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Mark J. Sundahl

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The Cape Town Convention and the Law of Outer Space: Five Scenarios

Mark J. Sundahl*

The adoption of the Space Assets Protocol to the Cape Town Convention marked a new era in the evolution of the law of outer space by providing the first space treaty regarding private international law. This Protocol was not created in a legal vacuum, but was drafted against the background of the existing United Nations space treaties that were drafted in the 1960s and 1970s. Although the existing UN treaties address public international law and therefore cover subject matter that is quite distinct from the private law issues addressed by the Space Assets Protocol, there are still points at which the Protocol intersects with the existing treaties. This article explores these intersections, and even potential conflicts, between the Protocol and the existing treaties. Five hypothetical scenarios are presented to illustrate these intersections between the new and old laws and suggestions are made for how existing space law may either interfere with the operation of the Protocol or, in some cases, facilitate its operation.

The Cape Town Convention (together with its Space Assets Protocol) has ushered in a new era of international space law as the first international treaty that addresses private law, that is, the rights and obligations of parties engaged in business transactions.¹ Earlier international space law applies to commercial space activity in certain respects, but the rights and obligations apply only to states. For example, a state has the duty to supervise the commercial space activities of its nationals. Similarly, the

* Professor and Associate Dean for Administration, Cleveland State University, Cleveland-Marshall College of Law. I would like to recognize Paul Larsen's significant work on this subject which proved to be of immense help as I wrote this article.

¹ Convention on International Interests in Mobile Equipment, 16 November 2001, Senate Treaty Doc No 108-10, <www.unidroit.org/english/conventions/c-main.htm> (Cape Town Convention); Protocol to the Convention on International Interests in Mobile Equipment on Matters Specific to Space Assets, in Final Act of the Diplomatic Conference for the Adoption of the Draft Protocol to the Convention on International Interests in Mobile Equipment on Matters Specific to Space Assets, UNIDROIT Doc DCME-SP-Doc. 43 (9 March 2012) <www.unidroit.org/english/workprogramme/study072/spaceprotocol/conference/documents/dcme-sp-43-e.pdf> (Space Assets Protocol).

duty of states to return to the launching state errant spacecraft that have crashed in their territory extends to the return of privately owned spacecraft. However, a private company has no standing under international law to demand the return of its errant spacecraft. In contrast, a bank that has an international interest in the form of a security interest in a satellite has a right to exercise remedies under the Cape Town Convention if the debtor defaults on its payment obligations – because a state that is a party to the Convention is required to enforce the bank's right to exercise these remedies.

The Cape Town Convention also differs from the earlier space treaties in the nature of the concerns that motivated its creation. In contrast to the earlier treaties, the Cape Town Convention is motivated by the concerns that arise from private transactions rather than governmental interests.² Rather than being

² See PB Larsen, 'Critical Issues in the UNIDROIT Draft Space Protocol' in *Proceedings of the Forty-Fifth Colloquium on the Law of Outer Space* (American Institute of Aeronautics and Astronautics 2003) 2, 4 (explaining that '[t]he Protocol is concerned primarily with private law and with the protections of financiers who enter into private law contracts, whereas existing space law is primarily public law.').

driven by concerns of sovereignty claims and militarization, the Cape Town Convention addresses the needs of private financiers, such as the priority of secured parties, title to purchased assets, and remedies upon default. This stark difference in the subject matter of the Convention in contrast to the existing space treaties results for the most part in an absence of intersection and conflict between the treaties.³ Nevertheless, some intersections do arise and must be kept in mind by practitioners and courts that are involved in the application of the Convention. The need for this vigilance is heightened by the fact that the Convention and Protocol are, by their own terms, subordinated to the terms of the existing space treaties. In light of this, the practitioner involved in a transaction governed by the Cape Town Convention must understand not only the Convention and Protocol, but also the broader body of space law. This article explores five hypothetical scenarios that illustrate potential intersections and conflicts between the Convention and the existing law of outer space.

I. A Concise Introduction to the Law of Outer Space

The codification of space law began with the *1962 United Nations Declaration of Legal Principles Governing the Activities of States in the Exploration*

³ P van Fenema, 'The UNIDROIT Space Protocol, the Concept of 'Launching State', Space Traffic Management and the Delimitation of Outer Space (Report of the 41st Session of the UNCOPUOS Legal Subcommittee)' (2002) 27 *Air & Space L* 266, 275 (explaining that during a meeting in 1997 the UNIDROIT Space Working Group 'concluded that there was no conflict between the provisions of the draft Protocol and the existing body of space law' and that the ITU indicated 'that it saw neither overlap nor contradiction between the [Cape Town] Convention and the draft Protocol, on the one hand, and the ITU Constitution, Convention and Radio Regulations, on the other.'). PB Larsen (n 2) 3 (explaining that the COPUOS Legal Subcommittee 'agreed with the no conflicts principle' recognized by the Space Working Group). For the views of the UNCOPUOS Legal Subcommittee see UN Committee of Peaceful Uses of Outer Space, Report of the Legal Subcommittee on its forty-first session, UN Doc A/AC.105/787 (2002).

and Use of Outer Space.⁴ This Declaration included the following fundamental principles that formed the bedrock of international space law:

