

STATE RESPONSIBILITY UNDER SPACE LAW

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I. INTRODUCTION

Space law grew as an adjunct of international law and has metabolized rather fast. It has since metamorphosed into an independent and auto-poietic system¹ having nexus and linkages with other sub-systems of cognate legal regimes² and international law jurisprudence. As a result, it is today, a well-developed, mature and independent branch of law despite its being nascent. It has adduced a small corpus of total five international instruments comprising a treaty, two conventions and two agreements and a part of it has assumed the status of customary space law. Besides these obligatory instruments, it has accumulated a clutch of soft law comprising principles, guidelines and a declaration.³ To this list, International Codes of Conduct that are in draft or negotiation stages can also be added. This makes a respectable means for regulating human activities in outer space, including celestial bodies.

The primary document of 'positive space law' is the Outer Space Treaty⁴, often reverentially referred to as the *Grundnorm* of space law. The importance of this Treaty is enhanced by the fact that this has evolved from a United Nations resolution adopted by the General Assembly as "Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space."⁵ This is the beginning of the progressive development and codification of international space law (ISL) which delineates the responsibility of states *qua* their activities in the outer space and on celestial bodies.

Space domain is an inhospitable environment to which humans are neither genetically adapted nor bodily acclimatized. Further, activities in outer space are inherently hazardous and highly risky whether it is space walk or in-orbit satellite repairs or jumps with space parachute. Therefore, independent and self-reliant space activity, in isolation, may be beset with imponderable risks. Recognition of conscious state responsibility towards space activities thus becomes incumbent. This Article purports to list out and define such responsibilities that become binding on the states by direct mention, allusion or implication.

II. STATE RESPONSIBILITY UNDER CODIFIED SPACE LAW

A. *The Nature of Space Law*

From primordial times, outer space has been governed and regulated by the rule of God, laws of nature, and the principles of astro-physics. In fact, the necessity of international

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¹Anthony D'Amato, "International Law as an Autopoietic System" in Rudiger Wolfrum and Volker Robens (eds.), *Developments of International Law in Treaty Making* 335-399 (Springer, Berlin, 2005).

²For example, regimes for Antarctica, High Seas, *et al.*

³These instruments will be mentioned as relevant with full citation.

⁴Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, 1967. Adopted as General Assembly Resolution 2222 (XXI), annex, on December 19, 1966, opened for signature on January 27, 1967 and it entered into force on October 10, 1967. It has variously been referred to in this Article as Outer Space Treaty or, in short OST.

⁵This General Assembly Resolution XVIII of 1962 was passed on December 13, 1963.

space law arose only to regulate conduct of human activity and operation of human-made objects in outer space. Thus, the primary purpose of ISL has been proper governance to ensure peace and order by informing of normative behaviour and regulating human activity within prescribed limits. A Spanish proverb succinctly sums up this wisdom that, 'it is not the fence that protects the orchard but the fear that goes with it and the respect that society accords'. Thus, this element of perceptible fear and normative reverence is imparted and instilled by the law. If it so happens, then the law has substantially achieved its purpose of protection and consequently safety and security would seem well assured.

By corollary, this principle can be safely extended to outer space where this *specialibus law* performs a vital function by its proclamations of permitted, prohibited and regulated activities. It, thus, defines the nature of activities in outer space and stipulates norms of human conduct in relation to this domain. Hence, space law seems to govern and promote public order in outer space. By and large, this specific law has succeeded in achieving this task within the outer space and from outside. The corpus of space law is a few treaties and mostly comprises of soft law. A serious study of this subject uplifts a sense of altruism reflected in the concepts of responsibility and cooperation, among space-faring nations and between signatory countries, enshrined in this law that would assure survival of humanity and has substantially improved quality of life of mankind on the earth and in outer space.

In principle, every human activity in every field needs law, not to curb freedom but to regulate its operation to make it amicable and compatible with the same or similar rights of the others. A legal doctrine, '*summum jus, summa injuria*', broadly meaning that absolute right may cause great injury, implies the need for reasonable restrictions on enjoyment of any right so that it is equally exercised by all. In other words, regulation and not restraint is in the best interest of all, because rights have correlatives in duties, for our purpose responsibilities, and both must coexist for the benefit of all, that is provided to all. In a way, cooperation and responsibility constitute the core fundamentals of space law.

B. The Need for Human Order in Outer Space

It is wisely said that, 'scattered and disorderly notes of sound make cacophony but the same notes put in some proper order compose a good symphony'. Same way, a house in disarray looks a mess and may lead to accidents but when put in proper order makes it a snug home full of warmth and congeniality. To conclude the analogy, proper order to human actions makes for good life and cultured living. In analogous vein, in the outer space domain, despite the laws of nature, human activities with launched satellites and other artificial objects can be disorderly and unregulated and could surely make a recipe for disaster. Whereas, good governance and public order in outer space can certainly lead to human advancement, sustained growth, better welfare and good living in the larger interest of humankind.

