

OST, LIABILITY PRINCIPLES AND LAUNCH FROM INTERNATIONAL DOMAIN: RESOLVING A NEW TWIST IN THE TAIL

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ABSTRACT

According to OST, the liability for damage by the spacecraft or its component parts rests upon each State that launches or procures the launching and from whose territory or facility an object is launched. Today, in the case of a private launch from an international domain, the launch is but procured by a private entity and the territory used is not that of any State but is situated at an international location thereby complicating the determination that which state is the launching state. However, Art. VI of the OST intentionally imposes a strict liability regime, rather than subjective responsibility, on the launching states for the reason that the treaty prohibits any space activity by a non-governmental entity unless it is authorized and continually supervised by that state. Indeed, prior state 'authorization' is a *sine qua non* if the launch of the object is to proceed and this process places the State in a position to ensure to its subjective satisfaction the safety of the launch process. By licensing, the state proclaims the space activity to be impregnable and the spacecraft to be fit for human flight. Nevertheless, damage is inflicted, the paper argues, the State under whose license the activity was advanced, shall be held liable.

INTRODUCTION

Since inception, law has acted as a mirror reflecting societal changes and needs. As law changes to reflect other changes in our society, international space law, as a *subset* of international law, needs to expand and change as the activities that it oversees expand and change owing to innovation in technology. A majority offers significant credit to the space race between the erstwhile Soviet Union and the United States, which they acclaim, spurred outer

space law.¹ It is unequivocal that it was the technological innovation in space sciences and the quest to outbid each other between the two strong economies, which sparked development of international law of outer space. As a matter of fact, it was not the first

¹ Richard Berkley, Comment, *Space Law Versus Space Utilization: The Inhibition of Private Industry in Outer Space*, 15 Wis. Int'l L.J. 421, 421-22 (1997) (explaining space law resulted from conflict among nations and designed as public law regime).

instance that technology paved the way for legal reasoning. Technology has been ubiquitous in development of international law and indeed, forced the reappraisal of one of the oldest Law of the Sea doctrines when owing to innovations in fishing technology and invention of modern ships, the 3 nautical mile sovereign limit was realized as inadequate and consequently the territorial sea breadth was increased to 12 miles. However, after the initial thrust of treaty law formation in the sixties and seventies no significant legal development encouraged the progressive development of international law of outer space. The most concrete liability principles and the definition of 'launching state' of that age are the most vulnerable provisions of today capable of being flouted by the private space industry. This paper attempts to reconcile the existing principles of liability in space law and proposes that 'licensing state' may be held responsible in case of a damage arising out of a launch carried out by a private agency from an internationally located territory.

I. TECHNOLOGY INNOVATION AND FORMULATION OF CORPUS JURIS 'SPATIALIS'

Space law is unique in that it is likely the first time in history that states will generally draft domestic policies based on international norms rather than the reverse.² As of now, there are only few nations which have developed excellence in space technology and thus when most states first adopt international space agreements, they will have neither a space program nor any legislation concerning space exploration. This peculiar paradigm nurtured by technology has led to the development of the body of modern law that is considered to

² Porras, *The "Common Heritage" of Outer Space: Equal Benefits For Most of Mankind*, 37 Cal.W.Int'l.L.J. 143,146

govern space law and consists of five international treaties. This *corpus juris spatialis* includes: the Outer Space Treaty (OST), the Rescue Agreement, the Liability Convention, the Registration Convention, and the Moon Treaty. These five treaties, complemented by five principles, are regarded by most as the controlling authority for human activities in outer space. The principles of the *corpus juris spatialis* involve new commitments to international cooperation in order to achieve a shared vision of space exploration.

The OST is the most significant of any because it created the framework from which all international space law is derived. The treaty recognizes the common interests of all people in the peaceful exploration and use of space; that it should benefit all despite economic or scientific development. The Rescue Agreement expands on Article V of the OST and clarifies the duties owed to stranded astronauts and governments trying to recover errant technology. The Registration Convention provide for the State with which the space object is registered to retain jurisdiction and control over the space object. The Liability Convention requires that launching states shall be absolutely liable to pay compensation for damage caused by its space object on the surface of the Earth or to aircraft flight.