- That space should be explored and used for the benefit of all mankind;⁵
- That space is open to free exploration by all states;⁶
- That no state can claim sovereignty over space or celestial bodies;⁷
- That space should be used in accordance with international law and in the interests of peace;⁸
- That states must bear responsibility for their activity in space, supervise activities of non-governmental parties, and be liable for harm caused by their activity or by their nationals;⁹
- That states maintain a registry of their space objects;¹⁰
- That space activity be guided by international cooperation and that states avoid interference with the activities of other states;¹¹
- That the state of registry maintain jurisdiction and control over a space object;¹²
- That ownership shall not be affected by an object's entry into space;¹³
- That states provide assistance to astronauts in distress;¹⁴ and
- That states return to the launching state any astronauts or space objects found on their territory or on the high seas.¹⁵

⁴ Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space, UNGA Res 1962, 1280th plen mtg, UN Doc A/RES/1962 (13 December 1963) (Declaration of Principles).

⁵ Ibid para 1.

⁶ Ibid para 2.

⁷ Ibid para 3.

⁸ Ibid para 4.

⁹ Ibid paras 5 & 8.

¹⁰ Ibid para 7.

¹¹ Ibid para 6.

¹² Ibid para 7.

¹³ Ibid para 7.

¹⁴ Ibid para 2.

¹⁵ Ibid paras 7 & 9.

These principles reflect the issues and concerns that existed at the time of drafting. Space activity was limited to governments and the prospect of private commercial space use was a rather distant concept. The concerns of the United States and the Soviet Union were of a governmental nature, namely, to prevent the appropriation of space by the other state, to avoid the militarization of space, to maintain control over their satellites, and to ensure the rescue and return of their astronauts and spacecraft.

In the years following the adoption of the Declaration of Legal Principles, five treaties were drafted under the auspices of the United Nations to codify and elaborate upon the principles contained in the Declaration. These five core space treaties include:

- 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);¹⁶
- The Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Space (Rescue and Return Agreement);¹⁷
- The Convention on International Liability for Damage Caused by Space Objects (Liability Convention);¹⁸
- The Convention on Registration of Objects Launched into Outer Space (Registration Convention);¹⁹ and

¹⁶ Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies (adopted 27 January 1967, entered into force 10 October 1967) 610 UNTS 205 (Outer Space Treaty).

¹⁷ Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Space (adopted 22 April 1968, entered into force 3 December 1968) 672 UNTS 119 (Rescue and Return Agreement).

¹⁸ Convention on International Liability for Damage Caused by Space Objects (adopted 29 March 1972, entered into force 1 September 1972) 961 UNTS 187 (Liability Convention).

¹⁹ Convention on Registration of Objects Launched into Outer Space (adopted 14 January 1975, entered

- The Agreement Governing Activities of States on the Moon and Other Celestial Bodies (Moon Agreement).²⁰

All of these treaties have entered into force and have been broadly ratified, with the exception of the Moon Agreement which, although it received a sufficient number of ratifications to enter into force, has been ratified by only thirteen states (none of which are space powers).²¹ One additional area of international law that could be implicated by the operation of the Cape Town Convention is the international law governing telecommunications. This area of the law regulates the allocation of orbital slots for telecommunications satellites and the use of radio frequencies. This law is overseen by the International Telecommunications Union (ITU) and the governing documents include the *Constitution of the International Telecommunications Union*, the *Convention of the International Telecommunication Union*, and the ITU Radio Regulations.²² Although there are potential intersections between the Cape Town Convention and ITU instruments, this article will only consider the five UN space treaties. The relationship between the Convention and customary international law regarding outer space activities also falls outside the scope of this article.

The following sections will examine how the Cape Town Convention interacts with space law through five illustrative examples.

into force 15 September 1976) 1023 UNTS 15 (Registration Convention).

²⁰ Agreement Governing Activities of States on the Moon and Other Celestial Bodies (adopted 18 December 1979, entered into force 11 July 1984) 1363 UNTS 3 (Moon Agreement).

²¹ Status of International Agreements Relating to Activities in Outer Space, Committee on the Peaceful Uses of Outer Space, 6 June 2011, UN Doc A/AC.105/2011/CRP.12.

²² Constitution of the International Telecommunications Union <<http://www.itu.int/aboutitu/basic-texts/constitution.html>> (ITU Constitution); Convention of the International Telecommunication Union <<http://www.itu.int/aboutitu/basic-texts/convention.html>> (ITU Convention).

However, before taking up these particular points of intersection between existing space law and the Cape Town Convention, the next section discusses the preliminary issue regarding how conflicts between the Convention and other sources of space law should be resolved.

II. The Relationship between the Cape Town Convention and the UN Treaties

The effect of the Cape Town Convention on the existing law of outer space was of critical concern to members of the Space Assets Working Group during the drafting of the Space Assets Protocol. As mentioned above, there was concern among governments and academics that the Space Assets Protocol would inadvertently upset the existing system of international space law. For example, there was concern that the registry of international interests would somehow conflict with the existing register of space objects maintained by the United Nations and negatively affect the legal implications of the UN register. To resolve these concerns the Working Group addressed the relationship of existing space law to the Convention in two ways in the Protocol. First, the fourth recital in the preamble to the Protocol recognizes the importance of preserving the principles of space law:²³

MINDFUL of the established principles of space law, including those contained in the international space treaties of the United Nations and the instruments of the International Telecommunication Union . . .