C. Regulation Prior to OST

Pre-OST era was the period of cooperation between the two space-faring states voluntarily appreciating a sense of reciprocal responsibility, when treaty law did not exist. At that stage, the UN assumed responsibility and arrogated authority to regulate activities in the outer space under Article 1 (4) of the UN Charter, which enjoins that the UN shall be a nodal centre for harmonizing the actions of nations in the attainment of common ends and peaceful

objectives. In pursuance to this mandate, the General Assembly took upon itself, under Article 13 of the Charter to initiate studies, ‘encouraging the progressive development of international law and its codification’⁶ relating to the outer space.

The UN General Assembly, thereafter, became active to pass Resolutions that established principles of non-appropriation in outer space and celestial bodies, freedom of exploration, extension of international law and applicability of the Charter of the UN as well as the Statute of the International Court of Justice to regulate human activities and artificial objects in outer space.⁷ As part of its efforts in this direction, the General Assembly, within the framework of the UN, constituted an international body for cooperation in the study of activities in the outer space that is now called the Committee on the Peaceful Uses of the Outer Space, in short, COPUOS.⁸ The importance of cooperation among states is boldly underscored here.

The next important stage in the evolution of space law dawned with the General Assembly, adopting by acclamation,⁹ ‘The Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space’.¹⁰ The Declaration enunciated nine cardinal principles, which later got embodied in the Outer Space Treaty of 1967¹¹. One of the fundamental principles underlying the Declaration, *inter alia*, was and continues to remain state responsibility. This principle finds copious references and due emphasis in the total gamut of space law spread over treaty law, agreements, principles and guidelines promulgated by the UN.

D. State Responsibility under Outer Space Treaty

State responsibility is rather definitive and expansive under space law. To begin with OST, which provides a general legal framework for the scientific exploration and peaceful uses of outer space. The specific provision relevant to international responsibility is contained in Article VI. The text of the Article reads, “States Parties to the Treaty shall bear international responsibility for national activities in outer space, including the Moon and other celestial bodies, whether such activities are carried on by governmental agencies or by non-governmental entities”. This means that corporate sector and other private ‘astropreneurs’ are permitted to undertake legitimate space activities.

The next element of responsibility under space law mandates an assurance “that national activities are carried out in conformity with the provisions set forth in the present Treaty”.¹² It means that activities which are not scientifically exploratory or that, where the use of outer space or celestial body is neither peaceful nor in the benefit of mankind would be contrary to the Treaty. Further in elaboration, the Treaty permits exploration but not exploitation and least of all for private appropriation and personal profit in contravention of the interest and benefit of all countries.

⁶ Ogunsola O. Ogunbanwo, *International Law and Outer Space Activities* 11 (Martinus Nijhoff- the Hague, 1975).

⁷ General Assembly Resolutions 1148 (xii) of 1957 and 1721 (xvi) of December 20, 1961.

⁸ General Assembly Resolution 1348 (xiii) of 1958.

⁹ Adopted on December 13, 1963. *Supra* note 4 at 14.

¹⁰ General Assembly Resolution 1962 (xviii) of 1962.

¹¹ Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, 1967 (or, the Outer Space Treaty, 1967).

¹²*Id.*, art. VI.

The third element of state responsibility relates to, space activities by private enterprise in the form of public-private partnerships and individual ventures by billionaires and corporate conglomerates that are gradually filling the widening hiatus created by withdrawal of state patronage. These are the private actors in space activities in respect of whose conduct, there is no clarity in law but all the same respective states are bound to bear responsibility for their acts. In order to properly discharge this responsibility, the State may have to regulate and supervise their activities by a specific domestic legislation or modulation of national statutes to ensure that space industry gets impetus and still causes least of injury to third party or, infringement of space laws resulting in consequential international liability.¹³

Therefore, space law specifically requires that, “The activities of non-governmental entities in outer space, including the Moon and other celestial bodies, shall require authorization and continuing supervision by the appropriate State Party to the Treaty”¹⁴. The term, non-governmental entities, connotes a broad plexus of business models that are progressively filling the hiatus due to state withdrawal from non-strategic, non-exploratory, commercial space activities. Thus, this Article of the Treaty provides a normative leverage to promote and oversee space activities of private sector. The purpose of articulated stipulation for state authorization is to establish a nexus of committed responsibility with the state; and continuing supervision mandates the need for conformance to the permissibility of activities under the Treaty. The states have so far abided by these legal provisions but the future appears uncertain with commercialization and privatization of space activities coming of age and starting to wield its own clout to leverage national economic policies to its own advantage.

