying principle of the system established under that instrument.[8] The prohibition on the use of force contained in Article 2(4) of the Charter represents a crucial element in the regulation of international relations and is equally applicable to the use of outer space.[9]

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On the other hand, Article 51 of the Charter – which confirms the 'inherent right' of self-defence 'if an armed attack occurs'- is also applicable to the legal regulation of outer space.[10] Under the principles of public international law, this right of self-defence remains subject to express legal limitations – the requirements of necessity and proportionality.[11] In its Advisory Opinion in the *Legality of the Threat or Use of Nuclear Weapons*, the International Court of Justice observed: 'The submission of the exercise of the right of self-defence to the conditions of necessity and proportionality is a rule of customary international law'.[12] Moreover, even where the right of self-defence is lawfully exercised, the State acting in self-defence remains subject to the *jus in bello* principles described below.

The sentiments underlying the United Nations Charter were strengthened further by the restrictions imposed in relation to nuclear weapons and weapons of mass destruction by Article IV of the *Outer Space Treaty*, although, as has been well documented by leading commentators, this provision in and of itself does not represent a complete restriction on the placement of weapons in outer space.[13] Indeed, there have been, from time to time, proposals put forward to amend Article IV in order to enhance these restrictions, but this has not (yet) eventuated.[14]

The 'peaceful purposes' provision set out in Article IV of the *Outer Space Treaty* has been the subject of much analytical discussion as to its scope and meaning. While there is general agreement – but not complete unanimity – among space law commentators that this is directed against 'non-military' rather than merely 'non-aggressive' activities, the reality has, unfortunately, been different. It is undeniable that, in addition to the many commercial and scientific uses, outer space has and continues to be used for an expanding array of military activities. Unless concrete steps are taken to arrest this trend – which will require a significant shift in political will, particularly among the major powers of the world – it is likely that space will increasingly be utilised to further the military and strategic aims of specific countries, particularly as military and space technology continues to evolve and develop.

In this context, if one were to adopt a hard-line pragmatic (and non-legal) view of the current situation, one could suggest that the 'non-military v. non-aggressive' debate is a redundant argument, even though it represents an extremely important issue of interpretation of the strict principles set out in the *Outer Space Treaty*. Indeed, the focus of much discussion now centres (as it should) on issues involving the 'weaponisation' of space – witness the numerous United Nations General Assembly Resolutions on that issue.[15] In one sense, this assumes that the militarization of space is a given, as much as it pains international and space lawyers to admit this. Of course this is highly troubling and flies in the face of the principles of the *Outer Space Treaty*. Yet, it would be naive to ignore the realities – what must be done is, instead, to understand what legal principles currently apply to any military activities in space and what more needs to be done to provide, at least from a regulatory perspective, an appropriate framework to protect humankind from what could otherwise be unimaginable scenarios.

As mentioned above, the rules relating to the legal regulation of the use of force – *jus ad bellum* – apply to the use of outer space, by virtue of Article III of the *Outer Space Treaty*, as well as under customary international law.[16] Much has been written about the application of these principles, which are, of course, extremely important aspects of the use of outer space.[17] However, there are also many other areas of international law that are also highly relevant to the military uses of outer space. This paper looks at some of the specific principles of international humanitarian law – *jus in bello* – that are also applicable.

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Jus in Bello – General Principles

The principles of *jus in bello* have emerged over time, as the international community has gradually agreed that there should be certain legal constraints applicable to the conduct of armed conflict. Wars have been with us since time immemorial and it has only been relatively recently that minimum international standards have been developed to regulate *how*, *with what* and *against whom* they could be fought – in effect the rules that have developed are 'intended to limit the terrible effects of war'.[18] Even though 'war' as a concept was declared illegal by the 1928 Pact of Paris,[19] it is evident that armed conflict still continues and has become more complex, particularly given the increasing role of non-State actors. Moreover, the scope for cataclysmic destruction and loss of life has also increased due to the development of sophisticated weaponry, which includes the use of space technology.