When the man made its maiden steps on the moon, a wave of anxiety prevailed all over apprehending illegal expropriation of property moon by the space faring nations. The Moon treaty enacted in 1979 proved to be the dimmest of the stars in the five star space law constellation and is meant to govern activities on the Moon so that all states will have equal "use of the moon and other celestial bodies," today and tomorrow, and to ensure that the Moon remains free

from international conflict. The Moon Treaty has not been ratified by the United States and has subsequently received scant recognition.

II. ADVANCING TECHNOLOGY & STAGNANT LAW: FUTURE RECOURSE

The dawn of the 40th Anniversary of the OST realizes that the quandary with space is that technology changes so rapidly - the law can barely keep up. Although, technology seems to develop by leaps and bounds, development of international space law has been nearly stagnant. The international space law has failed to regulate the activities of the commercial industry since the five treaties address only timely issues such as the protection of astronauts and the liability of nations active in space, rather than including future considerations of space use.³ Few of the imminent concerns which require immediate attention include the following:

A. The Space Tourism Industry

The drafters of space law treaties did not contemplate tourism in outer space as an industry requiring international legislation.⁴ The U.N. treaties exhibited the global belief that human space travel and tourism were far-fetched realities. Quite interesting is the fact that U.N. member states believed that

³ David Tan, *Towards a New Regime for the Protection of Outer Space as the "Province of All Mankind"*, 25 Yale J. Int'l L. 145, 156-160 (2000)

⁴ Michael Wollersheim, *Considerations Towards the Legal Framework of Space Tourism* (Apr. 1999) (addressing concerns of national liability and private activities in outer space), at http://www.spacefuture.com/archive/considerations_towards_the_legal_framework_of_space_tourism.shtml.

the use of space in the future would extend only to efforts by nations or international non-governmental organizations sending equipment and trained astronauts into space for the purpose of exploring and conducting scientific research. Technological advances today allow nations and private companies to expand their once narrow views of the commercial uses of space. Civilian space travel is a modern reality and the creation of lunar colonies catering to the space tourism industry is one of the many plausible prospective ventures. International legislators must create a foundation to which outer space investors and nations can look for legal guidance when considering modern ventures into space.⁵ The establishment of new legislation dealing with civilian space travel is vital because current laws fail to adequately address possible issues of civilian space travel and development.

B. Property Rights in Space

The primary flaw of established outer space law is the failure to establish an internationally acceptable view on proprietary rights in space. Although the OST provides a basis for the idea of sovereignty in space, it forbids appropriation of outer space resources and therefore, in view of the space faring nations, hinders development in space.⁶ Without legal authority to appropriate property or other matter in outer space, nations and private investors must wait for the creation of international laws providing them with the authority to use the resources of outer space. The unpopular Moon Agreement

⁵ Ezra J. Reinstein, *Owning Outer Space*, 20 Nw. J. Int'l L. & Bus. 59, 61 (1999)

⁶ Ty S. Twibell, *Space Law: Legal Restraints on Commercialization and Development of Outer Space*, 65 UMKC L. Rev. 589, 592 (1997)

supplements the notion of sharing the resources of outer space because it states that the moon is unavailable for national appropriation or monopolization of any kind.⁷

Whereas legislation specifically outlining the property rights on the moon's surface has become an imminent need as after the death of the Moon treaty, the fact remains that space-faring nations will not accept non-appropriation on Moon owing to its invincible commercial potential.

Widespread international desire for lunar property is the primary reason for the low number of signatures to the Moon Agreement.⁸ Nations with established space agencies and technological backing are aware of their capability to create lunar settlements and investment opportunities on the moon's surface. Those nations are unwilling to sign an international treaty denying them the right to extend their reaches to the moon. Developing nations view the Moon Agreement as a means for participating in outer space ventures and receiving benefits of the moon and its resources. To bridge the gap between these differing views, newly drafted space laws must clearly declare the opportunities that are assigned to all nations.⁹ Nations lacking resources to participate in the space tourism

⁷ Berkley, *supra note* 1, at 430 (comparing motives of Outer Space Treaty and Moon Agreement).

