

THERE'S A SATELLITE IN MY BACKYARD! – MIR AND THE CONVENTION ON INTERNATIONAL LIABILITY FOR DAMAGE CAUSED BY SPACE OBJECTS

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I INTRODUCTION

In March 2001, Russia's Mir space station plummeted back to earth after 15 years in space.¹ Despite well-publicised fears that the re-entry of the 135 tonne laboratory would be uncontrolled, the operation was an unqualified success. Approximately 30 tonnes of the remains of the once proud bastion of Russian space technology fell harmlessly as planned within the so-called 'Dead Zone' in the South Pacific, approximately 2 500 kilometres east of New Zealand. Its demise has heralded a new chapter in United States–Russian cooperation in space, as exemplified by their participation in the multi-nation US\$60 billion Alpha International Space Station ('ISS') project, which is currently underway and expected to be completed by 2006.²

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1 Mir was launched on 20 February 1986. At that time it was intended to operate for only five years but, despite a number of mishaps and accidents along the way, it remained in orbit for 15 years.

2 The participants in the ISS project are the United States ('US'), Russia, Japan, Canada and 11 Member States of the European Space Agency ('ESA') (Belgium, Denmark, France, Germany, Italy, Netherlands, Norway, Spain, Sweden, Switzerland and the United Kingdom). These countries signed the Inter-Governmental Agreement – the *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*, opened for signature 20 January 1998 ('1998 IGA') – establishing the ISS project on 29 January 1998. Brazil subsequently became a participating nation in the project. There are currently ongoing discussions taking place between the ESA and the Chinese Space Agency – China National Space Administration ('CNSA') – in which 'an intention to collaborate' has been reached with a view towards admitting China as a participant in the ISS project in the near future: W Long, 'ESA To Help China Join ISS', *Space Daily*, 29 July 2001, <<http://www.spacedaily.com>>.

Yet it all could have turned out quite differently. Previous 'returns' by Soviet space objects have not gone so smoothly. The most notorious of these incidents involved the 1978 crash of one of its nuclear powered ocean surveillance satellites, Cosmos 954, which scattered debris over regions of northern Canada. In 1991, fragments of Mir's predecessor, the 40 tonne Salyut 7 space station, fell across a wide area of Argentina.

The United States ('US'), too, has had its share of mishaps in this regard. In 1979, several tonnes of debris from its US\$2.6 billion Skylab space station, at the time the largest space object ever to orbit the Earth, crashed into the Great Australian Desert, having re-entered the Earth's atmosphere several thousand kilometers from its planned orbital track. This provoked a hurried and rather embarrassed apology to the Australian Government by President Carter.³ Last year, three large pieces of space debris from a US Air Force Rocket launched in 1996 crashed to Earth on a farm outside Cape Town, South Africa.⁴

As recently as June 2000, the American National Aeronautics and Space Administration ('NASA') triggered a controlled crash into the Pacific Ocean of its US\$670 million 17 tonne Compton Gamma Ray Observatory, following the malfunction of one of its three control gyroscopes. NASA had determined that, in the event that another of the observatory's gyroscopes was also to fail, there was considerable risk that a 'Skylab-type' incident may occur. Debris from this crash was spread over approximately 1 500 kilometres.

It has been estimated by the North American Aerospace Defence Command ('NORAD'), which monitors almost 9 000 man-made space objects in space, that a total of 2 529 satellites and 14 915 associated pieces of debris from space objects have fallen to earth in the period from the commencement of space flights in 1957 to the end of 2000.⁵

In the lead-up to planned re-entry of Mir, the Russian Government had reportedly taken out US\$200 million in insurance to cover any damage and/or loss of life resulting from a crash landing. Indeed, shortly before its successful re-entry, Russian space command lost communication with Mir, heightening concerns about the risk of damage from an uncontrolled return. Clearly, the Russian Government was aware of the financial risks involved with the operation, and was anxious to ensure that any claims for compensation could be met.

The 1998 IGA replaced an earlier Inter-Governmental Agreement signed in 1988 – the *Agreement Among the Government of the United States of America, Governments of Member States of the European Space Agency, the Government of Japan, and the Government of Canada on Cooperation in the Detailed Design, Development, Operation, and Utilization of the Permanently Manned Civil Space Station*, opened for signature 29 September 1988 ('1988 IGA') – between the US, Canada, Japan and nine ESA countries.

