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# Soft Law to Regulate Outer SpaceActivities?

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**Abstract**

*The debris-generation Chinese ASAT test in 2007 and the growing threat posed by orbital space debris prompted the international community to reexamine the existing international and administrative framework that regulates military and civilian activities in outer space. This framework is founded on two sets of authorities: "hard law" and "soft law". The hard law space regime consists of legally binding rules, derived from multilateral treaties, such as the Outer Space Treaty, the rescue Agreement, the Liability Convention, the Registration Convention, and the Moon Treaty) and the body of customary international law. But the international community composed of sovereign States could not easily reach new legally binding instruments to govern space activities. That is the reason a variety of non-binding soft law norms have been introduced for these activities.*

## Introduction

Space law cannot operate in isolation to the general rules of the international legal system. By virtue of article 3 of 1967 Outer Space Treaty, States shall carry on activities in the exploration and use of outer space in accordance with international law as well as 'in the interest of maintaining international peace and security and promoting international cooperation and understanding'. In this regard, Ian Brownlie has commented that 'international law, including the principles of the United Nations Charter have become a part of general international law [that] applies in outer space.[*]

Some authors argue that the only way for laws to be real is for them to be set in stone, meaning hard law. For Steven Freeland, the idea of hard law 'evolved from the necessity to establish the fundamental principles that underpin the legal regulation of outer space in a form that was clearly binding upon, and acknowledged as such by, the space-faring nations'[†]As sovereignty claims to space and celestial bodies would remain prohibited, and the Outer Space Treaty would continue to bar the placement in orbit of weapons of mass destruction, hard law provisions would be subject to an interpretive process of harmonization[‡].

The term 'soft law' is often used to denote principles, standards, or arrangements that are vague, ambiguous, and imprecise of a non-legally binding nature considered soft but strikes hard but can significantly influence the behavior of States.[§] The instruments of soft law are flexible and can be concluded quickly through a variety of methods that avoid unfinished debates about controversial key phrases and definitions.Soft law has emergedsimply as international norms when there was a gap in the hard law on how to handle a new issue. One wonders if the soft law characterizes international law by its lack of a binding tool and the absence of legally binding force, and this is exactly the aim of States: not to be engaged in obligations that they cannot fulfill.And since in outer space States need a certain freedom and flexibility, the instruments of the soft law are the best suited.

Regarding space activities, the Space Community seems more sensitive to and compliant with quasi ethical values, embodied by soft law than by legally binding agreementscontaining executive functions or sanctions.

[*] Ian Brownlie, 'The Maintenance of International Peace and Security in Outer Space', 40 British Yearbook of International Law (1964) 1, at 1.

[†] Steven Freeland, The Role of 'Soft Law' in Public International Law and Its Relevance to the International Legal Regulation of Outer Space, in Soft Law in Outer Space: The Function of Non-Binding Norms in International Space Law 16 (Irmgard Marboe ed. 2012).

[‡] Dale Stephens, The International Legal Implications of Military Space Operations: Examining the Interplay between International Humanitarian Law and the Outer Space Legal Regime, International Law Studies 75, Vol. 94 (2018) at 83

[§] Christian Brunner& George Konigsberger, Regulatory Impact Assessment- A Tool to strengthen Soft Law Regulations, in Soft Law in Space, supra note 27 at 90.

Soft law characterizes thatinformal recognition,acceptance, and respect under treaty law by the Space Community as if it is mandatory.

The lack of worldwide acceptance of hard law treaties from most States, in addition to the rapid technological progress and the increasingly commercially competitive nature of space activities have contributed to a move away from the establishment of treaty-based regulations towards soft law guidelines that seem reflecting practice.

This study will examine the legal framework regulating outer space. The weaponization of outer space by States (I) can lead to confrontation necessitating the applicability of law of armed conflicts (III) as a hard law along with outer space treaties (II). If the latter proved to be insufficient, soft law may seem to be the solution. (IV)

**2.Weaponization of Outer Space**

If we ask the question: Why weaponize outer space? The answer can be: Defense. Most States possess terrestrial military to protect themselves. As they cannot be faulted for wanting to protect their citizens and vital interests beyond Earth, and as outer space is unchartered territory States prefer to be prepared for any unexpected hostile confrontation. The weaponization of outer space is progressing despite the peaceful purposes established for its exploration and use in the first legal instrument developed to govern space activities. Fear, suspicion, threats, and hostile acts continue to undermine the status of space as a secure and peaceful territory. In 2012, Russian officials claimed that a Russian satellite had been disables by a secret weapon, presumably operated by the US. And with the United States creating its Space Force and India testing anti-satellite weapons, a real-life space battle is more possible than ever.

