A Basis for Directly Applying Principles of the Liability Convention to Nonstate Actors

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The Convention on International Liability for Damages Caused By Space Objects ("Liability Convention") contains liability principles concerning disputes between or among states or intergovernmental organizations arising from damage caused by a space object. The Permanent Court of Arbitration Optional Rules For Arbitration Of Disputes Relating To Outer Space Activities allow applying the Liability Convention's principles to disputes between or among private entities or between a State and a private entity.

PCA Rules Article 35(1) contains a choice of law provision for selecting the applicable substantive law. If the parties designate a particular substantive law, then the tribunal must apply the law or rules of law as agreed by the parties. If the parties fail to designate the applicable substantive law, then the tribunal applies the "national and/or international law and rules of law it determines to be appropriate." This vests an arbitral tribunal with broad discretion in determining the applicable substantive law when the parties fail to designate such law. Article 35(1) does not contain or impose any parameters within which the tribunal must exercise its discretion or determine when it is appropriate to apply international law. The lack of express parameters provides an opportunity for a tribunal to conclude, in a particular case, that legal principles articulated in the Liability Convention should govern all or a part of the merits even though the dispute is between or among private entities or involves a private entity and a governmental entity.

This paper explores the breath of discretion a tribunal possesses under Article 35(1) when the parties fail to designate the applicable substantive law. It will also discuss potential circumstances when it may be appropriate for a tribunal to apply the Liability Convention's legal principles in a dispute in which a private entity is a direct party, how such principles will apply to the private entity as well as the ramifications for extending or applying the Liability Convention's principles to a private party.

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I. Introduction

The escalation of nonstate actors engaging in diversified commercial space activities contributes to the realization that "substantial uniformity at the international level" is necessary to directly address space related claims brought by or against private parties.[1] This quest for harmonization or uniformity generates the notion of establishing an arbitral tribunal to resolve such space based damage claims.[2] The Permanent Court of Arbitration ("PCA")[3] seeks to assist this development of space law by expanding its menu of arbitral rules to include Optional Rules For Arbitration Of Disputes Relating To Outer Space Activities ("PCA Rules").[4] The PCA Rules seek to accommodate disputes having an outer space component "involving the use of outer space by States, international organizations and private entities."[5]

In his separate declaration in *Barcelona Traction*,[6] I.C.J. Judge Gerald Fitzgerald recognizes that "'since specific legislative action with direct binding effect is not at present possible in the international field, judicial pronouncements of one kind or another constitute the principal method by which the law can find some concrete measure of clarification and development.'"[7] This perspective equally applies to international arbitration decisions which similarly "'constitute a

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1 Frans von der Dunk, *Sovereignty Versus Space - Public Law and Private Launch in the Asian Context*, 5 Singapore Journal of International and Comparative Law 22, 47 (2001).

2 Ka Fei Wong, "*Collaboration In the Exploration Of Outer Space: Using ADR To Resolve Conflicts In Space*," 7 Cardozo Journal of Conflict Resolution 445, 448 (Spring 2006); Van C. Ernest, "Third Party Liability Of The Private *Space Industry: To Pay What No One Has Paid Before,*" 41 Case Western Reserve Law Review 503, 539 - 540 (1991). *See also* Helen Shin, *"Oh I Have Slipped The Bonds of Earth": Multinational Space Stations And Choice Of Law,"* 78 California Law Review 1375, 1411 - 1414 (October 1990).

3 PCA evolved out of the Hague Peace Conference of 1899 initiated by Russia.

4 <http://pca-cpa.org/shownews.asp?ac=view&pag_id=1261&nws_id=323> (Last visited Sept. 2, 2013). Other PCA Optional Rules include those for (1) Arbitrating Disputes Between Two States, (2) Arbitrating Disputes Between Two Parties of Which Only One Is a State, (3) Arbitration Involving International Organizations and States, (4) Arbitration Between International Organizations and Private Parties, (5) Concillation (6) for fact finding Commissions of Inquiry, and (7) Arbitration of Disputes Relating to Natural Resources and the Environment. This is not an exhaustive list of the rules PCA offers.

5 PCA Rule Introduction paragraph (I).

6 *Barcelona Traction, Light and Power Company, Limited*, Judgment, I.C.J. Reports 1970, p. 3.

7 **Permanent Court of Arbitration: International Arbitration and Dispute Resolution -Summaries of Awards, Settlement Agreement and Reports** at 25 - 26, *supra* note 72 quoting *Barcelona Traction,* 1970 I.C.J. Reports 1970 p. 3 at 65 (Separate Opinion of Judge Fitzmaurice).

very significant source of jurisprudential development of public international law.'"[8] PCA Rules Article 35, which governs choice of law, creates the potential for an arbitration panel extending certain legal principles contained in the Convention on International Liability for Damages Caused By Space Objects ("Liability Convention")[9] to a nonstate party.

II. Choice of Substantive Law and PCA Rules Article 35(1)

Choice of law is a significant issue that litigators should recognize and consciously address in formulating and presenting claims and defenses in arbitration. In fact, it has been observed that arbitration litigators frequency fail "to identify and consider significant applicable law issues."[10] International arbitration, regardless of the subject matter, generally presents four distinct choice of law issues involving (1) the procedural law often referred to as the *lex arbitri*, (2) the substantive law often referred to as the *lex causae*, (3) rule of conflict of laws, and (4) the law for determining the validity and effect of the arbitration clause.[11] A common misunderstanding associated with choice of law issues is that the *lex arbitri* and *lex causae* flow from the same legal source. While the same law can govern procedure and substance, contemporary international arbitration recognizes that different laws can serve as the *lex arbitri* and *lex causae*.[12] PCA Rules Article 35 treats the choice of law as follows:

1. In resolving the dispute, the arbitral tribunal shall apply the rules of law designated by the parties as applicable to the substance of the dispute. Failing such designation by the parties, the arbitral tribunal shall apply the national and/or international law and rules of law it determines to be appropriate.
2. The arbitral tribunal shall decide as *amiable compositeur* or *ex aequo et bono* only if the parties have expressly authorized the arbitral tribunal to do so (emphasis in original).

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8 Christopher S. Gibson and Christopher R. Drahozai, *Iran-United States Claims Tribunal Precedent In Investor-State Arbitration*, 23 Journal of International Arbitration 521, 523 (2006); <http://ssrn.com/abstract=978284> at 4.