Although the language of a treaty preamble is not binding, it does help to define the context of the treaty which, under the Vienna Convention, must be taken into account when interpreting the treaty. The word ‘mindful’ is not particularly reassuring to those who might wish for a stronger statement of the absolute primacy of existing space law. But the word means at a minimum that the drafters were aware of the importance of existing space law – and perhaps that the treaty should be

interpreted to the extent possible in a manner that is consistent with existing space law.

Second, Article XXXV of the Protocol, reproduced here, explicitly establishes the primacy of the UN treaties and ITU instruments over the Convention:²⁴

The Convention as applied to space assets does not affect State Party rights and obligations under the existing United Nations outer space treaties or instruments of the International Telecommunication Union.

This provision is binding on the parties to the Protocol and establishes the primacy of the five United Nations treaties and the ITU instruments over the provisions of the Convention. Unlike the fourth recital of the preamble, only the United Nations treaties and ITU instruments are mentioned in this article, thus leaving any conflicts between the Convention and other sources of international space law to be resolved according to the principles of *lex posterior* and *lex specialis* (which would almost certainly give primacy to the Convention and Protocol). This means that there is at least the potential that some areas of space law will be trumped by the Convention and Protocol. If customary international law or treaties concluded by states outside the auspices of the United Nations or the ITU conflict with the Convention, primacy will likely be given to the Convention.

III. The Five Scenarios

The following five hypothetical scenarios illustrate situations in which the Cape Town Convention and Space Assets Protocol intersect with the UN space treaties and identify legal interactions that can affect the operation of the Convention (and in some cases the operation of the UN treaties). These situations arise with respect to (i) the operation of the Liability Convention, (ii) the operation of the Rescue and Return Agreement, and (iii) the jurisdictional provisions found in the Outer Space Treaty and the Registration Convention.

²³ Space Assets Protocol Preamble Fourth Recital.

²⁴ Space Assets Protocol art XXXV.

A. Scenario #1: Liability Continues Despite Transfer of the Space Asset

Bank finances the construction of a satellite owned by Satco and the satellite is launched into orbit from State X. Bank takes a security interest in the satellite which is enforceable as an ‘international interest’ under the Cape Town Convention. When SatCo’s business fails, Bank enforces its international interest by selling the satellite to TeleSat, a state-owned enterprise wholly owned by State Z. Two years later, due to State Z’s negligence, the satellite reenters the atmosphere and causes extensive damage on the surface of the Earth. Who is liable for the damage?

Under this scenario, State X will bear absolute liability for the damage under the Liability Convention. The Liability Convention imposes liability on the ‘launching state’ under two rubrics. Article II of the Liability Convention imposes strict liability on the ‘launching State’ for all damage caused by a space object on Earth or to aircraft in flight:²⁵

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.

In contrast, Article III of the Convention imposes liability on the launching state when a space object causes damage to the space object of another state when the object is in the air or in space, but only when the launching state is ‘at fault’:²⁶

In the event of damage being caused elsewhere than on the surface of the Earth to a space object of one launching State or to persons or property on board such a space object by a space object of another launching State, the latter shall be liable

²⁵ Liability Convention art II.

²⁶ Ibid art III. Note that both Article II and Article III address damage caused in airspace, with the distinction being that Article II governs damage caused to aircraft while Article III addresses damage to space objects (which are presumably either *en route* to or returning from space).

only if the damage is due to its fault or the fault of persons for whom it is responsible.

Under Article I of the Liability Convention, the definition of a ‘launching State’ that could bear liability for damage caused by a space object remains unchanged from the Outer Space Treaty and includes (1) a state which launches a space object, (2) a state which procures the launch of a space object, (3) a state from whose territory a space object is launched and (4) a state from whose facility a space object is launched.²⁷ This last category could apply to a state that owns a launching facility, for example, located on an artificial island on the high seas. In the event that there are multiple launching states, each state is jointly and severally liable for damage caused by the space object.²⁸ This multi-faceted definition of a launching state together with the rule of joint and several liability provides a state that has suffered damage (or whose nationals have suffered damage) the possibility of pursuing multiple states, thus allowing for a greater likelihood of recovery.²⁹

The paradigm for state liability for space activities established by the Outer Space Treaty and the Liability Convention has been placed under stress over the years by the gradual expansion of private commercial activity in space. The liability paradigm set forth in the treaties primarily contemplates governmental space activity which involves a state launching a satellite or spacecraft and maintaining control over that space object for its entire lifespan.³⁰

²⁷ Liability Convention art I.

²⁸ Ibid art V(1) and (3).

²⁹ See S Hobe, B Schmidt-Tedd and K Schrogl (eds), *Cologne Commentary on Space Law, Vol. 1* (Carl Heymanns Verlag 2009) 135; see also RJ Lee, ‘Reconciling International Space Law with the Commercial Realities of the Twenty-First Century’ (2000) 4 *Singapore J Intl & Comparative L* 194, 200-01 (explaining how there could, theoretically, ‘be well over four launching States in any single launch.’). Liability also attaches if an attempted, but unsuccessful, launch of a space object causes harm. Liability Convention art I(b).

³⁰ Although governmental use of space was the primary scenario contemplated by the drafters of the space treaties, there was also an understanding that

With the advent and expansion of private space activity, the complexities of commercial transactions, including the transfer of ownership of a space object during its operational lifespan (such as on-orbit satellites), challenged the propriety of the existing liability paradigm. While these issues have existed since the commercialization of space began, some of the tensions between commercialization and the existing law of outer space may be exacerbated by the use of the Cape Town Convention.