⁸ Marko, Marko, *A Kinder, Gentler Moon Treaty: A Critical Review of the Current Moon Treaty and a Proposed Alternative*, 24 J. Nat. Resources & Envtl. L. 293, 298-99 (1993), at 308-09 (noting general international resistance to Moon Agreement).

⁹ Reinstein, *supra note* 5, at 98 (proposing content of new space laws).

industry must be offered, by an organized scheme, a continued opportunity to learn from the more advanced nations.

III. LIABILITY PRINCIPLES & LAUNCH FROM INTERNATIONAL DOMAIN

A. Identification of the Problem

According to the Outer Space Treaty (OST) and the Liability Convention, the liability for damage by the spacecraft or its component parts rests upon each State that (i) launches or (ii) procures the launching of an object into outer space and on each State from whose (iv) territory or (vi) facility an object is launched.¹⁰ Today, in the case of a private launch from an international domain, the launch is but procured by a private entity and the territory used is not that of any State but is situated at an international location thereby complicating the determination that which state is the launching state. Consequently, this has presented insuperable obstacles in determining the 'launching state' and resting liability.

It is worthy to note that while defining the "launching state", the Outer Space Treaty as well as the Liability Convention confers a special status to the state whose *territory* is used for launching the spacecraft because the other three criteria can easily be chosen by a private company according to its convenience, which may be, in truth, to defy the liability principles. The drafters of the Outer Space Treaty did not contemplate such a situation and therefore the treaty fails

¹⁰ Art. VII, Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Bodies, Jan. 27, 1967, 18 U.S.T. 2410 ; Art. I(c), Convention on International Liability for Damage Caused by Space Objects, entered into force Oct. 9, 1973, 24 U.S.T. 2389.

to address such keen issues of current day importance.

B. Possible Challenge to the Definition of 'Launching State'

The growth of the Sea Launch Company, a multinational consortium of companies from USA, Norway, Ukraine and Russia has projected a suitable example of "how technology can outbid law?" This commercial venture launches from a mobile sea platform placed at equator. The advantage of launch from equator are many and includes elimination of the need for a "plane change" to the zero degree inclination of geostationary orbit thereby providing a major extra launch boost and reduced fuel costs. This launch from international domain possesses the viable potential to disregard the liability principles of space law which count territory of launch as a major criteria to impose liability.

Although the United States had itself taken the initiative earlier, and obliged Boeing CSC, as the largest shareholder in Sea Launch, to apply for a license under the US Commercial Space Launch Act, possibility of formation of a consortium in future to flout the definition of a launching state cannot be denied. Thus a hypothetical situation where a Company C launches a satellite of Country A from a launch platform situated at high seas utilizing the facility of Country D eventually causing damage to a third party during launch. The role and liability of Country B under whose license the launch proceeds can be an issue worth examining.

C. Liability and the Licensing State

It is a general principle of international law that States can only act through agents and

representatives.¹¹ However, in deviation from the general doctrine of state responsibility, under the terms of Article VI of OST, states are responsible to the same extent for private activities as they are for public activities. But substantially, it would be the malady of law and justice if an innocent less developed state is held liable for damage owing to the launch from international domain carried out by its national-a Multinational Company, incorporated in that state only to flout legal provisions.

Where the launch is carried out by a private entity and the territory used is not that of any State but is situated at an international location, the given definition of the launching state stands inapt to determine liability of the parties. To resolve this incongruity, rules of treaty interpretation shall be resorted to. This Court has applied customary rules of treaty interpretation in numerous cases to ascertain the *intent* of the parties to the treaty.¹² The Commission and the Institute of International Law¹³ have taken the view that what matters is the *intention* of the parties as *expressed in the text*, which is the best guide to the more recent common intention of the parties. A corollary of the principle of ordinary meaning is the *principle of integration*: the meaning must emerge in the context of the treaty as a whole¹⁴ and in the light of its

¹¹ *Questions relating to settlers of German Origin in Poland*, (Ad.Op.), PCIJ, 1923, 22; Oppenheim, *International Law*, (Jennings & Watts) Longman, 9th ed., 1996, p 540.

¹² Oppenheim, *ibid*, pp. 631-632, 1269-1282.

¹³ Commentary of the International Law Commission on the Final Draft Articles, (1966) 2 *Yearbook* of ILC 172, pp. 187-274.