9 entered into Force Sept. 1, 1972, 24 UST 2389; TIAS 7762; 961 UNTS 187; 10 ILM 965 (1971).

10 John R. Crook, *Applicable Law In International Arbitration The Iran-U.S. Claims Tribunal Experience*, 83 American Journal of International Law 278, 311 (April 1989).

11 Loukas Mistelis, *Reality Test: Current State of Affairs In Theory And Practice Relating To "Lex Arbitri"* 17 American Review of International Arbitration 155, 155 (2006) citing *Mozambique Buyer v. Netherlands Seller*, 13 Y.B. Com. Arb. 110 ¶ 7 (ICC 1987).

12 *Id* at 159 - 160, (2006); Vigtek Danilowicz, *The Choice of Applicable Law In International Arbitration*, 9 Hastings International and Comparative Law Review, 235, 240 - 243 (Winter 1986).

3. In all cases, the arbitral tribunal shall decide in accordance with the terms of the contract, if any, and shall take into account any usage of trade applicable to the transaction.

The PCA Rules segregate *lex arbitri* and *lex causae* as Article 35 addresses only the substantive law. Article 35 does not discuss or mention procedural law as use of the PCA Rules is essentially an agreement by the parties on the PCA Rules supplying the procedural rules. Indeed, PCA Rules Article 1 provides, in part, that disputes "shall be settled in accordance with these Rules subject to such modification as the parties may agree."
The choice of law under Article 35 initially depends upon whether the parties agree to the applicable substantive law. If they have so agreed, then Article 35 requires applying that law.[13] If the parties fail to designate the substantive law, then the arbitral panel possesses discretion to determine the applicable substantive law. Exercising this discretion initially depends upon whether the case involves a contract or commercial transaction. If the dispute does not arise from a contractual relationship or a commercial transaction, then Article 35(1) dictates that the arbitral panel has the discretion to "apply national, and/or international law and rules of law" as the *lex causae*. If the dispute arises from a contractual relationship or commercial transaction, then Article 35(3) supplements Article 35(1) by obligating the tribunal to decide the matter in accordance with the contract, if any, and take into account "any usage of trade applicable to the transaction." Article 35(3) appears to be limited to claims arising from a contractual or commercial transaction and space based damage claims not arising from a contractual relationship or commercial transaction fall outside of its scope. Given that this paper restricts its analysis to Article 35(1), the exercise of discretion will be considered only in the context of claims by or against a nonstate actor for harm suffered in outer space which does not arise from a contractual or commercial relationship.
Article 35(1) gives an arbitral panel broad discretion to employ as *lex causae*, in whole or part, "national and/or, international law or rules of law it determines to be appropriate." Granting such broad discretionary power is neither unusual nor radical in contemporary international arbitration. For instance, the Iran-United States Claims Tribunal[14] has been referred to as "'the most

13 The parties designating an applicable law does not automatically resolve the choice of law quandary. Parties often fail to articulate whether the designated law applies to procedure, substantive law, or the arbitration clause. In this instance, arbitrators can conclude the parties failed to designate the substantive law thereby allowing the tribunal to select the applicable lex causae. *See* Danilowicz, *supra* note 12, 9 Hastings Int'l & Comp. L. Rev. at 237.

14 Declaration of the Government of the Democratic and Popular Republic of Algeria Concerning the Settlement of Claims by the United States of America and the Government of the Islamic Republic of Iran, Jan. 19, 1981, Department of State Bulletin No. 2047, February 1981, at 3, *reprinted in* 75 AJIL 422 (1981), and 20 ILM 230 (1981). This tribunal was set up in the early 1980's as part of the resolution of the

significant arbitral body in history.'"[15] Yet, the complex and crucial issue of *lex causae* is relegated to a single sentence.[16] Article V sets forth the choice of law provision which obligates the Tribunal to "decide all cases on the basis of respect for law, applying such choice of law rules and principles of commercial and international law as the Tribunal determines to be applicable taking into account relevant usages of the trade, contract provisions and changed circumstances." This language grants arbitrators freedom and flexibility to "select rules of substantive law through whatever processes and from whatever sources that they deemed fit."[17]

Article 35(1)'s discretionary power to "apply the national and/or international law and rules of law it determines to be appropriate" allows an arbitral tribunal to select the applicable substantive law by either wading through the complexities of conflict of law principles or by directly selecting the substantive law from the three sources or a combination of the three sources.[18] In any event, exercise of this discretion is constrained only by an arbitral panel's desire to issue an enforceable award.[19]

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diplomatic crisis between Iran and the United States which erupted following the Iranian Revolution which led to forming the Islamic Republic. The tribunal remains in existence.

15 Crook, *supra* note 10, 83 Am. J. Int'l L. at 279 (April 1989) citing Lillich, *Preface,* in The Iran-United States Claims Tribunal 1981-83, at vii (Lillich ed. 1984).

16 *Id* at 281.

17 Michael Durgavich, *Resolving Disputes Arising Out Of The Persian Gulf War: Independent Enforceability Of International Agreements To Arbitrate*, 22 California Western International Law Journal 389, 424 (1991-1992).

18 Danilowicz, *supra* note 12, 9 Hastings Int'l & Comp. L. Rev. at 259 - 278. This paper will not delve into the complexities of conflict of law. *See Id* at 259 - 268. It will only consider the discretion to directly decide the lex causae.

19 *Id* at 251 - 252; Mistelis, *supra* note 11, 17 Am. Rev. Int'l Arb. at 169. One of the principal duties of an arbitral panel is to issue an enforceable award. Article V of the Convention on the Recognition and Enforcement of Foreign Arbitral Awards commonly called the New York Convention, concluded on June 10, 1958 and entered into force on June 7, 1959, 330 UNTS 38; 21 UST 2517; 7 ILM 1046 (1968) enumerates at least 7 nonexhaustive grounds for denying enforcement of a foreign arbitral award. They include (1) incapacity of the parties, or invalidity of the arbitration agreement, (2) inadequate notice to a party regarding the arbitration, (3) the award, or any part thereof, concerns a matter not contemplated by or submitted to arbitration or the decision is beyond the competence of the arbitrators, (4) the tribunal composition was contrary to the arbitration agreement or contrary to the law of the State where the arbitration occurred, (5) the award is not final and binding or it has been set aside or suspended by an appropriate authority of the State where the arbitration occurred or the law under which the arbitration was conducted, (6) the subject matter of the award is not subject to arbitration where enforcement is sought and (7) the award is contrary to the public policy of the State in which it is sought.