The 'laws and customs of war' had its origins in the customary practices of armies on the battlefield and has developed as an important branch of international law.[20] The application of these customary practices was not uniform, and it therefore became evident that more formalized standards were required. A major step forward in the development of the rules of war, which *inter alia* limit the method and means of conducting warfare and also provide for classes of protected persons and protected objects, came with the Brussels Conference of 1874 and, more significantly, The Hague Peace Conferences of 1899 and 1907, which gave rise to some important standard-setting Treaties that are still applicable today.[21] The 1899 Conference concluded that '[t]he right of belligerents to adopt means of injuring the enemy is not unlimited'.[22]

Further Treaties followed, specifying in greater detail the limits of what constituted acceptable behaviour in the context of armed conflict. As an example, those provisions of the Hague Conventions that applied the laws of war to restrict the use of poison or poisoned weapons and asphyxiating gases were further extended by the 1925 Geneva Protocol.[23]

The horrors of the Second World War demonstrated the inadequacy of the existing rules, particularly in relation to the treatment of civilians and non-combatants. The four 1949 Geneva Conventions were concluded to address these issues,[24] and these were strengthened by the Additional Protocols of 1977.[25] There have also been a growing number of other important Treaties that have added to the corpus of international humanitarian law and the rules regulating armed conflict, particularly in relation to restrictions on specific weapons and means of warfare. Among these are several Treaties that relate to the use of outer space, including those limiting the testing of nuclear and other weapons[26] as well as the 1977 Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (ENMOD),[27] which was the first instrument that dealt with deliberate destruction of the environment during warfare, although it also applies in time of peace.

International humanitarian law is now a well-developed area of international law, covering many aspects of terrestrial warfare. The importance of the obligations arising under international humanitarian law, particularly those contained in The Hague Conventions of 1899 and 1907 and the Geneva Conventions of 1949 and their Additional Protocols of 1977, has recently been reaffirmed by the United Nations Security Council in a landmark resolution relating to the protection of civilians in armed conflict.[28] In addition, the establishment of various national, regional and international mechanisms of justice to enforce these fundamental principles – culminating in the International Criminal Court, the world's first permanent court of its kind - clearly indicates that the international community is determined that those senior officials (both military and

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political) who breach these norms are to be brought to account.[29]

While there are many principles that have arisen through the evolution of the *jus in bello* principles, it is perhaps pertinent to briefly mention three specific concerns that form the basis of any decision to undertake an act of military engagement. They are the principles of distinction, military objective and proportionality. Each of these is relevant to a consideration of the applicability of the rules of war to the use of outer space.[30]

(a) the principle of distinction - deliberate attacks against civilians and non-combatants are prohibited.[31] In addition, those engaged in armed conflict must not use weapons that are incapable of distinguishing between combatants and non-combatants. These represent fundamental concepts in the conduct of military activities and illustrate the strong linkages between the scope of international humanitarian law and the development of formal legal principles for the human rights of the individual;[32]

(b) the principle of military objective – attacks not directed at a legitimate military target are prohibited. The important issue is the need to distinguish between civilian persons or objects and military objectives - comprising the elements of 'effective contribution to military action' and 'definite military advantage' specified in Article 52 of Additional Protocol I;[33]

(c) the principle of proportionality – even when attacking a legitimate military objective, the extent of military force used and any injury and damage to civilians and civilian property should not be disproportionate to any expected military advantage. This demands an assessment of any potential 'collateral damage' in the case of military action. However, it is often difficult to apply the proportionality principle in practice, given that different people ascribe differing relative 'values' to military advantage *vis-à-vis* civilian injury and damage.[34] One only need recall the Advisory Opinion in the *Legality of the Threat or Use of Nuclear Weapons*, where the International Court of Justice, could not say categorically that the threat or use of nuclear weapons would in every circumstance constitute a violation of international law,[35] while noting that the threat or use of a nuclear weapon should comply with the requirements of international law relating to armed conflict, in particular the principles of international humanitarian law.

The Relevance of *Jus in Bello* Principles to Outer Space

As mentioned above, it is clear that the principles of international humanitarian law, as an integral part of international law, are, in theory, to be regarded as applicable to the use and exploration of outer space. There is no specific 'territorial' limitation to the application of the *jus in bello* principles. The laws and customs of war apply both to the area where the hostilities actually take place, as well as the broader areas that are in some way affected by the hostilities. If, for example, direct military action takes place in one area, but the effects of that action impact on civilians elsewhere, that represents a relevant consideration in deciding whether such action is consistent with the rules of war – for example with the principle of proportionality. As a consequence, any military activity that takes place in outer space will be subject to the *jus in bello* in relation not only to the direct action, but also as to its effects elsewhere, including on Earth.