- 3 Richard D Lyons, 'Skylab Debris Hits Australian Desert; No Harm Reported', *The New York Times* (New York, US), 12 July 1979, 1.
- 4 The US State Department has requested the return of the debris so that Defence Department scientists can determine why the debris did not burn up during re-entry into the Earth's atmosphere: 'US demands back space debris that landed on S. African farm', *Space Daily*, 3 June 2001, <<http://www.spacedaily.com>>.
- 5 Richard Macey, 'Duck when the space junk lands in your backyard', *The Sydney Morning Herald* (Sydney), 28 December 2000, 11.

But what is the legal position in relation to damage caused by the return to Earth of a space object such as Mir? Are there any rules in place to cover such an eventuality? Under what circumstances would Russia have been responsible at international law for any such damage? What would be the extent of its liability? How is damage to be measured and what procedures (if any) are in place to facilitate compensation claims and to arrive at a determination of responsibility and its consequences? Once a determination is made, is it a legally binding and enforceable decision?

In light of these recent events, it is timely to reflect on these questions, particularly since the frequency of such crash landings by space objects will almost inevitably increase at an exponential rate, given the rapid growth in the range of space activities and the number of countries and private entities within the international community which are engaging in – or planning to enter into – the launching market and/or other space activities. These questions are also relevant for a state like Australia, which plans to develop a significant space launch industry over the next few years.⁶

The answers to these important questions are generally to be found in an international treaty – the *Convention on International Liability for Damage Caused by Space Objects* ('*Liability Convention*')⁷ – concluded almost 30 years ago in an earlier and very much smaller 'era' of space activities, then dominated by only two space-faring nations.

The following section of this article describes the circumstances that led to the negotiation and conclusion of the *Liability Convention*. It then outlines the main provisions of the *Liability Convention* and discusses the mechanisms it establishes for the presentation and determination of claims for damage caused by space objects.⁸ This article then focuses on two specific provisions of the treaty of particular interest because they expressly vary general principles of international law in an effort to promote its 'victim oriented' goals. These two provisions themselves give rise to some uncertainties, which are also discussed, but represent laudable examples of 'innovative' legal rule-making to suit a

6 Australia has enacted the *Space Activities Act 1998* (Cth), which establishes a legal framework for the development of launch activities from this country. The legislation allows private entities to establish and operate launch facilities from Australian territory, subject to obtaining an appropriate government licence. The Australian Government has embarked on a strategy designed to enable the country to enter the space launch market, which it anticipates will contribute up to AUD\$2.5 billion to its balance of payments for the period to 2010: 'Australia Signs Space Launch Agreement With Russia', *Space Daily*, 23 May 2001, <<http://www.spacedaily.com>>. In May 2001, it signed an agreement with Russia – *Agreement Between the Government of Australia and the Government of the Russian Federation on Cooperation in the Field of the Exploration and Use of Outer Space for Peaceful Purposes*, 23 May 2001, Australia-Russian Federation – which paves the way for the establishment of jointly sponsored space operations between the two countries. In June 2001, the Australian Government announced that it would contribute up to AUD\$100 million towards a planned AUD\$800 million space launch facility to be built on Christmas Island, an Australian territory located off the Indonesian island of Java.

7 Opened for signature 29 March 1972, 961 UNTS 187 (entered into force 1 September 1972).

8 It should be noted that under the various treaties which regulate space law, the definition of a 'space object' is itself circular and unsatisfactory. Article I(d) of the *Liability Convention*, eg, defines a space object as 'includ[ing] component parts of a space object as well as its launch vehicle and parts thereof'.

particular goal – in this case, to aid the presentation of claims on behalf of individual victims.

However, the positive aspects of these provisions must be considered in the context of the formal dispute resolution mechanism that is established by the *Liability Convention*. In essence, the system in place does not provide for a legally binding determination of responsibility and liability, unless both parties 'have so agreed'.⁹ In all other circumstances, it is only to be considered 'in good faith'.¹⁰ This regime represents a major weakness in the terms of the *Liability Convention* and significantly limits the practical effect of the innovations referred to above in so far as the advancement of the victim's interests are concerned.