III. The Liability Convention and Customary International Law

Employing legal principles from the Liability Convention's as the substantive law in a space based injury claim, therefore, depends upon whether such legal concepts are deemed a part of national law, international law or rules of law.[20] For purposes of this paper, focus will be limited to whether the Liability Convention's principles can be construed as international law under Article 35(1) and applied directly rather than pursuant to a conflict of laws analysis. To this extent, Article 38 of the International Court of Justice is recognized as identifying the sources of international law.[21] The four enumerated sources consist of (1) "international conventions, whether general or particular, establishing rules expressly recognized by the contesting states," (2) "international custom, as evidence of a general practice accepted as law" (3) "the general principles of law recognized by civilized nations" and (4) "Subject to Article 59, judicial decisions and the teachings of the most highly qualified publicists of the various nations, as subsidiary means for the determination of rules of law."[22]
The Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies ("Outer Space Treaty")[23] embeds the foundation for all current space law jurisprudence.[24] Outer Space Treaty Article III obligates State parties to conduct space activities "in accordance with international law including the Charter of the United Nations." Pursuant to Article VI, a State bears international responsibility for the space activities of its nationals and for "assuring that national activities are conducted in conformity" with the Treaty. Most germane to this paper, however, is Article VII which provides as follows:

> [e]ach State Party to the Treaty that launches or procures the launching of an object into outer space, including the Moon and other celestial bodies, and each State Party from whose territory or facility an object is launched, is internationally **liable for damage to another State Party to the Treaty or to its natural or juridical persons** by such object or its component parts on the Earth, in air space or in outer space, including the Moon and other celestial bodies (emphasis added).

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20 Of course if the parties agree to apply substantive law principles of the Liability Convention then Article 35 obligates the panel to apply that lex causae.

21 Aldo Zammit Borda, *A Formal Approach To Article 38(1)(D) Of The ICJ Statute From The Perspective Of The International Criminal Courts And Tribunals*, 24 European Journal of International Law 649, 650 - 651 (May 2013).

22 The I.C.J. Statute is available at <www.icj-cij.org/documents/?p1=4&p2=2&p3=0> Article 59 provides that "[t]he decision of the Court has no binding force except between the parties and in respect of that particular case." *Id*.

23 entered into Force Oct. 10, 1967, 18 UST 2410; TIAS 6347; 610 UNTS 205; 6 ILM 386 (1967).

24 von der Dunk, *supra* note 1, 5 Sing. J. Int'l & Comp. L. at 27.

The Liability Convention emerges from this tenet.[25] Although the Liability Convention is not a comprehensive agreement, it does encapsule core legal principles concerning definition of certain terms, fault allocation, and the measure of damages associated with third party liability for damage caused by a space object. These fundamental concepts derive from State laws used to decide tort and personal injury disputes among nonstate actors. This essentially means that the Convention's legal principles relating to fault, liability and damages represent "an international effort to incorporate private law doctrines into public international law" and extend the doctrine to outer space as a part of international law.[26] However, in doing so, the Convention's language limits applicability of its legal principles to damage caused by space objects and restricts international liability to the space object's launching State. In addition, the Convention contains a non exclusive dispute resolution procedure which can only be utilized by States.[27]

Liability Convention Article 1 defines the terms "launching State," "space object" and "damage." Pursuant to Article 1(c) "launching State" is a State which launches or procures the launch of the space object and the State from whose territory or facility the space object is launched. The term "space object" has a redundant definition. Article 1(d) reads as follows "[t]he term 'space object' includes component parts of a space object as well as its launch vehicle and parts thereof." Article 1(a) defines "damage" to mean "loss of life, personal injury or other impairment of health; or loss of or damage to property of States or of persons, natural or juridical, or property of international intergovernmental organizations." While the definitions establish usable concepts, their contours remain unclear. For instance, it is unsettled under the "damage" definition how far the phrase "other impairment of health" reaches in connection with harm to a person. Similarly, it is unclear whether the Convention's subsequent use of the phrase "caused by" in connection with damage means recovery is limited to direct damages or whether it can include indirect damages.[28] This uncertainty carries significant implications when considering Article XII's measure of damages. Article XII declares the measure of compensation is "determined in accordance with international law and the principles of justice and equity." *ChorzËw Factory* (*Germany v. Poland*) articulates the international law standard for the measure of damages as being the amount that will "as far as possible wipe out all consequences of the illegal act and reestablish the situation which would, in all probability, have existed if that act had not been committed."[29] The same standard is utilized by the Iran-United States Claims Tribunal for a State's de-

25 *Id*. at 26.

26 *See* Marc S. Firestone, *Problems In The Resolution Of Disputes Concerning Damage Caused In Outer Space*, 59 Tulane Law Review 747, 755 (January 1995).

27 Wong, *supra* note 2, 7 Cardozo J. Conflict Resol. at 452 ["Although the Liability Convention sets forth ways in which to settle disputes, the Convention is not the exclusive means to seek redress."].

28 Carl Q. Christol, *International Liability For Damage Caused By Space Objects*, 74 American Journal of International Law 346, 360 - 362 (1980).

29 [1928] PCIJ, Judgement No. 13 (Merits), ser. A, No. 17, at 47; 4 ILR 258, 271 - 272.

privation of private property.[30] Article XII adopts the international standard as it requires compensation that restores the injured person "to the condition which would have existed if the damage had not occurred." This measure, however, should exclude contingent or indeterminate damages in as much as customary international law precludes recovery for that class of damages.[31]

Articles II through VII allocate fault and set the criteria for applying absolute or strict liability, shared liability, apportioned liability and exoneration of liability. The *loci* of the damage occurrence determines which liability scheme applies. Article II imposes absolute or strict liability for damage "caused by" a space object on the surface of the Earth or to aircraft in flight. Article III provides that liability for damage "being caused" by a space object in space or on a celestial body is premised on fault. Articles IV and V address the allocation of fault when more than one party may be at fault for the damage. Article VI provides a defense to absolute liability if the damage results from gross negligence or an intentional act of the "claimant State or of natural or juridical persons it represents." Article VII provides a defense to international liability for damage "caused by" a space object if the damage is suffered by a national of the launching State or to foreign nationals who participated in or associated with certain activities involving the space object.