Having established that these principles can apply to outer space, it is necessary to determine whether this is just an issue of academic curiosity or whether the rules of war are 'relevant' to activities in outer space. The answer, unfortunately, appears to be self-evident. It seems that outer space may well become a region of war in the future. Just as States have been undertaking what might be termed 'passive' military

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activities in outer space since the advent of space technology, outer space is increasingly being used as part of active engagement in the conduct of armed conflict. Not only is the information gathered from outer space – through, for example, the use of remote satellite technology and communications satellites – used to plan military engagement on Earth, space assets are now used to direct military activity and represent an integral part of the military hardware of the major powers.

It was during the Gulf War in 1990 that the value of space assets to the conduct of war was first utilised to a significant degree – indeed, 'Operation Desert Storm' was regarded as 'the first space war'.[36] It was recognised that the use of space technology would create an 'integrated battle platform' to aid in the implementation of military strategies.[37] Following the attacks of 11 September 2001, the United States Administration issued a landmark policy paper in which it emphasised the need for '[i]nnovation within the armed forces [which] will rest on experimentation with new approaches to warfare, strengthening joint operations, exploiting U.S. intelligence advantages, and taking full advantage of science and technology'.[38] As an integral part of this policy, it was necessary to maintain technological supremacy so as to 'dominate the space dimension of military operations'.[39] This necessitates having 'the ability to defend the homeland, conduct information operations, ensure U.S. access to distant theaters, and protect critical U.S. infrastructure and assets in outer space.'[40]

Ballistic missiles play an increasingly important role in any sophisticated national security structure, and the development of defensive systems 'is both a result of and additional factor driving' a global arms race.[41] In 2001, a commission headed by current United States Secretary of Defense, Donald Rumsfeld, suggested that an 'attack on elements of U.S. space systems during a crisis or conflict should not be considered an improbable act.'[42] The Report went on to (in)famously warn of the possibility of a 'Space Pearl Harbor' – a surprise attack on the space assets of the United States.[43] The European Union has recently identified outer space as 'a key component for its European Defense and Security Policy'.[44] Even for smaller countries such as Australia, the political exigencies of a post-11 September world have significantly altered the landscape of national space policy, which now highlights the military and national security concerns associated with the use of outer space.[45]

In an effort to consolidate its policy of 'space control', the United States has pursued its national missile defence system (NMD), the development and testing of which led to its withdrawal in 2002 from the 1972 *Anti-Ballistic Missile Treaty*.[46] In addition to the advancement of its so-called 'defensive' military utilization of space, the United States has also vigorously pursued its stated goal of space technology superiority. Space technology played an increasingly important role in the military actions by NATO in Serbia and Kosovo in 1999 and by the 'Coalition of the Willing' forces in Afghanistan in 2001. During the invasion of Iraq in 2003, the United States used GPS satellite technology to a significant degree to guide and direct so-called 'smart bombs' to their assigned targets. As this paper is being written (July 2006), there are reports of the delivery of a multi-million dollar package of satellite and laser-guided bombs to Israel by the United States, at a time when hostilities in the Middle East are increasing significantly.[47]

In addition, the advent of China as a major space power – symbolised not only by that country, in 2003, becoming the third country to successfully send a man into space, but also by its ambitious plans for missions both to the Moon and Mars – have given rise to increasing concerns about the use of outer space for strategic purposes not necessarily in keeping with the underlying co-operative principles of the space Treaties. Outer space has in recent times been referred to as the

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'Fourth Territory' (alongside land, sea and airspace) – a notion that clearly flies in the face of both the 'common heritage of mankind' and 'non-appropriation' principles that have guided the development of space law.

In this context, several commentators have gone even further and opined that space warfare is, in fact, inevitable and cannot be avoided.[48] If these suggestions turn out to reflect reality, the principles of the laws of war must be applied to any such actions. It is not clear how this should be done in practice and what are the consequences that follow. Given that an important group of space assets used for military purposes are 'dual-use' satellites – which also provide 'civilian' communications, remote sensing, and GPS services – one is drawn to the question of whether and in what circumstances such a satellite can now be regarded a legitimate target of war.