The next and fourth aspect of responsibility binds that, “States Parties...shall pursue studies of outer space, including the Moon and other celestial bodies, and conduct exploration of them so as to avoid their harmful contamination and also adverse changes in the environment of the Earth resulting from the introduction of extra-terrestrial matter and, where necessary, shall adopt appropriate measures for the purpose”.¹⁵ The nature of this responsibility ordains due regard in conduct for avoidance of negligence in actions, whether of commission or omission. So far no serious case of such dereliction has come to notice but considering the trend, of exploitation of celestial resources, planetary migration, space habitations, and other multiplying applications and uses, may jeopardize sustainability of space environment and its usability by posterity.

E. State Responsibility under Other Space Law Instruments

The fundamental of state responsibility finds a portfolio of copious references scattered in other international instruments regulating space activities either in direct reference or, by its generic variants like, duty to assist in emergencies and distress or offer cooperation or engage in consultations for unusual events and potentially dangerous experiments. These are parts of the same generic responsibility skeletally mentioned in Articles VI and VII of OST. In order to correctly grasp the import and comprehend the nuances of this principle, it is proposed to adduce a few illustrations to vindicate the above statement. A few provisions from other international instruments of space law emphasizing this precept are discussed in succeeding paragraphs.

¹³ G. S. Sachdeva, “State Responsibility for the Space Activities of Private Actors” in Venkat Rao and Kumar Abhijeet (eds.), *Commercialisation and Privatisation of Outer Space* 13-30 (KW Publishers, New Delhi, 2016).

¹⁴ *Supra* note 12.

¹⁵ *Supra* note 11, art. IX.

For instance, the case of the Convention on International Liability for Damage Caused by Space Objects, 1972, that amplifies the provision of responsibility and liability and outlines the procedure for incumbent claims. Thus, an inalienable incident of responsibility arises due to *vinculum juris* that relates to liability for any damages caused, by misadventure or default, even for bona-fide state activities performed by its space objects, to third parties or other adjacent users in the outer space or on celestial bodies. The liability attaches to the launching state or, the one that procures launching. Therefore, “A launching state shall be absolutely liable to pay compensation for damage caused by its space object on the surface of the Earth or to aircraft in flight”.¹⁶ The Convention upholds the principle of fault liability¹⁷ for consequential damages and provides for compensation. But the element of causal fault in space activities, quite often, is difficult to establish and hence many accidents remain unlitigated and un-negotiated like the Iridium-Cosmos collision.

Another nuance of responsibility, humanitarian in character, is embodied in the Agreement on Rescue of Astronauts etc. It states, “If owing to accident, distress, emergency or unintended landing, the personnel of a spacecraft land in territory under the jurisdiction of a contracting party, it shall immediately take all possible steps to rescue them and render them all necessary assistance”.¹⁸ This duty becomes particularized and specific on such a request of the launching authority, though however, it is equally binding even without such intimation.¹⁹

This Agreement is in amplification of the OST and is also a partial reiteration of Article V of the OST that requires, “State Parties to the treaty shall regard astronauts as envoys of mankind in outer space and shall render to them all possible assistance in the event of accident, distress or emergency landing on the territory of another state Party or on the high seas.” This provision also honors the jurisdiction and control over objects and personnel by the state of registry under Article VIII of the OST.

The Moon Agreement²⁰ too, carries a specific clause on this point. It reiterates, “States party to this Agreement shall bear international responsibility for national activities on the Moon, whether such activities are carried on by governmental agencies or by non-governmental entities...” And states shall assure that “national activities are carried out in conformity with provisions set forth in this Agreement”.²¹ This call to the ‘ratifiers’ of the Agreement for adherence to the law is loud and lucid; and more so ordains a responsibility for due care and implies liability for damages caused, advertently or inadvertently.

F. State Responsibility under Declaration of International Cooperation

The concept of state responsibility has been redefined and given a new boost under the UN Declaration on International Cooperation in the Outer Space.²² The UN Declaration

¹⁶ Convention on International Liability for Damage Caused by Space Objects, 1972, art. II.

¹⁷*Id.*, art. III.

¹⁸ Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, 1968, art. 2.

¹⁹*Id.*, art. 5.

²⁰ Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, 1979. Popularly referred to as the Moon Agreement.

²¹*Id.*, art. 14.

²²The full title of the instrument is, “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

accepts that “States are free to determine all aspects of their participation in international cooperation in the exploration and use of outer space on an equitable and mutually acceptable basis,”²³ but at the same time, it urges that, “All states, particularly those with relevant space capabilities and with programmes for the exploration and use of outer space, should contribute to promoting and fostering international cooperation on an equitable and mutually acceptable basis.”²⁴ It further adds, “International cooperation should be conducted in the modes that are considered most effective and appropriate...”²⁵

The language of the Declaration is persuasive and passionate and makes a fervent appeal for cooperation between responsible space-faring states in the outer space domain. Therefore, the Declaration enunciates ‘a responsibility to cooperation’ that is incumbent on the states. In fact, cooperation is another form of responsibility that obligates an attitude of mutual understanding, consultation and assistance for activities in the outer space domain of hazards and imponderables. Thus, the term cooperation should carry a meaning no different than responsible behavior of a civilized, space-faring state.