The first Gulf War in 1991, was often described as the first space war, even if it did not actually take place in space.But during this conflict, the United States and the coalition forces relied heavily on GPS and other satellite technologies against the Iraqi army.Since then, space resources have further developed, providing new capabilities for land, naval and air forces.

Given the dual (military and civilian) use of many satellites, an armed conflict in space could be catastrophic in today's world.

As there are only five international treaties that are specific to space, none of them contemplates the use of offensive methods aimed at causing destruction or interference by means of satellites. In this chapter we will examine the legal framework regulating space which includes the Outer space treaties and the manuals.

**2.1 Hard Law Treaties Regulating Space**

The concern with hard law treaties is double: not only they are old, but they also lack acceptance by States. The five main treaties on outer space developed by the United Nations Committee on the Peaceful Use of Outer Space (UNCOPUOS) are: Outer Space Treaty (the 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies); Rescue and Return Agreement (the 1968 Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space); Liability Convention (the 1972 Convention on International Liability for Damage Caused by Space Objects); Registration Convention (the 1975 Convention on Registration of Objects Launched in Outer Space) ; and Moon Agreement (the 1979 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies).

It is clear from the above paragraph that the most recent of these five treaties was concluded over 40 years ago. The other concern with hard law is the lack of worldwide acceptance from most States, as many non-space faring States have not signed or ratified any of these key treaties which were the product of many comprises and not an unanimously agreed upon viewpoint.

No text has imagined what it is possible to do today in the field of space warfare. Professor Dale Stephens, one of the major specialists in the matter, mentioned in this regard:*"missiles, weapons with directed energy (including lasers), electronic warfare (exploitation of radio emissions of an adversary) cyberwarfareand some dual-use technologies, such as orbit infrastructure for satellite maintenance*".This meansthat there is a large legal gap to be filled.

The main one (Outer Space Treaty) contains only one provision (Article IV) that directly mentions military activity, prohibiting the disposal of weapons of mass destruction in space. The narrow scope of article IV on weapons of mass destruction arguably leaves gaps in the legal regime governing military activity in space. It fails to address for example, the use of conventional weaponry in space and whether conventional weapons would be subject to the same restrictions enriched in article IV. As a result of the limits of space law, and as international space treaties do not explicitly cover privately owned rockets and satellites, some manuals appeared trying to give a common understanding of the applicable law and laying out what international law says to stop war in space.

**2.2 The Manuals**

For Erika Schneidereit, ambiguities in the application of international space law to military use have not gone unnoticed. In 2016, delegates to the United Nations Committee on the Peaceful Uses of Outer Space noted that more binding international legal instruments were necessary to prevent the placement of weapons in outer space and ensure the use of outer space for peaceful purposes. So, the Manual on International Law Applicable to

Military Uses of Outer Space (MILAMOS)was launched in May 2016.This project aims to develop a widely accepted manual clarifying the fundamental rules applicable to the military use of outer space in peacetime.
Unfortunately, the project was delayed by the withdrawal of the manual from the University of Adelaide, which also decided to undertake its manual own(WOOMERA).Unlike the MILAMOS project, the scope of the WOOMERA manual is narrower in that it focuses only on military space operations. It follows in the footsteps of other international operation law manuals, such as the San Remo Manual on Naval Warfare, Harvard Humanitarian Policy and Conflict Research (HPCR) Manual on Air and Missile Warfare. For the time being, the two projects remain very discreet on their interpretation of current international law to the space context, which pushes us to analyze the application of the law of conflict weapons in extra-atmospheric space.
As for the Tallinn Manual, it is an instrument on the international law applicable to cyber warfare and a non-binding instrument which was published in 2013. It is an exceptional legal tool for jurists because it represents a high-level analysis of the problems of interpretation of the current law regarding new cyberspace issues.
Before the creation of the Tallinn Manual, there was no common reflection on the practical enforcement of international legal norms to cyber-attacks.But this Manual has no legal value and is therefore non-binding.[**]According to Oriane Barat-Ginies, there is currently no international cyber-defense treaty regulating cyberspace, and she wonders whether it is necessary to have one. In fact, each State develops its defense policy and its national strategies by referring to its own legislation. The problem with all these manuals is that they are not officially approved by all States.Hence, the need to legally binding instruments to regulate outer space activities. As the International Law Commission (ILC) concluded that the Law of Armed Conflict is the controlling *lex specialis* during any period of armed conflict, irrespective of the potential applicability of any other legal regime.