The answer to this question will depend upon a number of fundamental principles of international law. Clearly, the physical destruction of a satellite would constitute a use of force. Apart from a consideration of the principles in the space Treaties, one would have to determine whether such an action represented a legitimate (at law) use of force, with the only possible justification being Article 51 of the United Nations Charter. This issue would be determined by a consideration of the necessity and proportionality – as against the armed attack and threat of further attacks – of the act of self-defence. Even if the action did not violate these *jus ad bellum* principles, one would then need to consider the *jus in bello* principles raised earlier.

Let us assume, for the sake of example, that a combatant takes the view that a dual-use satellite - for example, a communications satellite – represents a legitimate military objective in accordance with the principles outlined above. Even if this were a correct assessment, the principle of proportionality would continue to apply, so that injury and damage to civilians and civilian property should not be disproportionate to any expected military advantage. Moreover, one could argue that, implicit in the principle of distinction is the obligation on the parties to a conflict to take 'all feasible precautions' to protect civilians from the effects of an attack.[49]

One can certainly envisage that the deliberate destruction of such a target, even if it does not result in any immediate civilian casualties, would have a devastating impact on a community, country or even region of the world. Millions of lives and livelihoods could, potentially, be affected, economies destroyed and essential services incapacitated. Obviously, some of the consequences of such an attack may be difficult to foresee, but such action would, one could argue, be regarded at least as reckless. However, there are uncertainties as to whether a 'recklessness' test is applicable in the determination of the proportionality principle.[50]

Indeed, given the unique nature of outer space, the principles under the *jus in bello* – developed as they were largely to regulate *terrestrial* warfare and armed conflict – are probably neither sufficiently specific nor entirely appropriate to military action in outer space. Even though every effort should be made to define the existing principles as clearly as possible, the looseness of some of the fundamental concepts, as well as the resistance they face from certain States[51] – means that more specific rules are required if they are to provide a comprehensive framework to protect outer space from becoming another theatre of warfare.

Concluding Remarks

All of this leads to some quite stark conclusions: firstly, there is an increasing likelihood that outer space will not only be used to facilitate armed conflict (as it already is) but will become a theatre of war. The tendency of the major militarised

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powers to rely ever increasingly on space technology may spiral a space weapons race, despite the best efforts of the international community. Even though the United States may currently be in a position to claim space superiority, it can only be a matter of time before other space-faring countries – perhaps China and India – will have developed equally sophisticated (and potentially devastating) space weapons technology.

Secondly, the development of such technology and the increasing range of military uses of outer space significantly heighten the dangers of a space war, as frightening as that prospect is. The proliferation of military space assets means that States regard themselves (and their 'opponents') as increasingly dependent upon outer space for the maintenance of their respective security interests. From a military and strategic viewpoint, the disabling or destruction of the space assets used by another country would provide very significant advantages. The fact that it has not happened in the past is no reason to assume that we will never see a space conflict.

Thirdly, it is clear that virtually all of the world's countries are also highly dependent on space technology to maintain and improve their livelihood and standard of living. The non-military uses of space – communications, earth observation, television broadcasting, internet services, navigation and GPS tracking – are vital aspects of any community's survival. At the same time, however, many of the satellites providing these services are now regarded as dual-use, in that they are also utilised for military and strategic purposes. This raises difficult questions about the 'status' of such assets under the rules of war – particularly as to whether they may actually be regarded as legitimate military objectives.

Fourthly, Article III of the *Outer Space Treaty*, which also reflects customary international law, specifies that rules of international law apply to the use and exploration of outer space. These rules include the *jus ad bellum* principles regulating the use of force as well as the *jus in bello* principles that reflect the laws and customs of war. Respect for both of these sets of principles is absolutely vital to the safety and security of humankind, as well as the interests of future generations. In terms of the principles of *jus in bello*, there are some fundamental rules that would apply, in theory, to military action in outer space. However, with the exception of those Treaties that seek to ban the use and testing of certain types of weapons, there are many uncertainties that arise when one seeks to apply these principles to a (at this stage hypothetical) space conflict. The consequences of a space war are potentially so enormous that one cannot be sure as to exactly how these rules - for example, the principle of proportionality - will apply.