In a wider sense, this exhortation by the UN constitutes an essential and binding element of state responsibility to cooperate internationally; this insistence on cooperation assumes a veritable form of a variant of state responsibility in content and connotation. Therefore, the International Declaration imposes at least a valid pseudo-duty, if not a total obligation on the states. Some scholars may differ in this insistence on duty, but support can be sought from *Bin Cheng* who also maintains that General assembly resolutions express the will of the states and were resorted to for simplification of the treaty-making procedure. These may be “Oral Agreements” but are “undoubtedly international agreements subject to the law of treaties” and are legally binding.²⁶ In similar vein, the International Law Commission (ILC) has also confirmed in its commentary that Oral International Agreements are “a new type of international instruments, which, belonging to the realm of law, and may, under concrete circumstances acquire the characteristics of a binding international instrument.”²⁷ Thus, the effect and force of the Declaration is unimpeachable and operative and element of state responsibility to cooperate stands vindicated.

This view has been reiterated by the Office of Legal Affairs of the UN by pointing out that, “In United Nations practice, a ‘declaration’ is a formal and solemn instrument, suitable for rare occasions when principles of great and lasting importance are being enunciated...”²⁸ Another scholar also, while discussing about the evolution of a new trend and validity of non-contractual agreements, e.g. UN declarations or resolutions, has asserted their democratic legitimacy; and emphasized their norm-creating capability and “non-legally binding” nature. These expedients and mechanisms are resorted to in important and urgent cases of necessity

Developing Countries, 1996. It was adopted by the UN General Assembly in its resolution 51/22 of December 13, 1996.

²³*Id.*, para. 2 of the text of the Declaration attached as Annexure to the UN Resolution.

²⁴*Id.*, para. 3 of the Annexure mentioned.

²⁵*Id.*, para. 4 of the Annexure mentioned.

²⁶Bin Cheng, “United Nations Resolutions on Outer Space: Instant International Customary Law” 5 *Indian Journal of International Law* 23-48 (1965). Also refer G. S. Sachdeva, “Select Tenets of Space Law as Jus Cogens” in Venkat Rao, Gopalakrishnan, *et.al.* (eds.), *Recent Developments in Space Law* 13 (Springer, 2017).

²⁷Manfred Lachs, “The Law-Making Process for Outer Space” in Edward McWhinney and Martin Bradley (eds.), *New Frontiers in Space Law* 18-19 (A.W. Sijthoff, New York, 1969). Also refer Sachdeva, *Id.* at 12-15.

²⁸Manfred Lachs, *Ibid.*

for flexibility in procedure, ease in acceptance and effectuation in implementation of the instruments.²⁹

Be that as it may, compliance and adherence to law and selecting international cooperation coupled with tacit acceptance of responsibility as a motto is our own determination and advertant discretion. There is no reductionist approach of criminality in space law; hence the bottom-line is either common survival or collective annihilation. The stakes are clear and choices limited. The decision, however, is in our hand, of our volition and depends upon our wisdom and sagacity. Thus international cooperation is a state responsibility and a mandate of space law. It is certainly the *mantra* for survival and sustainability, at least, for the simple reason that it finds repetition in the instruments of space law and for its ontological essence to impress the importance of this idiom.

III. STATE RESPONSIBILITY UNDER INTERNATIONAL LAW

The formulation of Space Treaty was under exigency and urgency and the framers were conscious of the fact that the *specialis* law so agreed, would neither be comprehensive nor holistic to cover all and allied aspects of proper governance and requisite regulation of space activities. This awareness impelled them to invoke the application of international law, *mutatis mutandis*, to the state activities in the space domain. It was thus confidently assumed that human activities in outer space could now be regulated and their consequences tackled by the combined operation and strength of both laws.

To give effect to this considered view, the OST embodies an appropriate provision. It thus enacts the applicability of international law and has amplified the scope of this application by specific reference to the Charter of the United Nations. The text of the relevant Article reads, “States Parties to the Treaty shall carry on activities in the exploitation and use of outer space, including the Moon and other celestial bodies, in accordance with international law, including the Charter of the United Nations, in the interest of maintaining international peace and security and promoting international cooperation and understanding.”³⁰ No wonder, the doctrine of state responsibility well-established under international law becomes germane and incumbent.

A. State Responsibility under International Law

It is axiomatic in International Law that, “state as a sovereign person, can have no legal responsibility whatever”.³¹ Or, as goes the old saying ‘the king can do no wrong’. But such an absolute statement of classical law is no longer valid in modern times; and contemporary law of nations admits of wider international liability for harm caused due to acts of State or certain internationally injurious acts committed by its agents, officials or nationals so authorized, enabled or ordered.³² A parallel to this is international duty cast by international pacts, treaties and conventions, and out of these arise the *vinculum juris*, a legal obligation to act within the confines of law or the *pacta* and to assume responsibility for any

²⁹Ved P. Nanda, “The Role of International Organisations in Non-Contractual Lawmaking” in Rudigar Wolfrum and Volker Roben (eds.), *Development of International Law in Treaty Making* 157 (Springer, 2005).