**3.The Applicability of Law of Armed Conflict to the Spatial Context**

The warfare in outer space is a new phenomenon that can difficultly be compared with the traditional concept of armed conflict because the methods, means and environment are different.
This international space law has focused primarily on the maintenance of peace in space and only very partially addresses the hypothesis of armed conflicts in space.
However, the applicability of the law of armed conflict also known as the international humanitarian law (IHL), to outer space is a question of fact. In fact, Article III of the Outer Space Treaty, generally deemed to reflect customary law, which provides that States Party to the instrument must use outer space *"in accordance with international law".* Further, the International Court of Justice (ICJ), in its 1986 Nuclear Weapons Advisory Opinion, confirmed that IHL applies to *"all forms of warfare and to all kinds of weapons, those of the past, those of the present and those of the future."* The ICJ did so without proffering any distinction based on the domain of warfare in which hostilities occur or, indeed, the means or methods utilized therein. The International Committee of the Red Cross (ICRC) also followed this position. In its 2019 Challenges Report, the ICRC pointed to the 1949 Geneva Conventions' reference to *"any…. armed conflict"* in Common Article 2 to support its position that IHL would apply directly to armed conflicts in space. So, the fact that traditional armed conflict was developed from traditional warfarerenders the application of International Humanitarian Law (IHL) to the outer space difficult and uncertain.

**3.1 IHL Principles**

Space law does not clearly regulate the spatial dimension of an armed conflict. Thus, the applicability of the law of armed conflicts to outer space is not obvious. The basis of this right resides in the four Geneva Conventions, signed in 1949 at the end of World War II, and their two Additional Protocols signed in 1977. In addition to these texts, it should be noted that an important part of the law of armed conflicts is however recognized as belonging to customary international law and therefore enforceable in all States.
If we observe State's practice, we can see that militarization is an inevitable trend in outer space exploration and use. As there are no specific legal rules applicable to outer space warfare until now, in case of military confrontation in the space, fundamental principles of the IHL should apply. We will examine some IHL principles to check their adaptability to outer space, for example principle of distinction and principle of proportionality.

**3.2-Principle of Distinction**

It is a fundamental principle of IHL which provides that parties to an armed conflict must *"at all times distinguish between the civilian population and combatants and between civilians' objects and military objectives and accordingly shall direct their operations only against military objectives".* In case of an armed conflict in outer space, the application of the principle of distinction would impose a difference of treatment between military and civilian astronauts.
As for astronauts in military spacecraft in outer space warfare are considered combatants and can therefore be legally targeted. However, it is difficult to identify them as the spacecraft move at high speed, while in armed conflict they usually wear distinguished uniforms. Moreover, it will not be easy to know the attack intention.

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Probably only after being targeted, can a party in hostilities be aware of the attack or make a judgement. In space it is hard to distinguish military objects from civilian ones. In fact, as many spacecrafts can be used for either military or civil purposes, it will be difficult to identify whether the spacecraft is civilian or military.

**3.3- Principle of Proportionality**

The principle of proportionality seeks to regulate collateral damage to an attack.That meansits consequences of an attack must not be disproportionate to the concrete and direct military advantage.It has been textualized within Additional Protocol I, which provides the following relevant recitation of the principle under the heading *"Protection of the civilian population".*

One could consider that in the absence of human life directly threatened in space, that would attract a more traditional application of the principle. In this respect, it could be said that a conflict which focuses on targeting unpopulated space objects would already fulfil the aim of minimizing human suffering and would therefore in principle fulfil the notion of proportionality.