¹⁴ Art. 31(1), Vienna Convention of the Law Treaties (VCLT), 1969, 1155 UNTS 331,

object and purposes.¹⁵ This Court affirmed these principles in the *Libyan Arab Jamahiriya/Chad case*¹⁶, where the International Court of Justice looked to the preamble of the treaty to ascertain the convictions of the parties, and thereby interpret the treaty in light of its object and purpose.

Indeed, Art. VI of the OST intentionally imposes a *strict liability regime* on the launching states for the reason that the treaty prohibits any space activity by a non-governmental entity unless it is authorized and continually supervised by that state. Thus the intention of the parties as expressed in the text may be read to convey that where a private entity launches a space object, the State under whose license such activity is authorized is held liable in case of any damage arising out of or during such launch.

entered into force on Jan. 27, 1980; *Competence of the ILO to Regulate Agricultural Labor*, 1922 PCIJ (Ser. B) Nos. 2 and 3, p. 23; *Free Zones Case*, 1932 PCIJ (Ser. A/B) No. 46, p. 140; *US-France Arbitration, Case Concerning the Air Services Agreement of 27 March 1946*, 18 RIAA 417, p. 435; 54 ILR 304, pp. 328-329.

¹⁵ Art. 31(1), VCLT; *Case Concerning Rights of Nationals of the United States of America in Morocco*, 1952 ICJ Rep 176, pp. 183-4, 197-8; *Case Concerning Sovereignty over Pulau Ligitan and Pulau Sipadan (Indonesia v. Malaysia)*, Judgment of Dec. 17, 2002 as available on <http://www.icj-cij.org/icjwww/idecisions.htm>, as accessed on 6th Jan., 2005, 18.10 hrs., ¶ 37, 49-52; *LaGrand Case*, 2001 ICJ Rep. 102.

¹⁶ *Libyan Arab Jamahiriya/Chad Territorial Dispute (Libya v. Chad)*, 1994 ICJ Rep. 21, pp. 25-26 (Feb. 3, 1994)

As a fundamental principle of customary law,¹⁷ States must comply with their treaty obligations in good faith.¹⁸ *Pacta sunt servanda*,¹⁹ the golden rule of treaties, decrees that “every treaty in force is binding on the parties to it and must be performed by them in good faith.”²⁰ The *UN Charter* reiterates this principle, stating “[members]...shall fulfill in good faith the obligations assumed by them.”²¹ *Parties to a treaty should not exploit the terms of a treaty to reach an unjust advantage over another party, but instead should carry out*

¹⁷ Oppenheim, *supra* note 11, p. 1206; Cheng, *General Principles of Law as Applied by International Courts and Tribunals*, Cambridge, 1994, p. 113; Watts, *The International Law Commission* 1948-1998, Vol. II, Oxford, 1999, p. 667.

¹⁸ Art. 26, VCLT, 1969; Oppenheim, *supra* note 11, p. 38; E. Zoller, *Bonne Foi en Droit International Public*, Paris, 1977; R. Kolb, *La Bonne Foi en Droit International Public*, Paris 2000; Thirlway, ‘Law and Procedure of the ICJ (Part One)’, p. 3; Fitzmaurice, G., *The Law and Procedure of the International Court of Justice*, Cambridge, 1986, Vol. I, p. 183 and Vol. II, p. 609; Schwarzenberger, George, *A Manual of Public International Law*, 5th Edn., Sweet & Maxwell, London, 1967, p. 147.

¹⁹ Art. 26, VCLT, 1969; Art. 23 of the ILC Final Draft, 1966, 1966 (II) YBILC 210-11

²⁰ Brownlie, I., *Principles of Public International Law*, Oxford, 6th Edn. 2003, p. 616; Mc.Nair, *Law of Treaties*, Vol. I, Chap. 30; *AMCO v. Republic of Indonesia*, 89 ILR 366, pp. 495-7; *Nuclear Test Cases (New Zealand v. France)*, 1974 ICJ Rep. 473 (Dec. 20, 1974).