³⁰*Supra* note 11, art. III.

³¹ H. Lauterpacht (ed.), I *Oppenheim’s International Law A Treatise* 304 (Longmans, Green & Co., London, 7th edn., 1952).

³²*Id.* at 306.

digression of an obligatory treaty or commission of an internationally wrongful act or for violation of international legal duty.

The principle of state responsibility is a classical doctrine of international law and deems it "... necessary to distinguish two different kinds of state responsibility. These may be named 'original' in contradistinction to 'vicarious' responsibility".³³ The original responsibility may comprise of international delinquencies and acts of state organs while vicarious responsibility may relate to acts of private persons who are nationals of the state.³⁴ These tenets have been adhered to for centuries, only new connotations of state responsibility have gradually evolved with progressive liberal times, compromises on state sovereignty and changing international milieu.³⁵ State responsibility is a correlative of international obligation and this concept has now been embedded in space law with 'customary' legal mandate and a superior normative value. Nevertheless, its compliance is equally obligatory and attendant with sanctions. States as subjects of International Law are bound by its tenets and obligated to compliance.³⁶ This doctrine is thus expected "to serve as a specific instrument of legal regulation in international relations and stimulate the functioning of international law".³⁷

This tenet of state responsibility for its own acts, or of government functionaries or official organizations or its natural and juridical nationals, that cause international wrong, injury or damage, is a well-established principle of customary international law. This has been embodied in space law that is *lex specialis* for the outer space domain, which is so unique, hazardous and vulnerable. Till recently, space activities which bear long gestation period, involve highly complex technologies, and require huge outlays with endemic risk of failure, were undertaken by governmental agencies funded from the state exchequer. This trend of space exploration and use, however, is fast changing. Commercial space activities, being initiated and undertaken by private players with no dependence on public funds, is the emerging trend. However, the space-faring nations have behaved responsibly, having done so voluntarily and in reciprocity, almost every time, till now. These, of course, are generalized statements that need to be buttressed with specific provisions of law and events of violation or aberration. A few such examples of law have been discussed in succeeding paragraphs.

Many scholars of International Law, while discussing substantive rules of rights and duties of the State assume that, there exists a minimum international standard of justice and have highlighted the international responsibility of the States for breaches of duty, even by governmental authorities.³⁸ In general terms, state responsibility refers to the legal consequences that follow upon violation or a *delictum* as an act of commission or omission relating to any international legal obligation. However, it is immaterial whether such delinquent action has been performed by any of its legally constituted entities, executive organs of governments, juridical persons or natural nationals, whoever can be deemed as subject or object of international law. It may be added for clarity that the state responsibility extends even to harmful consequences of legitimate activities by its nationals. Thus any omission, failure or detrimental effect, in turn, sets up legal liability *qua* aggrieved parties of

³³*Id.* at 305-7.

³⁴*Id.* at 304-34.

³⁵ The new concepts of state responsibility relate to, for example, war and aggression, coercion of minorities, denial of freedom by colonial powers and now extend to international and inter-governmental organizations.

³⁶ Schwarzenberger, I *International Law* 68-70 (Stevens and Sons Ltd., London, 3rd edn., 1957).

³⁷ G.I. Tunkin, *International Law* 223 (Progress Publishers, Moscow, English translation, 1986).

³⁸ Charles G. Fenwick, *International Law* 333 (Vakil, Feffer and Simons Private Ltd., Bombay, 1967).

another state, subject to the basic rule that all means of domestic protection must first be exhausted.

B. State Responsibility under ILC Code

Certain aspects of state responsibility under international law had literally frozen as doctrine and did not progress abreast with the political, social and humanitarian developments. This lacuna in theory was acute, and identified for attention of the International Law Commission (ILC). It took the Commission over two decades for its transformation, progression, codification and to come up with a Code enunciating and edifying several new aspects of state responsibility. The code is called Draft Articles of Responsibility of States for Internationally Wrongful Acts (ARSIWA) and was approved by the ILC in August 2001. It was adopted by the UN General Assembly through resolution in December 2001.³⁹ ARSIWA thus became part of international law and its articulation was well respected in juridical circles and came to be cited as honorable legal authority even in the highest courts.⁴⁰ The exposition of the Code is generic and neutral; and it can, therefore, be asserted with confidence that ARSIWA undoubtedly applies, *mutatis mutandis*, to the activities of states in the domain of outer space.

The Code is fairly elaborate in its' context. It defines 'internationally wrongful acts as those that can be attributed to the state under international law and, that these constitute a breach of an international law obligation of the state.' But attribution of responsibility is based on 'proof of causal connection' between the injury and the act or omission attributable to the state alleged of breach. As in theory and practice of international law, certain circumstances and specific situations exonerate and preclude state responsibility. Similarly, the Code contains certain defence pleas admissible like force majeure, consent, distress, necessity, self defence or counter measures. However, on adjudication, reparations can be granted, e.g. restitution, compensation or satisfaction, though the remedies depend on the competence of forum like UN, ICJ, WTO, ICC and so on.