In some cases, an attack will be proportional to the military objective even though it would result in the destruction of the satellite because the military objective would be so important that it would justify it. The damage that would result from this attack, whether it be damage to the civilian population or the creation of space debris, will appear as collateral damage of a legitimate objective.

Article 58 of the 1977 Additional Protocol to Geneva Conventions requires parties to the conflict to take necessary precautions to protect civilian population, individual civilians, and civilian objects under their control against the danger resulting from military operations. In outer space warfare, space forces often provide information support to military operations and they usually be attacked by surprise. So, how can parties take precautions such as giving advance notifications or evacuating civilians before attack.

The above reasons set considerable challenges to the application of the IHL in outer space warfare. Which means for some scholars that the existing international humanitarian law is not clear enough to guide and regulate outer space warfare.

According to Ling JIE, the international community does not have a unified legislature, and international legal rules regulating outer space can only be formulated by sovereign States reaching agreements. However, the ability of military exploration and use of outer space varies greatly from country to country. Based on their realistic needs that can differ, State's interpretation varies regarding international humanitarian law principles, which makes it difficult to come to an agreement. Under such context, soft law can be useful by conference resolutions or declarations. These documents can lack legal effects on parties in international armed, however, they can be helpful to the final formation of international humanitarian norms.

**4.Soft Law in Outer space**

Any concept of soft law should be analyzed and discussed as to its value, in particular in space law, where international treaties, the instruments most clearly transforming 'non-law' into 'hard law' from one moment to another, are relatively rare.

The debris-generation Chinese ASAT test in 2007 and the growing threat posed by orbital space debris prompted the international community to reexamine the existing international and administrative framework that regulates military and civilian activities in outer space. This framework is founded on two sets of authorities: "hard law" and "soft law". The hard law space regime consists of legally binding rules, derived from multilateral treaties, such as the Outer Space Treaty, the rescue Agreement, the Liability Convention, the Registration Convention, and the Moon Treaty) and the body of customary international law. But the international community could not reach new legally binding instruments to govern space activities. That is the reason a variety of non-binding soft law norms have been introduced for these activities. According to Marco Ferrazzani,:"*Whatever the history of space law may tell, soft law is already there, non-legally binding but vital, helping significantly in the establishment and the development of international space relations*." He adds, " *Soft law is thus a long established, vital component of space law regime and there is an increasing tendency of international community to rely on soft law instruments to assist in numerous areas of space activity*."

That process would allow States, hesitant at the outset to commit to such clear-cut treaty obligations, to start out accepting merely political obligations which are not yet fully elaborated and/or not legally binding, such as by way of an UN General Assembly resolutions. As a matter of fact, space law has provided us with a very interesting example of this process, in the field of space debris and efforts to mitigate its generation and deleterious consequences. The process started on a completely non-legal level, with major space agencies in the context of the Inter-Agency Space Debris Coordination Committee (IADC) agreeing in 2002 on a political practical level to essentially start conducting their respective space operations in a manner less conducive to the generation of harmful space debris.

As a next step, the United Nations, almost as the official representative of the international community of States but of course still without binding legal effect, by officially recognizing the validity and value of the IADC

document in the United Nation General Assembly resolution of 2007, elevated these practical guidelines to what should probably be called a "soft law' status.

Since the beginning of the year 2000, China and Russia have been proposing to the Disarmament Conference the concept of international treaty prohibiting the deployment of weapons in space. In January 2007, China managed to destroy one of its old satellites in orbit by means of a missile launched from its territory. This test inspired the European Union to develop a soft law instrument, called a Code of Conduct to promote more responsible behavior in space, which was the right step forward to ensure more responsible, since 2008 for all space activities.

However, the Mitigation Guidelines, along with other soft law, do not define or, indeed, address the issue of fault under article 3 of theTreaty on Principles Governing Activities of States in the Exploration and Use of Outer Space, when damage is caused by a space object in outer space, even impliedly. Rather, programs and soft law, such as space situational awareness(SSA) and the Mitigation Guidelines, increase the regulation of space and, thus, create greater awareness in relation to the operation and control of space objects.