Fifthly, if we are to avoid 'grey areas' in the law, it is necessary to develop specific and clear rules and standards that categorically sanction the weaponisation of space, as well as the engagement in any form of conflict in the region of space and against space assets. The *Outer Space Treaty*, as well as the other space Treaties and General Assembly Resolutions, do not currently provide stringent rules nor incentives to prevent an arms race in outer space, let alone conflict in space. This may, therefore, require additional space law regulation directly applicable to armed conflict involving the use of space technology. As part of these new rules, clear definitions need to be developed for concepts such as 'space weapons', 'peaceful purposes' and 'military uses'. Moreover, the fundamental issue of 'where space begins' should be definitively resolved so as to counter any arguments that outer space is, in fact, an area akin to the territory of a State for the purposes of national security.

Lastly and most significantly, in developing these new rules, we need to adhere strictly to the 'collective humanity' principles of space law in order to avoid the possibility of

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alternate scenarios too frightening to contemplate.

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[1] Associate Professor of International Law, University of Western Sydney, Australia, Visiting Professor of International Law, University of Copenhagen, Denmark and Visiting Professional at the International Criminal Court, The Hague, The Netherlands. The views expressed in this paper are the author's alone. Email s.freeland@uws.edu.au.

[2] 610 U.N.T.S. 205.

[3] Article III, *Outer Space Treaty*. Article 2 of the *Agreement Governing the Activities of States on the Moon and other Celestial Bodies* (*Moon Agreement*), 1363 U.N.T.S. 3, extends these sentiments by referring to 'the Declaration on Principles of International Law concerning Friendly Relations and Co-operation among States in accordance with the Charter of the United Nations, adopted by the General Assembly on 25 October 1970'.

[4] Bin Cheng, 'The 1967 Outer Space Treaty: Thirtieth Anniversary' (1998) 23:4/5 *Air & Space Law* 157, 158.

[5] United Nations General Assembly Resolution 1348 (XIII), 13 December 1958, preambular paragraph 3.

[6] United Nations General Assembly Resolution 1721 (XVI), 20 December 1961, paragraph 1(a).

[7] United Nations General Assembly Resolution 1962 (XVIII), 13 December 1963, paragraph 4.

[8] 1 U.N.T.S. xvi (892 U.N.T.S. 119). The first 'Purpose' of the United Nations specified in Article 1(1) of the Charter begins with the words: 'To maintain international peace and security …'

[9] Article 2(4) of the Charter provides: 'All Members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the Purposes of the United Nations.'

[10] Article 51 of the Charter provides *inter alia*: 'Nothing in the present Charter shall impair the inherent right of individual or collective self-defence if an armed attack occurs …'

[11] See *The Caroline Case* 29 B.F.S.P. 1137-1138; 30 B.F.S.P. 195-196, which also referred to a requirement of immediacy, although this was not mentioned in the recent decision of the International Court of Justice in *Oil Platforms* (*Merits*) (*Iran v. United States*) [2003] ICJ Rep. Judgment of 6 November 2003.

[12] [1996] 1 ICJ Rep. 245, para. 41.

[13] See, for example, Gyula Gál, '"Threat or Use of Force" - Observations to Article 2 of the U.N. Charter and Article III of the Outer Space Treaty' (1989) 17:1 *Journal of Space Law* 54, 57.

[14] See, for example, Vladimir Bogomolov, 'Prevention of an Arms Race in Outer Space: The Deliberations in the Conference on Disarmament in 1993' (1993) 21:2 *Journal of Space Law* 141, 141, where the author refers to a failed Venezuelan proposal to amend Article IV.

[15] Refer to the numerous United Nations General Assembly Resolutions, beginning with Resolution 36/97C, 9 December 1981 and culminating most recently with Resolution 59/65, 12 December 2004, which have been directed towards the 'Prevention of an arms race in outer space.' The political dimensions of this issue in the early 1980s were indicated by a split, along ideological grounds, on the main thrust of these resolutions: see Nandasiri Jasentuliyana, *International Space Law and the United Nations*, 1999, Kluwer Law, The Netherlands, 82.

[16] For a discussion on the customary international law status of specific provisions of the space treaties, see Ricky J Lee and Steven Freeland 'The Crystallisation of General Assembly Space Declarations into Customary International Law' (2003) 46 *Proceedings of the Colloquium on the Law of Outer Space* 122-130.

[17] See, for example, the papers presented in the session 'Legal Implications of Military Uses of Outer Space', (2002) 45 *Proceedings of the Colloquium on the Law of Outer Space* 134-277.