Despite wide appreciation of the good work done by the ILC, certain critics have commented that some rules involve ambiguities and their application will often entail detailed fact-finding. Again some rules define responsibility involving private acts and stoppage of their breaches would need cooperation for abatement from private actors. Space activities by private enterprise involving environmental degradation or human rights abuses appear to be parallel cases of such violations. In nutshell, *Crawford* comments that the rules are "rigorously general in character."⁴¹

C. State Responsibility under the United Nations Charter

It now becomes pertinent to recall that space law, apart from international law, also beseeches support from "the Charter of the United Nations, in the interest of maintaining international peace and security and promoting international cooperation and

³⁹UN General Assembly Resolution 56/83 of December 12, 2001. Refer UN Doc A/56/10 (2001).

⁴⁰For example, refer *Gabcikovo-Nagymaros Project (Hungary v. Slovakia)* Judgment, 1997 ICJ Rep. 7 (September 25). Also see case concerning *Fisheries Jurisdiction (Spain v. Canada)*, Jurisdiction of the Court, Judgment, 1998 ICJ Rep. 432 (December 4).

⁴¹James Crawford, *The International Law Commission's Articles on State Responsibility: Introduction, Text and Commentaries* 12 (Cambridge University Press, 2002).

understanding.”⁴² Among other aspects, the most relevant and prominent provision for our study exhorts, “All Member 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.”⁴³ The use of the word “shall” attaches certain imperious strictness to the clause and this cardinal principle should also prevail in international relations in outer space.

This principle, however laudable and espoused, has repeatedly courted controversy with sharp divisions regarding its meaning and scope. The Western states maintain an interpretation that the term ‘force’ assumes relevance only when it wears the garb of military force or military threat. At the same time, the Third world countries have insisted on a liberal and enlarged connotation to embrace “all forms of force, military, economic and moral force.”⁴⁴ Anyhow, this fundamental provision almost banning use of force seems to exude confidence and is a great solace for assuring ostensive peace and security.

Ironically, the imperiousness of this rule of law has been compromised by another Article of the UN Charter. The text of this Article reads, “Nothing in the present Charter shall impair the inherent right of individual or collective self-defence if an armed attack occurs against a Member of the United Nations until the Security Council has taken measures necessary to maintain [or restore] international peace and security.”⁴⁵ This right, though, is valid for immediate expedience and under temporary predicament, till Security Council takes control of the situation, yet it seriously dents the majesty of Article 2 (4) of the Charter and relaxes its veritable strictness.

Legal experts have long wrestled with the true meaning and actual intent of the ‘self-defence’ clause. But it must be interpreted based on the maxim, *ex vinculis sermocinatur* which means in good faith. Many scholars contend that over the years, perception of self-defence has changed and notion of threat has blurred. Spatial separation and geographical distances have lost their meaning. No wonder, the US could use its armed forces, unilaterally or in concert, in Iraq or Kosovo, under an ‘alief’⁴⁶ of threat by the phantomised potential of Iraq or imagined threat from instability in Kosovo. The US logic was beset with syllogistic fallacies and the principle of proportionality of force was ignored. Even the UN could not rise up to its ideals. International conscience seems to have been routed badly and torn asunder. Therefore, attribution of any advertently loose or liberal meaning to self-defence or threat would be, betrayal of our cherished values, and only at peril to humanity.⁴⁷

D. State Responsibility Derived from Domestic Statutes

Space Law under OST stipulates state responsibility for “regulation and continuing supervision” of its space activities, particularly those undertaken by private enterprise. This is because treaties are state-centric and responsibility fully attaches to the state and not individual defaulter. The scholars have, therefore, asserted that international wrong

⁴²*Supra* note 11, art. III.

⁴³The United Nations Charter, art. 2(4).

⁴⁴T. O. Elias, “The Law of Treaties: An Assessment of the Vienna Convention” in *Essays on International Law* 30 (Twentieth Anniversary Commemorative Volume issued by Asian-African Legal Consultative Committee, 1976).

⁴⁵*Supra* note 43, art. 51.

⁴⁶Alief is a new word meaning an irrational fear in mind knowing full well that the situation is safe.

⁴⁷G. S. Sachdeva, *Outer Space: Security and Legal Challenges* 175 (KW Publishers, New Delhi, 2010).

committed by nationals also “engages the responsibility of the State”.⁴⁸ This mandate has, therefore, required states to create their own domestic expedients to dispense local justice and sharing of attributed liability. In respect of space activities also, many countries have enacted local legislation to internally define and allocate responsibility for the consequences of activities in outer space undertaken by agencies not under direct state ownership or governmental control. Consequently, law often tends to derive the circumscription of state responsibility from domestic statutes like the Constitution or *specialis* legislation enacted for the purpose or both. In the United States, the treaties signed or ratified by the government are self-executing and laws are enacted if necessary to give effect to the treaty provisions. This is the case for space treaties, except the Moon Agreement that has not been signed by the US.