As a result, this article concludes that the *Liability Convention* fails to adequately ensure that its victim-oriented goals will, in most circumstances, be satisfied. It is therefore desirable that the various calls to strengthen the terms of the *Liability Convention*, which have been made from time to time since its inception, be heeded in order to provide for a more effective dispute resolution procedure, in case the next re-entry by a space object is not as successful as Mir's.

II A MULTILATERAL TREATY DEALING WITH LIABILITY FOR OUTER SPACE ACTIVITIES

Ever since the launch of Sputnik 1 by the Soviet Union ('USSR') on 4 October 1957, humankind has striven to find increasingly more diverse ways of exploring and exploiting the area known as outer space. Indeed, our fascination with space travel long preceded that launch and jurists had already been writing on the legal implications of outer space exploration for several decades prior to the launch of Sputnik.¹¹ However, the launch, representing as it did the first flight into orbit around the Earth, provided significant impetus towards the development of a diverse range of increasingly ambitious space technology. Over time this has led to the creation of a multi-billion dollar space 'industry' and to the development of a legal regime for the regulation of space activities.¹²

The years 1957-58 had been designated as an International Geophysical Year by the international community and, following the successful launch of Sputnik, the United Nations General Assembly called for international cooperation and for the conclusion of treaties setting out the rules for the peaceful use of outer

9 *Liability Convention* art XIX(2).

10 *Liability Convention* art XIX(2).

11 Joseph A Bosco, 'International Space Law – A Brief Overview' (1995) 9(4) *The Air and Space Lawyer* 3, 3. Bosco makes reference to formal legal publications on space law dating back to 1910.

12 The significance of the Sputnik launch has been described in the following terms: 'it is no exaggeration to say that what the Wright brothers did for air law, Sputnik 1 did for space law'. I H Ph Diederiks-Verschoor, *An Introduction to Space Law* (2nd ed, 1999) 2.

space.¹³ Customary international law was generally regarded as already being applicable to outer space activities,¹⁴ and in 1959 the General Assembly affirmed that space activities were to be undertaken in accordance with international law.¹⁵ Nevertheless, it was clear that a more formalised set of rules was necessary to deal with the new legal challenges and issues that were expected to arise from the exploration and use of outer space.

This recognition by the international community of the need to agree on rules relating to space activities was followed by a lengthy period of discussion and negotiation. The whole issue of the use of outer space carried with it significant political overtones, particularly in relation to the only two participants in space activities at the time, the US and the USSR. Eventually, the negotiations culminated in the adoption of 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*'), which entered into force in October 1967.¹⁶ The *Outer Space Treaty* was based upon a number of earlier General Assembly Resolutions¹⁷ and marked a most significant advancement in space law. The *Outer Space Treaty* has formed the basis upon which subsequent treaties relating to outer space activities have been founded.

In the course of discussions leading to the conclusion of the *Outer Space Treaty*, the international community identified some underlying principles that were considered as essential for the development and characterisation of space law. These principles were reflected in the terms of the *Outer Space Treaty* and included the following:

- (1) the recognition that outer space could not be the subject of sovereignty claims by individual States;¹⁸
- (2) the requirement that space activities would be conducted in accordance with international law;¹⁹ and
- (3) the obligation to use and explore outer space purely for peaceful purposes²⁰ – though the wording of the *Outer Space Treaty* seems to have effected only a 'partial demilitarisation' of outer space.²¹

A number of these important themes were to be repeated in subsequent space treaties.²²

13 UN GA Res 1348, 8 UN GAOR (13th Session) Supp No 18, UN Doc A/4090 (1958) provided that outer space shall be exclusively 'used for peaceful purposes only'. Diederiks-Verschuur, above n 12, 140.

14 Bin Cheng, 'The Commercial Development of Space: The Need for New Treaties' (1991) 19 *Journal of Space Law* 17, 19.

15 UN GA Res 1472, 14 UN GAOR, Supp 16, UN Doc A/4354 (1959).

16 Opened for signature 27 January 1967, 610 UNTS 205 (entered into force 10 October 1967).

17 See, eg, UN GA Res 1721, 16 UN GAOR, Supp 17, 6, UN Doc A/5100 (1962). See also David J Harris, *Cases and Materials on International Law* (5th ed, 1998) 248.