[18] Dissenting Opinion of Judge Koroma in *Legality of the Threat or Use of Nuclear Weapons* [1996] 1 ICJ Rep. 245.

[19] Article I of the *General Treaty for the Renunciation of War* (U.K.T.S. (1929) 29) provides: 'The High Contracting Parties solemnly declare in the names of their respective peoples that they condemn recourse to war for the solution of international controversies, and renounce it as an instrument of national policy in their relations with one another.'

[20] Jean-Marie Henckaerts and Louise Doswald-Beck, *Customary International Humanitarian Law – Volume 1: Rules*, 2005, Cambridge University Press, United Kingdom, xxv.

[21] The 1899 Hague Conventions were: Convention (I) for the Pacific Settlement of International Disputes and Convention (II) with

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Respect to the Laws and Customs of War on Land. The 1907 Hague Conventions were Convention (II) for the Pacific Settlement of International Disputes, Convention (III) Relative to the Opening of Hostilities, Convention (IV) Respecting the Laws and Customs of War on Land, Convention (V) Respecting the Rights and Duties of Neutral Powers and Persons in Case of War on Land, Convention (VI) Relating to the Status of Enemy Merchant Ships at the Outbreak of Hostilities, Convention (VII) Relating to the Conversion of Merchant Ships into War-Ships, Convention (VIII) Relative to the Laying of Automatic Submarine Contact Mines, Convention (IX) Concerning Bombardment by Naval Forces in Time of War, Convention (X) for the Adaption to Maritime War of the Principles of the Geneva Convention, Convention (XI) Relative to Certain Restrictions with Regard to the Exercise of the Right of Capture in Naval War and Convention (XIII) Concerning the Rights and Duties of Neutral Powers in Naval War.

[22] 1899 Hague Convention II, [1907] Supp 1 *American Journal of International Law* 129.

[23] Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, xciv L.N.T.S (1929) 65-74.

[24] Geneva Convention for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field (75 U.N.T.S. 31), Geneva Convention for the Amelioration of the Condition of the Wounded, Sick and Shipwrecked Members of Armed Forces at Sea (75 U.N.T.S. 85), Geneva Convention Relative to the Treatment of Prisoners of War (75 U.N.T.S. 135) and Geneva Convention Relative to the Protection of Civilian Persons in Time of War (75 U.N.T.S. 287).

[25] Protocol I Additional to the Geneva Conventions of August 12, 1949, and relating to the Protection of Victims of International Armed Conflicts (Additional Protocol I), 16 I.L.M. 1391 (1977) and Protocol II Additional to the Geneva Conventions of 12 August 1949 and relating to the Protection of Victims of Non-International Armed Conflicts, adopted on 8 June 1977 by the Diplomatic Conference on the Reaffirmation and Development of International Humanitarian Law applicable in Armed Conflicts, 16 I.L.M. 1442 (1977).

[26] These include the 1963 Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water (480 U.N.T.S. 43), the 1996 Comprehensive Nuclear Test-Ban Treaty (not yet in force) and the 1972 Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction (in force 26 March 1975).

[27] 16 I.L.M. 88 (1977).

[28] United Nations Security Council Resolution 1674 (2006), 28 April 2006, paragraph 6.

[29] For a description of the powers and operation of the International Criminal Court see, Steven Freeland, 'How Open Should the Door Be?: Declarations by non-States Parties under Article 12(3) of the Rome Statute of the International Criminal Court', forthcoming in (2006) 75:2 *Nordic Journal of International Law*.

[30] Many commentators combine issues of distinction and military objective into a broader principle known as 'discrimination'. This author prefers to differentiate between these two issues so as to emphasize the need to distinguish between civilians and combatants without reference to sometimes subjective considerations as to what constitutes a military target in the context of military advantage.

[31] Article 48 of Additional Protocol I provides *inter alia* that '[i]n order to ensure respect for and protection of the civilian population ... the Parties to a conflict shall at all times distinguish between the civilian population and combatants'

[32] In his Dissenting Opinion in *Legality of the Threat or Use of Nuclear Weapons*, Judge Koroma pointed out that 'both human rights law and international humanitarian law have as their *raison d'être* the protection of the individual as well as the worth and dignity of the human person, both during peacetime or in an armed conflict.' For a discussion of the links between international humanitarian law and international human rights law, see René Provost, *International Human Rights and Humanitarian Law*, 2002, Cambridge University Press, United Kingdom.