Another relevant aspect of state responsibility stems from national constitutions because international law has a symbiotic relationship and an intimate nexus with municipal laws. For example, Indian Constitution, under Article 51 directs ‘to promote international peace and security’ as well as ‘foster respect for international law and treaty obligations...’ This requires the government to maintain amiable inter-state relations, subject to national posturing and geo-political strategy. Thus, the constitution directs the state to perform its international obligations under ratified treaties, even if it requires a new domestic enactment. Indeed, the language is directive, explicit and binding. India has ensured compliance of the space treaties and abided by its responsibility in every way.

Further, Article 253 of the Indian Constitution empowers Parliament to make suitable and appropriate domestic laws to implement the provisions and obligations under any treaty, agreement or convention adhered to by the state. This duty of international responsibility is, therefore, solemn and obligatory as well as the basic philosophy of Indian public policy. In deference to this, with an emerging private sector desirous of undertaking space activities, India has initiated steps to formulate a specific Space Activities Act to regulate and supervise space activities by private players and other ancillary aspects. Regulation is essential and freedom should be permitted to only responsible limit. “[S]ubstantial individualism of the international community”⁴⁹ or the private sector is neither approved by the Indian Constitution nor espoused by the Indian political ethos.

E. State Responsibility towards its Nationals

The concept of sovereign state has conjecturally arisen out of Social Contract Theory of Rousseau where individuals collectively agreed to form a state and in return expected state protection for their life and property. This basic idea has evolved in many ways and has extended to the state responsibility to protect the life, liberty and assets of citizens even when residing beyond the territorial limit of the state. Diplomatic protection in foreign countries is now demanded as a matter of right by the nationals and the State has a bounden duty to ensure safety and protection of its nationals and their assets, even on foreign lands, in every possible manner whether legally, diplomatically, by dispute negotiation or by alternative methods.⁵⁰

⁴⁸ *Supra* note 38 at 334.

⁴⁹ R. A. Mullerson, “Sources of International Law: New Tendencies in the Soviet Thinking” 83 *American Journal of International Law* 508 (1989).

⁵⁰ Michael Akehurst, *A Modern Introduction to International Law* 88-102 (George Allen and Unwin, London, 1980).

This predicament seems more pertinent to the outer space domain where national activities, by whosoever, are likely to be more risky, hazardous and prone to vulnerability either way. A general understanding of customary state responsibility is fine, but not adequate for the purpose and for catering to its nuances. With growing commercialization of outer space, other ramifications of state responsibility like welfare of space workers and allied matters of evacuation may assume prominence. Of course, not many cases of default have occurred but with exponentially escalating activities, accumulating debris and lack of sufficient space situational awareness, more accidents may occur and more disputes are likely. Hence, ultra-hazardous activities in space environment, security of huge investments by private enterprise and peculiar humanitarian requirements for space-based labour would need a separate legal regime with well-defined responsibility, modalities and methodologies.⁵¹

F. State Responsibility towards Humanity

One is impelled to allude to another relevant aspect of state responsibility that can be sublimated to *erga omnes*, and this rule has since been recognized in customary international law that *pari passu* becomes applicable to contemporary space law. The legal force of this particular obligation that is owed by the states to the international community as a whole has been identified and obliquely highlighted in a celebrated suggestion by the International Court of Justice in the Barcelona Traction case⁵² among others. It has been pointed out, that certain violations of international obligations can adversely affect the international community as a whole such that state responsibility can be invoked by states on behalf of larger community as a whole.

As a result, this social duty of the state towards humanity at large has been accepted universally and has got deeply rooted in state practice. In fact, 'state responsibility *erga omnes*' is already in customary practice and can be, by *opinio juris*, elevated to the status of *Jus Cogens* of space law⁵³ so that violations of *erga omnes* obligations, by any state, may be punishable under the universality principle.⁵⁴ This *jus cogens* can also draw substantive support from the Vienna Convention.⁵⁵ Thus, such a responsibility *pro bono* humanity will certainly be incumbent on states and obligatory in nature.

An existing OST provision of similar character requires 'states to ensure that its space activities are carried out with due regard to the corresponding and reciprocal interests of all other states.' It further ordains that the states "...shall pursue studies of outer space, including the Moon and other celestial bodies, and conduct exploration of them so as to avoid their harmful contamination and also adverse changes in the environment of the Earth resulting from the introduction of extra-terrestrial matter and where necessary, shall adopt appropriate measures for this purpose."⁵⁶ The provision is strongly directive of positive action and strict in obligatory character.