A widely criticized shortcoming of the existing law of outer space is that the launching state continues to be liable under the Outer Space Treaty and Liability Convention even after the transfer of the space object by the launching state, or by one of its nationals, to another state or private party (or after the state's loss of direct control over the object through other circumstances, such as the lease of an object).³¹ The liability imposed by the treaties on a launching state is perpetual, with only a few narrow exceptions. Critics of this result see a fundamental unfairness in imposing liability on the launching state when it was in no way

commercial activity would also take place, as is made clear in the Outer Space Treaty's reference in Article VI to space activity by 'non-governmental entities.'

³¹ See, eg, FG von der Dunk, 'The Illogical Link: Launching, Liability and Leasing' in *Proceedings of the Thirty-Sixth Colloquium on the Law of Outer Space* (American Institute of Aeronautics and Astronautics 1993) 349, 351; M Chatzipanagiotis, 'Registration of Space Objects and Transfer of Ownership in Orbit' (2007) 56 *Zeitschrift für Luft- und Weltraumrecht* 229, 230; PB Larsen (n 2) 5; HR Hertzfeld and FG von der Dunk, 'Bringing Space Law into the Commercial World: Property Rights Without Sovereignty' (2005) 6 *Chicago J Intl L* 81, 89; RJ Lee, 'Effects of Satellite Ownership Transfers on the Liability of the Launching States' in *Proceedings of the Forty-Third Colloquium on the Law of Outer Space* (American Institute of Aeronautics and Astronautics 2001) 148, 151; PB Larsen, 'UNIDROIT Space Protocol: Comments on the Relationship between the Protocol and Existing International Space Law' in *Proceedings of the Forty-Fourth Colloquium on the Law of Outer Space* (American Institute of Aeronautics and Astronautics 2002) 187, 190; UN Doc A/AC.105/C.2/L.225, 23 January 2001.

involved in the harmful activity. This issue may be exacerbated by the entry of the Cape Town Convention into force with respect to space assets under the theory that the Convention will result in an increase in the sale and lease of space assets after their launch. The increase in sales and leases under the Convention will arise not only in simple sales and leases, but through sales and leases that take place in the form of remedies pursued by secured creditors. This increase in transactions is likely to occur if the Cape Town Convention is perceived as being useful to facilitate such transactions by providing rights and remedies, or other benefits, which were not available under pre-existing law. The increase in sales and leases will create more situations in which the launching state loses control over the space object (or loses control, by way of loss of jurisdiction, over the entity that controls the space object), thus making more distinct the disconnection between the existing liability regime and the realities of commercial space activity. In addition, the right of a secured creditor to repossess a space asset or take control of the asset upon default (in advance of selling or leasing the asset) will place additional stress on the existing liability regime by potentially interfering with the launching state's ability to control the asset even before it is sold or leased. For the launching state will potentially bear liability for any damage caused by the asset (and will bear absolute liability for any damage caused in the air or on Earth) even though the launching state has been deprived of any ability to control the asset due to secured creditors seizing control of the asset under the Cape Town Convention.

B. Scenario #2: The Convention Assists in Determining Liability

Bank finances the construction of a satellite owned by a secretive company, X Corp, and the satellite is launched into orbit from an unknown location under high secrecy. Bank takes a security interest in the satellite which is enforceable as an 'international interest' under the Cape Town Convention. Bank registered the

international interest before the launch. The satellite fails to reach a sustainable orbit and causes damage in State Y after reentering the atmosphere and falling to Earth soon after launch. The launching state does not submit any information about the launch to the UN under the Registration Convention because the satellite failed to reach orbit. State Y is unable to determine the identity of the company or the launching state of the satellite for purposes of assigning liability under the Liability Convention.

In this scenario, the registration of an international interest in the Cape Town Registry could provide information that might assist in the recovery of damages by the injured party under domestic law or under the Liability Convention. Provided that the identifying information was preserved on the remains of the satellite, the Cape Town Registry could be searched and would reveal the parties involved in the financing transaction. After discovering that Bank held an international interest in the satellite, the damaged party could approach Bank to discover the identity of the debtor who launched the satellite. An action could then be brought against the private entity that owned the satellite or against the launching state (if further inquiry revealed the place of launch).

In a scenario such as this, the Cape Town Convention could have a beneficial effect by facilitating the operation of the liability provisions of the space treaties because the registry of international interests will (1) aid in the identification of space objects that have caused damage and (2) aid in the identification of entities that have actual control over space objects. The identification of the private party in control of the space asset that has caused harm will aid in bringing an action for damages against that party under applicable domestic law. Moreover, the registry of international interests may aid in identifying the state that bears liability under international law.