For Christian Olarean, the process associated with developing soft law has been described as a faster and an easier alternative for States to address shared problems and overcome political obstacles. We can explain the ease with which States are able to use soft laws instruments is the flexibility afforded by soft law, an attribute that some authors also suggest is particularly useful for dealing with the challenges of space.

Some authors suggest that soft law initiatives should be embraced as 'a key building block for norm-setting and regulation of the outer space environment'. Beatrice Fihn, suggests that soft law *"can help define responsible activities and set out agreed norms of behavior when legally binding agreements cannot be reached."*

**4.1Advantages of soft law instruments**

The soft law instruments have many advantages:

1-Set forth various technical standards, guidelines or regulations that can lead to harmonized international procedural standards that in turn may generate legally binding domestic legislation. In the area of space law, such soft law procedural initiatives have clearly served as an incentive for States to create coordinated national space legislation and regulations. A good illustration for such a role is that one played by the 1986 UN General Assembly Resolution on "Principles Relating to Remote Sensing of the Earth from Outer Space". Although this resolution is non-binding, its principles are widely accepted and have been incorporated in the legally binding domestic licensing regulations of numerous States.

2-In their seeking to frame new norms of cooperation, they may later form the basis of legally binding international agreements. This had clearly appeared in the early era of space exploration when several key principles set forth in non-binding UN General Assembly Resolutions were subsequently codified in legally binding multilateral agreements governing activities in the space. For example, the foundational "non-appropriation principle", barring States from claiming sovereignty over outer space and celestial bodies, was first expressed in a UN General Assembly Resolution in 1961 and subsequently formed the basis of article II of the Outer Space Treaty.

However, the choice of soft law for arm control initiatives is problematic as it is not well equipped to address security issues in an unstable geopolitical environment. For Jack M. Beard, the benefits of hard law regimes and disadvantages of soft law instruments in the field of arms control are compelling. That is the reason behind the agreement of many experts that hard law approach is ultimately needed to deal with the greatest challenges confronting the international community in outer-space, and that soft law is not enough to deal with more and more complicated space activities.

The United Nations Legal Subcommittee has not been making new binding laws, as many countries do not support the creation of new treaties on this matter. Instead, it established the following mains sets of principles, considered as a type of soft law:

1-Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting.

2-Principles Relating to Remote Sensing of the Earth from Outer Space.

3-Princciples Relevant to the Use of Nuclear Power Sources in Outer Space.

4.Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States, Taking into Particular Account the needs of Developing Countries.

The European Space Agency and the US, inter alia, have incorporated some of these policies into their national acts.

Always-changing technology can only be handled by soft law. In fact, when the five main treaties were established, it was not easy to predict where future technology would lead. For instance, the 1967 Outer Space Treaty was not sufficient to future. As our normative thinking is continually changing and gradually emerging within legal process, new principles may arise which might even be contrary to these enumerated in the 1967 Outer Space Treaty So, because of the continuously changing technologies and the increasing numbers of new actors in space, States prefer not to adopt more treaties.

**5. Conclusion**

Space law is that body of law regulating objects and activities beyond the Earth's atmosphere. It emerged initially as a subject of international law, consisting primarily of international treaties that govern the behavior of States actors in peacetime.

The five UN Space treaties do not contain any provisions regarding their applicability in time of war. The question is therefore whether these texts create an objective situation making them applicable even in times of armed conflicts.

If a part of the doctrine is in favor of this approach, for Professor Marcoff for example, these treaties only apply to peaceful space activities and would therefore be suspended between belligerents in the event of an armed conflict.[††]In the event of warfare, the legal system established by Outer Space Treaty will no longer be valid. The State, which is the victim of an armed attack, will be able to respondby all means available on land, in the seas, in the air and also in space.

To adapt the texts of space law to new security issues, numerous soft law initiatives have been presented.

The most recent and significant are the guidelines for the reduction of space debris, prepared at the initiative of the main space agencies (within the framework of the Inter Agency Space Debris Committee -IADC), then approved by COPUOS and adopted by the UN General Assembly at the end of 2007.But above all two projects aimed at fighting the weaponization of space and the threat of proliferation of debris by deliberate destruction of satellite.

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