Applying the principles of damage, liability, fault, and measure of damages pursuant to Article 35(1) necessitates a determination that they reflect customary international law.[32] To this extent, *ChorzËw Factory* indicates that Article XII's measure of damages reflects customary international law. Thus, the true question is whether the Convention's definitions of "damage" and "space object," as well as its liability and fault allocation scheme reflect contemporary customary international law.

Customary international law is not stagnant but evolves over time.[33] It forms by State practice but does not derive from "any single, definitive, readily-identifiable source."[34] It has historically been viewed as coming into existence over an extended period of time and derives from a consensus among States regarding norms that govern state conduct.[35] State conduct alone, however, is insufficient. The state conduct or practice must be founded on a sense of legal obligation, meaning that states conform with the practice in their dealings with each other because they consider it a legal requirement as opposed to it being "a good idea,

30 Crook, *supra* at 10, 83 Am J. Int'l L. at 301 & 301 n. 118 citing *Tippetts, Abbett, McCarthy, Stratton v. TAMS-AFFA*, 6 Iran-U.S. C.T.R. 219, 225 (1984 II); *American Int'l Group, Inc. v. Iran*, 4 Iran-U.S. C.T.R. 96, 105, 109 (1983 III).

31 *ChorzËw Factory,* PCIJ Series A, Judgment No. 17 at 56 -57; 4 ILR at 274.

32 It can also apply the Liability Convention principles if they are incorporated into the applicable national law or constitute rules of law. However, that is beyond the scope of this paper.

33 *Pope & Talbot Inc. v. Canada, NAFTA Arbitration Tribunal,* 125 ILR 127, 148 ¶ 59.

34 *United States v. Bellaizac-Hurtado*, 700 F.3d 1245, 1252 (11th Cir. 2012) citing and quoting *Flores v. S. Peru Copper Corp*., 414 F.3d 233, 247 -249 (2d Cir. 2003).

35 *Id.*

or politically useful or otherwise desirable."[36] The conduct or practice does not have to be universal but it "should reflect wide acceptance among the states particularly involved in the relevant activity."[37]

Pragmatic scholars, however, confront this traditionalist school of thought with the doctrine of "instant custom."[38] Proponents of the "instant custom" school of thought believe that characteristics of the modern era such as the exponential expansion of technology, instantaneous flow of information and acceleration of change in the geopolitical landscape renders the traditional deliberative process too slow and archaic.[39] The "instant custom" theory allows for a rapid development of customary law based on "(1) an articulation of the putative law and (2) an act in support of it or acquiescence demonstrating acceptance of it."[40] Support or acquiescence can occur over a short period of time to demonstrate that a norm has developed and does not require the numerosity of States as the traditional method.[41] The fundamental divergence between traditional formation of international law and "instant custom", however, is the temporal element. It can fairly be argued that the Liability Convention satisfies both beliefs.

Treaties and United Nations General Assembly Resolutions are generally viewed as "an articulation" of the relevant law and State conduct acquiescing to the articulation demonstrate the formulation of a norm.[42] *United States v. Dire*[43] employs this concept in ruling that the provisions of the United Nations Conference on Law Of the Sea ("UNCLOS")[44] reflect customary international law on piracy and are "binding on even those nations that are not a party to the Convention including the United States."[45] Similar to UNCLOS, the Liability Convention represents an articulation of customary international law for several reasons.

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36 *Id*, quoting *Buell v. Mitchell*, 274 F.3d 337, 372 (6th Cir.2001); Restatement (Third) of Foreign Relations.

37 *Id*.

38 Jacob M. Harper, "*Technology, Politics, And The New Space Race: The Legality And Desirability Of Bush's National Space Policy Under The Public And Customary International Laws Of Space*," 8 Chicago Journal of International Law 681, 688 - 690 (Winter 2008). *See* Bin Cheng, *United Nations Resolutions on Outer Space: "Instant" International Customary Law?*, 5 Indian J. International Law 23, 35-40, 45-48 (1965).

39 *See* Harper, *supra* note 38, 8 Chi. J. Int'l L. at 690.

40 *Id*. at 690 - 691.

41 *Id*. at 691.

42 *Id*.

43 680 F.3d 446 (4th Cir. 2012) cert. den. -- U.S.--, 133 S.Ct. 982, 184 L.Ed.2d 765, (2013).

44 Entered into force Nov. 16, 1994, 1833 U.N.T.S. 397, 21 ILM 1261(1982).

45 *Id*. at 462.

The Liability Convention has been in effect for over 40 years and is currently ratified by at least 90 States.[46] There is one well known incident coming within the Convention's coverage. The event concerned Cosmos 954, a Soviet Union satellite which crashed in a remote part of Canada in 1978.[47] The crash did not cause any personal injury, but Canada did demand compensation for activities associated with the crash. Although the States settled the dispute without any admission of liability, neither State claimed the Liability Convention was inapplicable or irrelevant.[48]

Despite the apparent rarity of space related damage disputes, many space faring nations have implemented domestic laws concerning governmental responsibility and liability in connection with private space activities for which it is responsible. Such legislation include, among other provisions, mandatory insurance requirements for nonstate actors engaging in space activities. These domestic law enactments derive from the States' sense of legal obligations imposed by the Outer Space Treaty and the Liability Treaty.[49]

Moreover, the International Space Station Intergovernmetal Agreement ("ISS Agreement")[50] relies on and incorporates Liability Convention principles. Specifically, ISS Agreement Article 2(1) acknowledges the ISS "shall be developed, operated, and utilized in accordance with international law," including the Outer Space Treaty and Liability Convention.[51] Article 16 addresses cross waivers of liability among the parties to the agreement and Article 16(c) makes clear that the cross -waiver provisions "includes a cross-waiver of liability arising from the Liability Convention." Article 17 provides that except for the cross waivers of liability contained in Article 16(1), the States participating in the ISS

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46 *See* Brian Wessel, *The Rule of Law In Outer Space: The Effects of Treaties And Non-binding Agreements On International Law*, 35 Hastings International and Comparative Law Review 289, 293 (summer 2012) citing U.N. Office for Outer Space Affairs, Treaty Database, <www.unoosa.org/oosatdb/showTreatySignatures.do>.

47 Stanton Eigenbrodt, *Out To Launch: Private Remedies For Outer Space Claims*, 55 Journal of Air Law and Commerce 185, 200-202 (fall 1989).