One of the challenges of finding a state liable for damage caused by a space object is identifying the launching state. The United

Nations register of space objects that is maintained pursuant to the Registration Convention plays a critical role in helping to identify launching states. The Registration Convention was adopted in 1975 to establish a central international register of space objects for a variety of reasons including (1) improving awareness of objects in orbit, (2) establishing the jurisdiction and control over space objects by the state of registry, and (3) identifying the launching state of objects that cause damage.³²

The Cape Town Convention registry of international interests in space assets can serve the same function as the UN register by assisting in the identification of the launching state or other states (or entities) that may face liability for damage caused by a space object.³³ But rather than merely duplicating the benefits of the UN register, the registry of international interests will supplement the UN register by providing information that may not be available through the UN register. Like the information collected under the Registration Convention, the registry of international interests will be available to the public online. However, the type of information provided on the registry will differ significantly from information found on the UN register. The registry of international interests will be searchable by asset and the records returned upon a search will provide the name of any parties that have registered or recorded any interest in the asset. In addition, instead of providing the names of the launching states, the registry of international interests will contain the names of the holders of an international interest in the asset or a buyer that has registered a sale. The registry of international interests also differs from the UN register in that (1) states register space objects in the UN register to comply with international law while parties register international interests to protect their financial interests and (2) states are only required to submit information to the UN when an

³² Regarding the Registration Convention see generally, F Lyall and PB Larsen, *Space Law: A Treatise* (Ashgate 2009) 84-96.

³³ This possibility is raised in PB Larsen (n 2) 6.

object has reached space while holders of an international interest are likely to register long before launch. In light of these differences between the two registries, the Cape Town Convention registry could complement the UN register in a number of ways.

First, a space object that is not on the UN register may be registered on the Cape Town Convention registry. If the launching state is not a party to the Registration Convention, but is involved in a transaction related to a space object that gives rise to a registrable interest under the Space Assets Protocol, there will likely be a registration related to the object on the Cape Town Convention registry.³⁴

Second, a space object that causes damage on Earth may be easier to identify through information that is found on the Cape Town Convention registry and may not be on the UN register, such as a serial number.³⁵ The registry of international interests will also carry information about components of space objects (since international interests in components are separately registrable), which could assist in the identification of the space object as a whole. Although a search for international interests will only reveal the name of the buyer or creditor, this information can lead, through further inquiry, to the identity of the launching state or other responsible party.

Third, the Cape Town Convention registry will capture transfers of ownership of space objects (and the transfer of control through leases) through the registration of sales and leases. This information could be useful if a damaged state is seeking reparations under the theory that the 'appropriate state' is responsible for the damage due to its failure to properly authorize or supervise the space activity that caused the damage. Similarly, the registration of sales and leases will be helpful to determine what party had actual control of a space object at the time damage occurred, which could help support a claim under state responsibility for its

³⁴ PB Larsen (n 31) 188.

³⁵ See, eg, *ibid* (explaining that the Protocol has more stringent identification requirements than the Registration Convention).

national activities in space or under domestic tort laws.

C. Scenario #3: The Rescue and Return Agreement Assists in the Application of the Convention

A reusable space capsule is launched from State X, which is a party to the Cape Town Convention, and upon reentry loses controls of its landing trajectory and unexpectedly lands in State Y. State Y is not a party to the Cape Town Convention, but is a party to the Rescue and Return Agreement. Bank financed the construction of the space capsule and holds a security interest subject to the Cape Town Convention. Bank wants to enforce its international interest and repossess the space capsule.

In this scenario, Bank would not be able to proceed against the space capsule under the Cape Town Convention in State Y. However, State Y would be required under the Rescue and Return Agreement to return the capsule to State X, which would then allow the creditor to proceed under the Cape Town Convention in State X to repossess the capsule and pursue other remedies.

The duty to return space objects was originally contained in Paragraph 7 of the 1962 Declaration of Principles and in Article VIII the 1968 Outer Space Treaty.³⁶ Just one year after the Outer Space Treaty was completed, the Rescue and Return Agreement was concluded in order to elaborate upon the duty to rescue and return that had been established in the Outer Space Treaty.³⁷ The fact that this treaty was drafted before the drafting of the treaties regarding liability and registration were taken up reflects the importance attached by the United States and the Soviet Union to the duty to rescue astronauts and return lost space objects. Although the duty to rescue astronauts

³⁶ Declaration of Principles para 7; Outer Space Treaty art VIII.

³⁷ For a thorough discussion of the duty to rescue astronauts and return space objects see MJ Sundahl, 'The Duty to Rescue Space Tourists and Return Private Spacecraft' (2009) 35 *J Space L* 163.

could be said to be purely humanitarian in spirit, the duty to return lost space objects was motivated by the desire to reclaim sensitive technology that had fallen out of the control of the launching state.

Regarding the duty to return errant space objects, Article VIII of the Outer Space Treaty provides as follows:³⁸

[O]bjects or component parts found beyond the limits of the State Party to the Treaty on whose registry they are carried shall be returned to that State Party, which shall, upon request, furnish identifying data prior to their return.

Article 5 of the Rescue and Return Agreement requires the return of any space object to the state of registry whenever the object is found outside of that state's jurisdiction, regardless of the circumstances leading to the discovery of the object:³⁹

Upon request of the launching authority, objects launched into outer space or their component parts found beyond the territorial limits of the launching authority shall be returned to or held at the disposal of representatives of the launching authority, which shall, upon request, furnish identifying data prior to their return.

The space object (or component parts) must be returned to the 'launching authority.' The term 'launching authority' is defined in Article 6 of the Rescue and Return Agreement:⁴⁰

For the purposes of this Agreement, the term 'launching authority' shall refer to the State responsible for launching, or, where an international intergovernmental organization is responsible for launching, that organization, provided that that organization declares its acceptance of the rights and obligations provided for in this Agreement and a majority of the States members of that organization are Contracting Parties to this Agreement and to the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies.