²¹ Art. 2, The Charter of United Nations, (Ratified on Oct. 24, 1945) as available at <http://www.icj-cij.org/icjwww/ibasicdocuments/Basetext/istatute.htm>, as accessed on 2nd Jan., 2007, 10 hrs.

treaties fairly, honestly and in the way that all parties mutually intended. One of the basic principles governing the creation and performance of legal obligations, whatever their source, is the principle of good faith; trust and confidence are inherent in international cooperation, in particular in an age when this cooperation in many fields is becoming increasingly essential.²² Thus States must accept international liability where it stands clear that it was under their license the spacecraft causing damage was launched.

D. The licensing State should be held liable

Under article VI of the OST, a nongovernmental agency performing space activities must be licensed by its government because that government is legally responsible for space activities.²³ To confirm to the Article VI obligation of 'authorization and continuing supervision', many space faring nations of the world have enacted domestic legislations, *inter alia*, regulating authorization through a very strict and comprehensive licensing procedure.

The Commercial Space Launch Act, 1984 (CSLA)²⁴ of USA, which has been a model law for domestic space regulations/legislations of numerous nations, *inter alia*, established a broad regulatory regime for the licensing, and regulation of

all commercial launches from the territory of the United States as well as all launches conducted by US citizens outside the United States. The license review process essentially involves two phases: mission review and *safety review*.²⁵ Safety review, the second part of the licensing process, encompasses a scrutiny of all minute aspects pertaining to the safety of a proposed launch.²⁶ This review procedure examines "the efficacy of the proposed safety operations to support safe preparation and launch of a launch vehicle and any payload". If the launch occurs at a privately operated launch range, then the applicant is required to provide a much more detailed file in order to prove to OCST that safe procedures are being followed.²⁷ In this case, applicants must demonstrate the capability and resources for safely conducting the launch. Prior to issuing approval, a comprehensive review of the applicant's proposed safety program must be performed.

It is evident that the grant of the license, as in the case of the private launch, is a *sine qua non* if the launch of the object is to proceed, the comprehensive process of authorizing and supervising the private launch activity places the State in a position to ensure to its satisfaction the safety of the launch process.²⁸ By licensing, the state proclaims the space activity to be impregnable and the spacecraft to be fit for

²² *Nuclear Test Cases (New Zealand v. France)*, 1974 ICJ Rep. 473, p. 488 (Dec. 20, 1974)

²³ Morris D. Forkosch, *Outer Space and Legal Liability*, 47 (1982); Sherri R. Malpass, *Legal Aspects Of The United States/International Space Station*, 14 Hous. J. Int'l L. 183 (1991)

²⁴ Commercial Space Launch Act, 49 U.S.C. app. § § 2601-2623 (1991)

²⁵ 14 C.F.R. § § 411.5, 411.7, 415.11-.31 (1991).

²⁶ 14 C.F.R. § § 411.5(a), 415.11-.17 (1991).

²⁷ 14 C.F.R. § 411.5(a)

²⁸ John B Gantt, *Space Law and the Expanding Role of Private Enterprise, with Particular Attention for Launching Activities*, 5 Sing. J. Int'l & Comp. L. 48 (2001)

human flight. Nevertheless, damage is inflicted, the State under whose license the activity was advanced, shall be held liable.

IV. NEED OF DOMESTIC LEGISLATIONS-A LAST WORD

It is but a truth that the future of human kind in space cannot be envisioned within the realms of decades old *corpus juris spatialis* where innovation in technology is persistent with a great pace. Where technology is taking giant leaps for mankind every day, mankind needs to take equally sufficient steps in moulding the law according to the futuristic needs.

In response to the boom in commercial satellite launch market, there is a sizable rise in the number of commercial launch vehicles, and potentially, new privately

operated spaceports from which to process and launch them. Companies, enticed by commercial competition, tend to escape from any real state control by choosing a nationality of convenience for the company, a flag of convenience for the ship (in the case of a sea launch) and connecting links with advantageous 'launching', 'appropriate' and 'registration' states. Security and control will be at stake if States devoid of any space technology or capacity are chosen as unique launching states.

In view of the above, there may arise concrete factual situations desiring one or more specific amendments to the Space Treaties. Meanwhile, it is argued, the efforts of States parties should be directed to enact apposite municipal laws to implement the current Space Treaties, particularly Articles VI and VII of the OST.