48 *Id*.

49 *See* Steven Freeland, *Fly Me to the Moon: How Will International Law Cope with Commercial Space Tourism?* 11 Melbourne Journal of International Law 90, 106 (May 2010)[These treaties have been "one of the underlying reasons behind the growing number of national space laws enacted by states. The terms of these domestic laws enable states to pass on financial responsibility to their private entities, and recover the amount of the damages for which they remain liable at the international level."]

50 Agreement Among The Government Of Canada, Governments Of Member States Of The European Space Agency, The Government Of Japan, The Government Of The Russian Federation, And The Government Of The United States Of America Concerning Cooperation On The Civil International Space Station, done on January 29, 1998, entered into force on March 27, 2001, T.I.A.S. No. 12,927, State Dept No. 01-52, 2001 WL 679938.

51 Article 2(1) also references the Rescue Agreement and Registration Convention.

"shall remain liable in accordance with the Liability Convention." Also, Article 17(2) and 17(3) expressly address application of the Liability Convention's fault apportionment provisions and defenses.

Furthermore, there is not any known instance of any State withdrawing from the Convention or a space faring State lodging or making formal objections to the Liability Convention's provision concerning damages, fault and liability allocation. Similarly, there is not any competing international liability scheme developed to address space based claims for harm to a person or property. More importantly, thought, is that while some have espoused the idea of developing a new protocol or treaty to govern space based damage disputes, such protocols or treaties are viewed as supplementing the Liability Convention rather than supplanting it.[52] This concept of supplementing the Convention is envisioned by Liability Convention Article XXIII(2) which clarifies that the Convention does not "prevent States from concluding international agreements reaffirming, supplementing or extending its provisions."

Given State behavior during the Liability Convention's 40 year history, it can reasonably be concluded that the States actively "involved in the relevant activity" of launching space objects and/or being deemed responsible or liable for a space object have acted and continue to act based on a sense of legal obligation flowing from Liability Convention.[53] Thus, the Liability Convention's core provisions of damage, measure of damages and fault can be viewed as fulfilling the criteria for "instant custom" as they articulate legal obligations and sufficient State conduct demonstrates acceptance of the legal obligation.[54] The legal principles and the prevailing State practice can also be deemed to satisfy the legal obligation and *opinio juris* element under the traditional method of forming international law. The crux for the traditional method, therefore, is whether sufficient time has lapsed for the State practice to be considered an international norm.

The temporal period for showing the existence of an international norm is not subject to an enshrined number of years. Instead, as the International Court of Justice observed in *North Sea Continental Shelf (Germany v. Denmark, Germany v. Netherlands):*[55]

> [a]s regards the time element, although it was over ten years since the Convention had been signed, it was still less than five years since it came into force, and less than one had elapsed when the negotiations between the Federal Republic and Denmark

52 Henry R. Hertzfeld, *A Roadmap For A Sustainable Space Legal Regime*, at 28 (2012) available at <www.gwu.edu/~spi/assets/docs/Hertzfeld-IISL%20Paper-Revision%20 11-30-2012.pdf> (last visited on September 1, 2013) [Stressing that any such protocol or treaty "would not replace, contradict, or invalidate the existing Liability Convention. It would, though, close loopholes and gaps where it is possible to fairly and equitably apply the new rules in order to encourage business, safety and fairness."]. *See* Ernest, *supra* note 2, 41 Case W. Res. L. at 535- 539.

53 *Bellaizac-Hurtado*, 700 F.3d at 1252 citing and quoting *Buell,* 274 F.3d at 372.

54 Harper, *supra* note 38, 8 Chi. J. Int'l L. at 688.

55 1969 I.C.J. 3; 41 ILR 29 (1969).

> and the Netherlands had broken down. Although the passage of only a short period of time was not necessarily, or of itself, a bar to the formation of a new rule of customary international law, an indispensable requirement would be that, within the period in question, State practice, including that of States whose interests were specially affected, should have been both extensive and virtually uniform, and should moreover have occurred in such a way as to show a general recognition that a rule of law or legal obligation was involved.[56]

The conduct of space faring States over the 40 year existence of the Liability Convention, especially since the acceleration of nonstate actor participation in space activities, constitute a sufficient basis for deciding that its provisions on liability, fault allocation, and damage reflect customary international law under the traditional approach. Thus, an arbitral tribunal can reasonably determine the Liability Convention's legal principles reflect customary international law under either the traditional school of thought or the "instant custom" school of thought. This is further supported by legal scholars who acknowledge that the Liability Convention's principles are now a part of customary international law.[57]

As seen, the Liability Convention's legal principles can be construed as a part of international law. If a tribunal using the PCA Rules reaches this conclusion, then the principles are eligible for utilization under PCA Article 35(1). The threshold consideration thus becomes why should an arbitral panel apply some or all of the Liability Convention principles as the substantive law in a tort based space dispute involving a private entity.

IV. Liability Convention Legal Principles Applied as Substantive Law Pursuant to PCA Rules Article 35(1)

Customary international law primarily concerns itself with state practices and rarely imposes direct legal restraints on private individuals or other nonstate actors.[58] A nonstate actor is subject to international law when rights and duties are attributed directly to the individual and not indirectly through the

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56 *Id* at 1969 I.C.J. at 74, 41 ILR at 72.

57 James P. Terry, *The Lawfulness Of Attacking Computer Networks In Armed Conflict And In Self-Defense In Periods Short Of Armed Conflict: What Are The Targeting Constraints?* 169 Military Law Review 70, 87 (2001) [The four space conventions including the Liability Convention "are so widely accepted that they are viewed as reflective of customary international law, even as between non-parties']. *See* Jennifer Friedberg, *Bracing For The Impending Rocket Revolution: How To Regulate International Environmental Harm Caused By Commercial Space Flight*, 24 Colorado Journal of International Environmental Law and Policy 219 (Winter 2013) [Liability Convention principles "may now represent customary international law."]

58 *See* Marek St. Korowi, "*The Problem of the International Personality of Individuals*," 50 AJIL 533, 542 (July 1956).

medium of states.[59] Historically, customary international law rarely attributes rights and duties to nonstate actors because private or nonstate conduct was hardly ever a matter of mutual legal concern among states.[60] Consistent with this international law tenet, the space legal regime rarely attributes rights and obligations directly to nonstate actors in connection with damage caused by space activities.