In short, an errant space object must be returned to the state (or under the conditions stated, the

international intergovernmental organization) that is 'responsible for launching' the object.

It should be kept in mind that the duties under the Rescue and Return Agreement, as well as the Outer Space Treaty, are only triggered with respect to those spacecraft or other space objects that have been 'launched into outer space.'⁴¹ This means that creditors cannot look to the Rescue and Return Agreement or Outer Space Treaty for assistance in recovering errant space assets unless the assets have been launched. For example, a satellite warehoused in a foreign state prior to launch will have to be recovered by the creditor without the aid of these treaties.

In addition to the scenario set forth at the outset of this section, there are other potential situations in which the Rescue and Return Agreement may be implicated in a transaction governed by the Cape Town Convention.⁴² Some of these scenarios involve the operation of the Rescue and Return Agreement to the benefit of the holder of an international interest, while other situations may arise in which the Rescue and Return Agreement may operate in a manner that would be detrimental to the interests of a creditor. One such scenario is discussed in the next section.

D. Scenario #4: The Rescue and Return Agreement Interferes with the Application of the Cape Town Convention

A reusable space capsule is launched by Company from State A, which is *not* a party to the Cape Town Convention. On its return to Earth, the space capsule guidance systems malfunction and the capsule lands unexpectedly in State B, which is party to both the Rescue and Return Agreement and the Cape Town Convention. The bad press

⁴¹ Rescue and Return Agreement Preamble First Recital art 5(3); Outer Space Treaty art VIII.

⁴² This intersection between existing space law and the Cape Town Convention has been discussed by Larsen and Heilbock. PB Larsen and JA Heilbock, 'UNIDROIT Project on Security Interests: How the Project Affects Space Objects' (1999) 64 *J Air L & Commerce* 703, 719.

³⁸ Outer Space Treaty art VIII.

³⁹ Rescue and Return Agreement art 5(3).

⁴⁰ *Ibid* art 6.

from the emergency landing resulted in cancellations by future customers. Under financial distress from the loss of business, Company defaults on its obligations to Bank. Bank immediately attempts to enforce its international interest against the capsule under the Cape Town Convention by applying for a court order in State B to allow Bank's repossession of the space capsule. At the same time, Company seeks to avoid the repossession of the capsule by requesting that State A make a diplomatic request of State B to return the capsule to State A, which is the 'launching authority' under the Rescue and Return Agreement.

In this scenario, State B's obligation under the Rescue and Return Agreement could lead to a result that is contrary to the interests of the creditor. Under the Rescue and Return Agreement, State B is required to return the capsule to State A, which is not a party to the Cape Town Convention – an action which may impede the exercise of the creditor's remedies under the Convention.

How will the conflict between these two competing treaty obligations be resolved? On the one hand, the Cape Town Convention requires the courts of State B to grant Bank possession. On the other hand, the Rescue and Return Agreement requires State B to return the space capsule to State A. Under the Cape Town Convention, primacy is given to the Rescue and Return Agreement and the court may have to dismiss Bank's case requesting repossession. When the capsule is returned to State A, Bank will have no choice but to proceed against the capsule under the domestic laws of State A (which, without the benefit of the Cape Town Convention, may be inimical to its interests).⁴³ This obstructionist effect of the Rescue and Return Agreement may be sought

out by debtors who could choose to launch from a state that is not a party to the Cape Town Convention in an attempt to use the Rescue and Return Agreement to deprive its creditors from availing themselves of the remedies of the Cape Town Convention. It should be kept in mind that a state is obligated to return a space object to the launching authority even if the landing of the object is not the result of emergency or distress.

The foregoing analysis may lead to a different result if the vehicle involved in the above example were a suborbital spaceplane that is only temporarily in space, and which would therefore be subject to the Aircraft Protocol rather than the Space Assets Protocol. Since the Aircraft Protocol does not give supremacy to the UN space treaties, any provisions in the Convention or Aircraft Protocol that conflicted with the provisions of the Rescue and Return Agreement would likely be resolved in favor of the Convention and Aircraft Protocol under the doctrines of *lex posterior* or *lex specialis*. If this were the case, then Bank in the above example would likely succeed in its motion to take possession of the spaceplane since the obligation of State B to grant Bank possession would take priority over its duty to return the spaceplane under the Rescue and Return Agreement.

E. Scenario #5: The Jurisdictional Provisions of the Cape Town Conventions are Trumped by Jurisdictional Provisions in the Space Treaties

Company in State A has a satellite launched from State B. State B registers the satellite under the Registration Convention. The satellite is controlled from a ground station in State A (and is therefore 'situated' in State A for purposes of seeking interim relief under the Cape Town Convention). A bank in State C financed the construction and launch of the satellite. The bank believes the company has defaulted and seeks interim relief from a court in State A to ensure that the satellite is not moved to a different orbit. Can Company

⁴³ Of course, if State A were a party to the Cape Town Convention and Protocol, once the asset were returned to State A under the Rescue and Return Agreement, the courts of State A would have to enforce the creditor's right to enforce its remedies under the Convention. See PB Larsen (n 31) 192.

successfully argue that the courts of State A have no jurisdiction over the satellite and must dismiss the request for interim relief?