[33] Article 52 of Additional Protocol I provides *inter alia* that '[i]n so far as objects are concerned, military objectives are limited to those objects which by their nature, location, purpose or use make an effective contribution to military action and whose total or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage.'

[34] See, for example, W Fenrick, 'Prosecuting Violations of Combat Limitations' in *Protecting*

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Civilians in 21st Century Warfare: Target Selection, Proportionality and Precautionary Measures in Law and Practice, 2001, Red Cross, Netherlands, 82-83.

[35] On this issue the Court was divided equally, with the casting vote of President Bedjaoui deciding the matter: see Article 55(2), Statute of the International Court of Justice.

[36] See Jackson N Maogoto, 'Weaponisation of Outer Space – From Playground to Battleground: Time to Raise Eyebrows', LLM thesis 2006 (copy with author), 46 and the references therein.

[37] Id, 35.

[38] The White House, 'The National Security of the United States of America', September 2002, 30, http://www.whitehouse.gov/nsc/nss.html (accessed 20 July 2006).

[39] See Sa'id Mosteshar, 'Militarization of Outer Space: Legality and Implications for the Future of Space Law' (2004) 47 *Proceedings of the Colloquium on the Law of Outer Space*, footnotes 1 and 2.

[40] See note 38 above.

[41] Regina Hagen and Jürgen Scheffran, 'International Space Law and Space Security – Expectations and Criteria for a Sustainable and Peaceful Use of Outer Space' in Marietta Benkö and Kai-Uwe Schrogl, *Space Law: Current Problems and Perspectives for Future Regulation*, 2005, Eleven International Publishing, The Netherlands, 273, 273.

[42] United States Department of Defense, *Report of the Commission to Assess United States National Security Space Management and Organization*, 11 January 2001, http://www.defenselink.mil/pubs/spaceintro.pdf (accessed 12 March 2006), p.8.

[43] Ibid.

[44] Hagen and Scheffran, note 41 above, 281-282.

[45] For a discussion of Australia's Space Policy, see Steven Freeland, 'Difficulties of Implementing National Space Legislation Exemplified by the Australian Approach' in Stephan Hobe, Bernhard Schmidt-Tedd and Kai-Uwe Schrogl (eds), *'Project 2001 Plus' - Global and European Challenges for Air and Space Law at the Edge of the 21st Century*, 2006, Carl Heymanns Verlag, Köln, 65-92.

[46] *Treaty on the Limitation of Anti-Ballistic Missile Systems* (*ABM Treaty*), 26 May 1972, 23 U.S.T. 3435. Article V(1) of the *ABM Treaty* provided that '[e]ach Party undertakes not to develop, test or deploy ABM systems or components which are sea-based, air-based, space-based, or mobile land-based': see also Carl Q Christol, 'International Agreements of Unlimited Duration: The 1972 ABM Treaty', (2002) 45 *Proceedings of the Colloquium on the Law of Outer Space* 134.

[47] 'U.S. Speeds up Bomb Delivery for the Israelis', *The New York Times*, 21 July 2006, http://www.nytimes.com/ (accessed 23 July 2006).

[48] See, for example, Iole M De Angelis, 'Legal and Political Implications of Offensives Actions from and against the Space Segment' (2002) 45 *Proceedings of the Colloquium on the Law of Outer Space* 197.

[49] Henckaerts and Doswald-Beck, note 20 above, 70. There would also be adverse environmental consequences (including significant space debris) that may result from the destruction of a satellite. There are, of course, international environmental law principles that would also be applicable in these circumstances.

[50] For a discussion of the difficulties of applying the proportionality principle in the case of the 'high altitude bombing' during the NATO military action in Serbia and Kosovo in 1999, see Steven Freeland, 'The Bombing of Kosovo and the Milosevic Trial: Reflections on Some Legal Issues' (2002) *Australian International Law Journal* 150, 165-168.

[51] For example, a number of States have entered a reservation to Article 57(2)(a)(iii) of Additional Protocol I, which prohibits the launching of an attack where the incidental loss, injury or damage to civilians and/or civilian objects would be 'excessive in relation to the concrete and direct military advantage anticipated': see also Antonio Cassese, *International Law* (2nd ed), 2005, Oxford University Press, Great Britain, 417-420.