Outer Space Treaty Article VII provides, in part, that a launching State is "internationally liable for damage to another State Party to the Treaty **or to its natural or juridical persons**" for damage caused by an object it launched into outer space or to the Moon or other celestial body. This language "allows foreign natural and juridical persons to make direct claims against a launching State"[61] but does not provide for a procedure for pursuing the claim directly against a State or any other party. Liability Convention Article XI(2) expressly acknowledges that the Convention does not prevent a natural or juridical person from "pursuing a claim in the courts or administrative tribunals or agencies of a launching State."[62] Article XI(2) further provides that a State can not utilize the Convention's claim procedure when recovery for the same damage "is being pursued in the courts or administrative tribunals or agencies of a launching State or under another international agreement which is binding on the States concerned." Noticeably, Article XI(2) does not limit the claim to one against a State meaning the claim can be against a nonstate actor. Thus, the space law regime recognizes that a nonstate actor can possess a private claim against a launching State, a non launching State or another nonstate actor for space based damage. The regime does not, however, provide a direct mechanism for a nonstate actor to pursue a claim at the international level.

While Article XI(2) refers to a nonstate actor's claim being pursued in accordance with the law of the launching State, use of such a venue and substantive law is not mandatory or exclusive. A general principle of international law is that what is not prohibited is permitted.[63] In other words, "'in relation to a specific act, it is not necessary to demonstrate a permissive rule so long as there is no prohibition.'"[64] Neither the Outer Space Treaty nor the Liability Conven-

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59 *Id* at 535.

60 *Bellaizac-Hurtado*, 700 F.3d at 1252.

61 Christol, *supra* note 28, 74 Am. J. Int'l L. at 358 n. 52. *See* The Liability Convention can be interpreted as giving individuals the option for pursuing damages.]

62 Kendra Webb, *To Infinity And Beyond: The Adequacy Of Current Space Law To Cover Torts Committed in Outer Space*, 16 Tulane Journal of International and Comparative Law 295, 309 n.152 (2007) citing Office of Technical Assessment, Space Stations and the Law: Selected Legal Issues 44-50 (1986), reprinted in Glenn H. Reynolds & Robert P. Merges, Outer Space: Problems of Law and Policy, 261 (1989).

63 *S.S. Lotus*, P.C.I.J. Ser. A, No. 10 at 18 (1927).

64 Roland Tricot and Barrie Sander, "*Recent Developments: The Broader Consequences Of The International Court of Justice's Advisory Opinion On The Unilateral Declaration of Independence In Respect Of Kosovo*," 49 Columbia Journal of

tion contain any provision prohibiting or precluding a nonstate actor from using international arbitration to pursue a damage claim arising from space activities. Similarly, neither treaty provides that the launching State's national law or the national law of any State is the exclusive *lex causae* for resolving a claim by a nonstate actor. Likewise, the space law regime does not preclude using the Liability Convention's legal principles in an international arbitration when a nonstate actor is a party.

Applying international law to conduct of a nonstate actor, while rare, is not unheard of. Piracy is the first instance of international law being extended to activities of a nonstate actor. This extension of international law developed not because piracy was "uniquely heinous but 'because of the threat that piracy pose[d] to orderly transport and commerce'" and the conduct transpired on the high seas, a realm not subject to the sovereignty of States."[65] In the civil context, prior to the last century, international tribunals did not apply international law to nonstate actors. [66] During the 20th Century, arbitrators commenced applying international law principles in arbitration between a State and nonstate actor involving expropriation,[67] nationalization,[68] and international concession agreements.[69] This application resulted from arbitrators developing the "internationalized contract" doctrine.[70] International law principles being applied in tort claims brought by a nonstate actor is further fortified by the United States Alien Tort Claims statute jurisprudence.[71]

Even more so, international law as embodied in a multinational treaty has been used as the rule of decision in civil disputes between two nonstate actors. *Dalmia Cement Ltd v. National Bank of Pakistan*,[72] concerned a dispute between

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Transnational Law, 321, 327 (2011) quoting Accordance with International Law of the Unilateral Declaration of Independence in Respect of Kosovo (Kosovo Advisory Opinion), Advisory Opinion, 2010 I.C.J. at 2 (July 22)(declaration of Judge Simma).

65 Eugene Kontorovich, *The Piracy Analogy: Modern Universal Jurisdiction's Hollow Foundation*, 45 Harv. Int'l L.J. 183, 195 (Winter 2004).

66 John Cerone, *The Status Of The Individual: A Critical Appraisal*, Proceedings of The Annual Meeting (American Society of International Law), 100 American Journal of International Law 257, 257 (2006).

67 *Sapphire International Petroleums Ltd v. National Iranian Oil Company*, 35 ILR 136 (Arb. Award 1963).

68 *Agip Spa v. The Government of The Popular Republic of The Congo*, 67 ILR 318 (ICSID 1979).

69 *Texaco Overseas Petroleum Company (TOPCO) v. Libya*, 53 ILR 389 (Arb. 1977).

70 A.A. Fatouros, *International Law and the Internationalized Contract*, 74 American Journal of International Law 134 (1980). *See Revere Copper & Brass Inc. v. Overseas Private Investment Corp*, 56 ILR 258, 274 - 276 17 I.L.M. 1321, 1332-38 (D.D.C.1978), aff'd, 628 F.2d 81 (D.C.Cir.1980), cert. denied, 446 U.S. 983 (1980).

71 *Kiobel v. Royal Dutch Petroleum*, ---U.S.---, 133 S.Ct. 1659, 2013 WL 1628935(2013).

72 *See* Danilowicz, *supra* note 12, 9 Hastings Int'l & Comp. L. Rev. at 276 & 276 n. 148 citing 1 Y.B. Com. Arb. 129, 131 (1976). *See* 67 ILR 611 (I.C.C. Arb. Trib. 1976)[brief synopsis of case].

an Indian cement company and a Pakistani bank where the outcome was determined by a principle of public international law. The resolution turned on the tribunal's determination that, despite the violent hostilities between India and Pakistan, a state of war under international law did not exist between the States.[73] More on point, though are *Castle John v. NV Mabeco*[74] and *Institute of Cetacean Research* v. *Sea Shepherd Conversation Society.*[75] *Castle John* and *Sea Shepard* each used customary international law principles embodied in an international treaty as the substantive law for resolving a non contractual and non commercial dispute between two private parties arising in the international arena of the high seas.[76]

The above background reveals that, under certain circumstances, applying substantive international law principles as the *lex causae* in a dispute involving a nonstate party is consistent with international law. This establishes that it is possible for PCA Rules Article 35 to serve as a vehicle for the Liability Convention's legal principles being employed in an arbitration involving a nonstate actor. This also opens the inquiry as to what circumstances can this occur. It appears the circumstance can arise in a dispute subject to the Liability Convention as well as claims falling outside of the Convention's scope.