An argument could be made that the courts of State A have no jurisdiction and must dismiss the case because Article VIII of the Outer Space Treaty grants jurisdiction over a space object to the state of registry:⁴⁴

A State Party to the Treaty on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such object, and over any personnel thereof, while in outer space or on a celestial body.

Pursuant to the Registration Convention, when a space object is launched into space, the launching state is required to record the launch in its national registry (as well as provide information about the object to the Secretary-General of the United Nations to be included in the international register).⁴⁵ It is this state of registry that then has ‘jurisdiction and control’ over the object under Article VIII of the Outer Space Treaty. Given the supremacy of the Outer Space Treaty, the question arises as to whether Article VIII affects the operation of the jurisdictional provisions of the Cape Town Convention.

Prior to the final enforcement of a remedy or adjudication of a claim, a party may seek interim relief under Article 13 of the Cape Town Convention in those states that have jurisdiction pursuant to the agreement of the parties as well as in certain other states depending on the type of relief being sought.⁴⁶ Under Article 43, a state in which the asset is ‘situated’ has jurisdiction to grant *in rem* relief, while a state where the debtor is ‘situated’ has jurisdiction to grant *in personam* relief.⁴⁷ Pursuant to the Protocol, a space asset is

‘situated’ in the territory of a state where ‘a mission control centre for the space asset is located.’⁴⁸

The question for parties engaged in a transaction under the Cape Town Convention, for lawyers who represent such parties, and for courts that are asked to adjudicate issues arising under the Convention is whether Article VIII of the Outer Space Treaty affects the jurisdictional provisions of the Convention and the Protocol. The answer to this question depends on how ‘jurisdiction’ is interpreted in the Outer Space Treaty – a question that has been the subject of considerable academic debate.

As a preliminary matter, the nature of the various forms of jurisdiction must be considered. Jurisdiction is generally described as taking three basic forms of (1) prescriptive jurisdiction, (2) enforcement jurisdiction, and (3) adjudicative jurisdiction.⁴⁹ Prescriptive jurisdiction is the right of a state to apply its laws to the ‘activities, relations, or status of persons, or the interests of persons in things.’⁵⁰ Enforcement jurisdiction refers to a state’s right to enforce (or punish noncompliance with) its laws.⁵¹ Finally, adjudicative jurisdiction is the right of a state’s courts to subject persons or things to their adjudicative processes and issue a ruling on a matter.⁵² Adjudicative jurisdiction can arise over persons (*in personam* jurisdiction)

⁴⁸ Space Assets Protocol art I(4).

⁴⁹ C Ryngaert, *Jurisdiction in International Law* (OUP 2008) 9. See also generally, WM Reisman (ed), *Jurisdiction in International Law* (Ashgate/Dartmouth 1999).

⁵⁰ C Ryngaert (n 49) 9 (citing *Restatement (Third) of U.S. Foreign Relations Law* (2014 supp, American Law Institute 1987) §401(a)). Under customary international law, a state has prescriptive jurisdiction if one of the bases of jurisdiction is present. The bases of prescriptive jurisdiction are (1) territoriality, (2) nationality, (3) effects, (4) national security, (5) passive personality, and (6) universality. K Raustiala, ‘The Geography of Justice’ (2005) 73 *Fordham L Rev* 2501, 2512. While territoriality and nationality are widely accepted as bases of prescriptive jurisdiction in domestic legal systems, the other bases are accepted only to varying degrees.

⁵¹ C Ryngaert (n 49) 9.

⁵² Ibid 10.

⁴⁴ Outer Space Treaty art VIII.

⁴⁵ Registration Convention art II(1). If there is more than one ‘launching state’, those states are to decide among themselves which state will be the state of registry (of which there can be only one). Ibid art II(2).

⁴⁶ Cape Town Convention art 13.

⁴⁷ Ibid art 43.

or over property (*in rem* jurisdiction).⁵³ In addition, jurisdiction can also be ‘exclusive’ or ‘concurrent.’ Exclusive jurisdiction exists when a court has sole jurisdiction over a matter and no other court is able to assert its jurisdiction. In contrast, concurrent jurisdiction describes the situation where multiple courts are able to assert their jurisdiction over the same matter.

One interpretation of Article VIII is that only the state of registry has jurisdiction of any kind over a space object and any judicial disputes regarding that space object. This would mean, in other words, that the state of registry has exclusive jurisdiction to regulate the space object and exclusive jurisdiction to hear a case involving the object.⁵⁴ If this approach is adopted, then Article VIII would trump all jurisdictional provisions of the Cape Town Convention and Protocol and would permit only the state of registry to issue orders regarding the enforcement of remedies and other matters arising under the Convention. This would be

⁵³ AT von Mehren, ‘Adjudicatory Jurisdiction: General Theories Compared and Evaluated’ (1983) 63 *Boston U L Rev* 279, 286.