⁵¹ C W Jenks, "Liability for Ultra-Hazardous Activities in International Law" 117 *Recueil des Cours*, 99, 165 (1966). Also refer John Kelsen, "State Responsibility for Abnormally Dangerous Activities" 13 *Harvard International Law Journal* 197, 238 (1972).

⁵² Barcelona Traction, Light and Power Co. (*Belgium v. Spain*) 1970 ICJ 3, 32 (February 05, 1970).

⁵³ G. S. Sachdeva, *supra* note 26 at 21, 22.

⁵⁴ Oscar Schachter, *International Law in Theory and Practice* 264 (Springer, 1985).

⁵⁵ The Vienna Convention of the Law of Treaties, 1969, art. 53. Also refer Sachdeva, *supra* note 50 at 7-26.

⁵⁶ *Supra* note 15.

The usage of the word “shall” in the text makes it pre-emptive and binding to require invariable compliance and attribution of causal responsibility to the defaulting state, leading to consequential liability. Thus the obligation not to despoil or pollute the medium of outer space and to sustain the pristinity of the celestial bodies, except legitimate exploration or use, is indefensible. And there is a similar, in reverse, directive to obviate transportation of similar celestial contamination and eschew its adverse fall out on the Earth. This need for care and caution thus constitutes a solemn responsibility *in summum bonum* of humanity and posterity, the sagacity of which is indeed laudable.

IV. APPRAISAL AND CONCLUSION

In nutshell, in the beginning, space activities were state-sponsored, state-governed, and state-funded because such activities represented advancement of technology and afforded strategic advantages. While these motivations still prevail, this sole reason has somewhat eroded in its importance with possible commercial exploitation and private actors entering the fray. Multi-media applications, remotely sensed data, future of space transportation and tourism, possibility of planetary habitations, and viability of commercial exploitation of celestial resources are all becoming prospective business propositions. As a result, states are restricting investment to strategic research only and commercial ventures are passing on to private enterprise. And, it is here that private actors find their specific niche but their consideration of business and motivation for enterprise is profitability, even at the cost of compromise of international responsibilities of the state. Their benchmark is profit.

This calls for state regulation of private activities in space. The Treaty puts an incumbent rider of state regulation and continuing supervision of corporate space sector. Wisdom ordains a holistic approach and comprehensive agenda with optimal governance. Thus, all stakeholders should responsibly strive for a safe, secure and sustainable use of outer space and profitable commercial activities ‘with benefit to all countries.’ Collective responsibility of all actors and stake-holders in this fragile and hazardous domain thus becomes imperative. None can afford to be a weak link. Encouragingly, India has behaved as a responsible nation, with unblemished credentials, in its space activities and as a launching facility for the world.

Civilised nations do not have to be mandated or reminded to interact with a sense of responsibility and with conscious awareness of the consequences of irresponsible actions. Nevertheless, this reminder becomes more relevant in space relations and space activities. Therefore, it behooves space-faring nations to naturally respond and reflexively behave in a responsibly prudent manner; and of course, we all claim to be civilized nations honoring the tenets of international law and cooperating in international relations. Yet history is witness to a grand fact that many world-wide and sustained wars have happened among, so called, civilized nations; and at the end of each and every war on the globe, all parties, including the victor, have invariably come to the negotiating table for a final solution to compromise the very reason for war. If we were to do this after devastation and death then why not react responsibly in the first instance and avoid the catastrophe. Let’s not encourage exorbitance of irresponsibility. Sagacity lies in choosing the prudent option rather than regret the holocaust *post facto*. This brings us to the concept of international responsibility that has multiple resonances. And these responsibilities bring to focus their importance as a cardinal principle of peaceful and prosperous living.

Space law is as yet an evolving branch of international law and within the short span of half a century, a nascent convention called OST has already assumed the status of customary law of outer space and is treated globally binding even on states that have not been party to the Treaty. Some of the salient provisions of the Treaty are taken as peremptory norms of state behaviour and conduct in outer space and hence, can logically be elevated to the pedestal of *Jus Cogens* of space law for reflexive obedience and universal compliance. The well-established concept of state responsibility for internationally wrongful acts is one such tenet, among others, recommended by *opinio juris* to be exalted as *jus cogens*.⁵⁷

State responsibility has many facets and the state has to exercise restraint in eschewing internationally wrongful acts as against the relevant laws or other states or its nationals and juridical citizens or humanity and posterity, apart from other responsibilities drawn from the UN Charter, international law and domestic statutes. The obligations are incumbent and breaches may lead to liability and compensation payable *restitutio in integrum*. Thus, just as international law is the law of civilized nations, in the same manner, space law is the law of responsible and cooperative space-faring nations who understand their stakes and exercise good sense to appreciate their debt to the future generations. The relevance of state responsibility increases manifold on the dawn of the era of space commercialization and privatization of space activities.

⁵⁷ Refer G. S. Sachdeva, *supra* note 26 at 7-26.