If two space objects with different launching States and owned and operated by juridical persons of different nationalities collide in space, the incident is appropriate for implementing the Liability Convention's dispute resolution mechanism. Convention Article XXIII(2) reaffirms that the Convention does not "prevent States from concluding international agreements reaffirming, supplementing or extending its provisions." Accordingly, the launching States can settle the matter by entering into an agreement that the two juridical persons arbitrate the dispute directly in a proceeding governed by the PCA Rules.[77] This scenario can emerge if the launching States do not desire to undertake the matter diplomatically or expend governmental resources in connection with the dispute. Similarly, if the juridical persons or their insurers, if any, prefer to

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73 *Id* at 625 - 626 ¶ 53 and 626 - 627 ¶ 60.

74 77 ILR 537 (Belgium Court of Cassation 1986).

75 708 F.3d 1099 (9th Cir. 2013).

76 The two cases involved plaintiffs seeking injunctive and declaratory relief against a non-State actor for conduct alleged to constitute piracy under international law.

77 The launching States agreeing to allow private arbitration pursuant to the PCA can be construed as an international agreement for purposes of Article XXIII(2). In such an occurrence, any such agreement should specify that the launching States are not parties to the arbitration and the agreement should be signed by both juridical persons. This prevents any confusion or claim that the launching States are parties as well as remove potential obstacle to enforcement of any award. *See e.g. Technosystem SpA v. Taraba State and Federal Government of Nigeria*, PCA Case No 96001,TS/Nig. 70 (1996) synopsis of case printed in **Permanent Court of Arbitration: International Arbitration and Dispute Resolution -Summaries of Awards, Settlement Agreement and Reports** 176 - 181, Kluwer Law International (P. Hamilton et al, ed 1999).

handle or control resolution of the dispute rather than subject resolution to the variables of politics and diplomacy, they can agree between or among themselves to arbitrate the dispute in a proceeding subject to the PCA Rules. In either circumstance, if the parties designate international law or more specifically principles of the Liability Convention as the substantive law, then Article 35(1) mandates applying that designated law. On the other hand, absent a designation of the applicable substantive law in the agreement, the arbitrators, with or without input from the private parties,[78] will "apply the national and/or international law and rules of law it determines to be appropriate." If the tribunal, in its discretion, determines that international law, and more specifically the Liability Convention's legal principles, constitute the appropriate substantive rule, then the principles can serve as the *lex causae*.

The Liability Convention's principles concerning damage, measures of damages and fault can also serve as the decisional law for space based damage claims which fall outside of the Convention's scope. Three short potential hypotheticals demonstrate this point.

Hypothetical 1

Two commercial satellites collide in space. Each satellite is owned and operated by juridical persons with a different nationality but the same launching State. Since both space objects were launched by the same State, Liability Convention Article VII indicates the Convention does not apply. The juridical persons and their insurers are unable to settle the claims arising from the collision. They do not want to litigate in the other's national court system or the launching State's court system. The parties decide to arbitrate liability and damages under the PCA Rules.

Hypothetical 2

An astronaut on board a space object launched and operated by State A performs a space walk to make repairs on the space object. The astronaut loses grip on a metal tool fabricated in space by a 3-D printer,[79] and the tool proceeds to flow freely in Earth orbit. It subsequently strikes a space object providing an outer space joy ride for wealthy patrons. The tourist space object was launched by State B and is operated by a State B juridical person. The collision

78 PCA Rules Articles 20(2)(e) and 21(2) require each party to submit legal grounds supporting its position regarding the merits of the dispute. This provides the opportunity for each party to articulate its position concerning the applicable law. Presumptively, if all parties to the arbitration argue that international law serves as the lex causae, then that can be construed as an agreement on the substantive law for Article 35(1) purposes.

79 *See* Doug Gross, *NASA sending a 3-D printer into space*, CNN.com (Aug. 14, 2013) available at <www.cnn.com/2013/08/13/tech/innovation/nasa-3d-printer> (Last visited Sept. 2, 2013). An argument can be advanced that a tool on board a space object at the time of launch is a "component part" of the space object for purposes of Liability Convention Article 1.

damages the tourist space object and injures 3 passengers each with a different nationality but none with the nationality of either State A or State B.
It can legitimately be argued that the Liability Convention is inapplicable as the tool which caused the collision and damage is not a space object since it was fabricated or replicated in space using a 3-D printer rather than it being transported from Earth to outer space. The parties are unable to settle the damage claims. In lieu of expending a debatable claim under the Liability Convention or litigating in the national courts of State A, State B or the State of any injured passenger, the parties agree to arbitration using the PCA Rules.

Hypothetical 3
A juridical person formed and registered under the laws of State A, is engaged in extraterrestrial mining. It uses robotic space craft[80] launched into space as payload on board a launch from State B. To expedite extraction of resources from a near Earth asteroid, the State A juridical person uses its robotic craft to place low yield TNT explosives in certain designated areas on the asteroid. This is done without prior disclosure to States A and B.[81] The explosions cause the asteroid to fracture with parts of the fractured asteroid falling into Earth orbit and striking a communications satellite owned and operated by a juridical person from State C which is also the launching State. This impact causes the communications satellite to deviate from orbit and subsequently collide with a remote sensing satellite owned and operated by a multinational petroleum company from State D but launched by State C. The explosion also damages several robotic craft of a juridical person from State E which was mining another portion of the asteroid.
Under these facts, it can be legitimately argued that the incident is beyond the reach of the Liability Convention as the damage to the communications satellite and the robotic craft was not caused by a space object, and the collision between the two satellites satellite is not covered as both space objects share the same launching State. The parties are unable to settle the damage claims or agree on the whether any part of the damage is subject to the Liability Convention. Given the potentiality that the Liability Convention may not apply and in lieu of the juridical persons litigating in the national courts of any State, the juridical persons, and the States agree to arbitrate using the PCA Rules.
Each of the three hypotheticals involves a space based claim suffered or caused by a nonstate actor with relief being available in an international arbitration using the PCA Rules. If the parties in each instance agree that international law,

80 Charlie Jane Anders, *Swarms of robots could be mining asteroids within a generation*, io9.com (March 21, 2013) available at <http://io9.com/swarms-of-robots-could-be-mining-asteroids-within-a-gen-458282597> (last visited Sept. 2, 2013); Jason Major, *Space Exploration By Robot Swarm,* universetoday.com (May 15, 2012) available at <www.universetoday.com/95180/space-exploration-by-robot-swarm/> (last visited Sept. 2, 2013).