⁵⁴ See, eg, S Aoki, ‘In Search of the Current Legal Status of the Registration of Space Objects’ in Corinne M Jorgenson (ed), *2010 Proceedings of the International Institute of Space Law* (American Institute of Aeronautics 2011) 245, 248 (stating that ‘[j]urisdiction arising from the registration shall be comprehensive, and a State of registry is supposed to hold legislative, judicial and, above all, enforcement jurisdiction.’). Aoki admits that state practice has not always observed such a far-reaching interpretation of the Article VIII of the Outer Space Treaty, but does not think that such state practice affects the interpretation of the treaty. See also M Chatzipanagiotis, *The Legal Status of Space Tourists in the Framework of Commercial Suborbital Flights* (Carl Heymanns Verlag 2011) 48; RJ Lee (n 31) 150-51 (stating that ‘only one state can exercise jurisdiction over . . . satellites.’); PB Larsen, ‘The Draft Space Protocol and Jurisdiction over Commercial Space Assets’ in Corinne M Jorgenson (ed), *2011 Proceedings of the International Institute of Space Law* (Eleven International Publishing 2012) 485, 488, 490-91 (citing Aoki’s concept of comprehensive jurisdiction as well as other commentators who argue that Article VIII provides an exclusive grant of jurisdiction to the state of registry). At the end, Larsen concludes that there is uncertainty as to whether Article VIII’s grant of jurisdiction is exclusive. *Ibid* 499.

an absurd result that would render the Cape Town Convention a nullity since the successful operation of the Convention requires that a creditor be able to take action in any state that exercises actual control over the object or those parties that control the object.

There are commentators who argue for a narrower interpretation of Article VIII of the Outer Space Treaty. The concept of ‘jurisdiction’ in Article VIII can be more narrowly read in at least two respects. First, even if Article VIII is read as granting jurisdiction of every form to the state of registry, it can be interpreted as a non-exclusive grant of jurisdiction – thus enabling other states to assert jurisdiction when appropriate under other sources of domestic and international law.⁵⁵ These sources would include both customary international law (which permits a state to exercise prescriptive jurisdiction if any of the five bases of prescriptive jurisdiction exists) and treaty law (which would include a grant of jurisdiction under the Cape Town Convention and Protocol). This interpretation of Article VIII is reasonable pursuant to a plain reading of its language, which does not state that the jurisdiction of the launching state is exclusive. Under this narrower reading of Article VIII, although State B in the scenario described at the outset of this section might have jurisdiction to grant interim relief as the state of registry, State A would also have jurisdiction to grant interim relief under the Cape Town Convention since the satellite is ‘situated in’ State A.

Second, Article VIII can be narrowly interpreted as only granting *prescriptive*

⁵⁵ Chatzipanagiotis (n 54) 50 (stating that ‘[i]t has been accepted that the State of registry does not have exclusive jurisdiction.’). Bin Cheng’s writings on jurisdiction also support the reading of Article VIII as a grant of non-exclusive jurisdiction. B Cheng, ‘The Extra-Terrestrial Application of International Law’ (1965) 18 *Current L Problems* 132. Cheng explains that the seventh principle of the Declaration of Principles (the forerunner of Article VIII) merely codified customary international law by making clear that the state of registry would retain any jurisdiction over its spacecraft and the personnel on board that it would otherwise have under customary international law. *Ibid* 141.

jurisdiction to the state of registry over a space object (as well as any activity taking place on board the object).⁵⁶ This would make sense in the greater context of the concept that the state of registry ‘shall retain jurisdiction and control.’ This is a directive that the state of registry maintain control over the space object and makes clear that the laws of the state of registry shall apply to the object (and any activity taking place on board the object). The actual enforcement of such regulations by the state of registry would require that the state have adjudicative jurisdiction over those parties that control the object, which would require some connection of the parties to the state (or *in rem* jurisdiction over the object itself). It could be argued that Article VIII does not address adjudicative jurisdiction.⁵⁷ This interpretation of Article VIII would mean that there is no conflict between the Outer Space Treaty and the Cape Town Convention since the Outer Space Treaty addresses prescriptive jurisdiction, while the Cape Town Convention addresses adjudicative jurisdiction. In the absence of any conflict, the Convention’s jurisdiction provisions would be unaffected by the existing space law. Moreover, Article VI of the Outer Space Treaty suggests that any grant of prescriptive jurisdiction under Article VIII is a non-exclusive grant of jurisdiction since the duty to supervise national activity under Article VI presupposes that a state have prescriptive jurisdiction over the activities of one’s nationals (as well as the space objects operated by its nationals).⁵⁸

⁵⁶ S Hobe et al, (n 29) 159 (stating that ‘[t]he legal consequence of jurisdiction and control is the applicability of the national law of the State of registry for the object launched into outer space.’); see also M Gerhard and K Gungaphul-Brocard, ‘The Impact of National Space Legislation on Space Industry Contracts’ in LJ Smith and I Baumann (eds), *Contracting for Space: Contract Practice in the European Space Sector* (Ashgate 2011) 64 (explaining that the grant of jurisdiction to the state of registry ‘defines the law applicable to space objects.’).

⁵⁷ See, eg, PB Larsen (n 31) 191 (asserting that the ‘Outer Space Treaty is not intended to cover the issue of jurisdiction of national courts.’).

⁵⁸ S Hobe et al, (n 29) 113 (stating that ‘a State has jurisdiction over any activity that is carried on from its

territory as well as over any activity that is carried on by its nationals.’); see also *ibid* 114 (explaining that state practice in the form of national space legislation reflects an understanding that the applicability of the legislation to space activities does not rely on the relevant object being registered by the state).

territory as well as over any activity that is carried on by its nationals.’); see also *ibid* 114 (explaining that state practice in the form of national space legislation reflects an understanding that the applicability of the legislation to space activities does not rely on the relevant object being registered by the state).