81 This lack of knowledge can absolve States A and B from international responsibility under Outer Space Treaty Article IX.

or more specifically the Liability Convention's principles of damage, fault allocation and measure of damages apply to the merits, then Article 35(1) dictates that the arbitral panel apply the designated substantive law. If no substantive law is designated, then the arbitral panel, with or without memoranda from the parties,[82] must select the applicable substantive law as being "national and/or international law and rules of law" or a combination from among the trio. Several viable reasons justify or warrant the arbitrators selecting international law as the applicable *lex causae*.

A fundamental and crucial issue associated with the choice of law is whether national law can be applied as *lex causae* in a dispute involving multiple nationalities arising from damage suffered or caused in the international domain of outer space. Outer Space Treaty Article II prohibits national appropriation in space "by claim of sovereignty, by means of use or occupation, or by any other means." Thus, damage suffered by a nonstate actor or property located in space, raises the question of whether Outer Space Treaty Article II precludes applying any national law as *lex causae*. Selecting any national law as the substantive law may constitute or be viewed as an extension or exercise of sovereignty, especially by others involved in the collision whose national laws were not selected as the applicable law. Moreover, when damage is sustained in outer space or on an extraterrestrial body, utilizing terrestrial "*lex loci delicit* is absurd" as the law of no nation should apply.[83] This point may serve as an underlying reason for using international law and the Convention's legal principles as the substantive law. Indeed, if choosing a national law as *lex causae* for a collision or accident in international space amounts to an exercise of sovereignty, then use of any national law as *lex causae* may undermine the arbitral award's validity.

Applying international law would also be consistent with the hesitancy of international arbitral panels to apply a national law as *lex causae* in absence of the parties unequivocally specifying a particular national law as governing the merits. This hesitancy is seen in the Iran-United States Claims Tribunal as that "Tribunal has rarely decided on the basis of national rules, even in cases where the parties might arguably have agreed on them as the rule of decision."[84] The same hesitancy can reasonably apply in deciding whether to employ international law as the substantive law in a space based injury claim.

Using national laws as the *lex causae* for space based damage claims would also defeat harmonization of space based damage claims. Injecting national law into such disputes leaves the substantive law subject to the consequences of fate depending upon the States and/or nationality of the persons and property

82 PCA Rules Article 20(2)(e) and Article 21(2) require each party to submit argument or legal grounds supporting its position regarding the merits of the dispute. This provides the opportunity for the parties to articulate its assertion on the applicable substantive law. *See* Note 7, *supra*. Presumptively, if all parties assert international law should serve as the lex causae, then this can potentially satisfy the designation element of Article 35(1).

83 Firestone, *supra* note 26, 59 Tul. L. Rev. at 757.

84 Crook, *supra* note 10, 83 Am. J. Int'l L. at 280.

involved in a collision or other incident. That is neither desirable nor conducive for introducing stability or establishing the parameters for determining liability and compensation for damage suffered by persons or property in outer space. *Lex specialis derogat legi generali* further supports utilizing international law and the Liability Convention's principles. This doctrine, often referred to as *lex specialis*, derives from the legal concept that the specific rule prevails over the general rule.[85] The Liability Convention's legal principles are special rules developed to address the "specialized international tort law on hazards in the space environment."[86] Since they are a part of customary international law, they should apply to space based tort disputes brought by or against a nonstate actor as they address the specific issue of space based damage.

In applying the Liability Convention's principles to space based tort claims involving nonstate actors, an arbitral panel can adopt the definitions of "damage" and "space objects" and interpret the breath of the terms. It can employ the fault allocation scheme for incidents involving a claim against more than one entity as well as the measure of damages an injured party can recover. Most importantly, a tribunal can rely on analogy to extend the Convention's liability scheme to nonstate actors by equating the allocation of fault to a launching State with the fault allocation of nonstate actors causing space based damage.[87] As the Iran-United States Claims Tribunal aptly notes, when addressing circumstances that do not come clearly within the well developed and discussed legal doctrines, the controlling law is "derived from principles of international law applicable in analogous circumstances or from general principles of law. The development of international law has always been a process of applying such established legal principles to circumstances not previously encountered."[88]

V. Conclusion

PCA Rules Article 35(1) opens an avenue for extending the Liability Convention's core legal principles to claims brought by or against nonstate actors for damage suffered or caused in outer space. When confronted with choosing among a myriad of potential national laws for damage claims arising in an international arena, an arbitral panel may prudently decide to utilize international law as the *lex causae*. If and when such a determination is made under

85 Claire R. Kelly, *Power Linkage and Accommodation: The WTO As An International Actor And Its Influence On Other Actors And Regimes*, 24 Berkeley Journal of International Law 79, 98 n. 130 (2006).

86 Christol, *supra* note 28, 74 Am. J. Int'l L. at 369.

87 *See* Crook, *supra* note 10, 83 Am. J. Int'l L. at 299 [Noting that the development of international law has always been a process of applying established legal principles "to circumstances not previously encountered."].

88 *Oil Field of Texas, Inc. v. Iran*, 1 Iran-U.S. C.T.R. 347, 361 (1981-82) available at <www.trans-lex.org/230400>.

Article 35(1), it should include the Liability Convention's core legal principles since they reflect customary international law.

Using arbitration to pave this path for space tort law is not novel. Arbitrators previously followed a similar tact by developing the concept of "internationalized contracts" to apply international law principles to commercial and economic disputes between a State and foreign nonstate actor.[89] With the implementation of the PCA Rules, Article 35(1) now furnishes a basis for arbitrators extracting legal principles from the Liability Convention for application in space based tort claims with nonstate actors as parties.

89 *See Texaco Overseas Petroleum Co.*, *supra* note 69.