18 *Outer Space Treaty* art II.

19 *Outer Space Treaty* art III.

20 *Outer Space Treaty* Preamble para 2 and art XI.

21 Sylvia M Williams, 'International Law and the Military Uses of Outer Space' (1989) 9 *International Relations* 407, 416.

In addition, the *Outer Space Treaty* affirmed that States were *responsible* for national activities in outer space²³ and were *liable* for damage to another state party, or to its natural or juridical persons, caused by a space object that it has launched or for which it has procured the launching.²⁴ The *Outer Space Treaty* did not, however, define the precise meaning and scope of the international responsibility and liability for damage that arose in these circumstances.

In the meantime, the activities of humankind in space evolved rapidly with the development of significant technological advances, partly in response to prevailing Cold War tensions, but also as a result of commercial considerations.²⁵ These necessitated the formulation of further rules to regulate those issues that were seen as important in the overall political and economic context of space activities. Accordingly, following strong pressure from the USSR, the *Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space* ('Rescue Agreement')²⁶ was concluded in the following year.

It had also become increasingly obvious that the advent of space exploration and various associated activities would bring with it the risk of substantial and possibly unavoidable hazards. The *Outer Space Treaty* had affirmed that outer space 'shall be free for exploration and use by all States'.²⁷ Yet, in the period leading up to the conclusion of the *Liability Convention*, this freedom of exploration brought with it increasing international apprehension in relation to the perceived risk of significant loss and damage on the surface of the Earth resulting from space activities.²⁸

Indeed, even in the relatively early days of space activities, there had already been a number of incidents involving space debris falling to Earth.²⁹ Such incidents confirmed that there was a need for further rules which would expand on the principles set out in the *Outer Space Treaty* and specify the legal position

22 For example, art 2 of the *Agreement Governing the Activities of States on the Moon and Other Celestial Bodies*, opened for signature 18 December 1979, 1363 UNTS 3, 18 ILM 1434 (entered into force 11 July 1984) ('*Moon Agreement*') provides that all activities on the Moon 'shall be carried out in accordance with international law' and art 3(1) provides that the Moon shall be used 'exclusively for peaceful purposes'. It should be noted, however, that the *Moon Agreement* has only been ratified by nine states thus far (Australia, Austria, Chile, Mexico, Morocco, Netherlands, Pakistan, Philippines and Uruguay), and signed by a further five states (France, Guatemala, India, Peru and Romania). It has not been accepted by the major space-faring states. This significantly reduces the influence of the *Moon Agreement* on the future practice of those states.

23 *Outer Space Treaty* art VI.

24 *Outer Space Treaty* art VII.

25 Dimitri Maniatis, 'The Law Governing Liability for Damage Caused by Space Objects' (1997) 22 *Annals of Air and Space Law* 369, 370.

26 Opened for signature 22 April 1968, 672 UNTS 119 (entered into force 3 December 1968).

27 *Outer Space Treaty* art I.

28 Due to the current number of space objects and the increasing level of space debris, it is now widely thought that the greatest risk of damage, at least from a commercial viewpoint, arises from the possibility of collisions between space objects or between space objects and space debris.

29 In 1962, a piece of metal weighing almost 20 pounds, almost certainly from the Soviet Sputnik 4 rocket, fell to Earth, landing in a street in a Wisconsin town. In June 1969, five Japanese sailors were allegedly injured off the coast of Siberia by fragments from a device launched into outer space: Bin Cheng, *Studies in International Space Law* (1997) 287.

and consequences arising from damage caused by space activities. Certainly, there was the need to clarify the question of liability for these hazardous activities, incorporating appropriate general elements of fault liability based on negligence and carelessness, risk liability and absolute liability.³⁰

As mentioned above, the *Outer Space Treaty* had already provided for international responsibility and liability – however, these were expressed in general terms in the *Outer Space Treaty* without specifying, for example, the conditions under which liability was to be assessed and compensation, if any, was to be calculated.³¹ Indeed, arts VI and VII of the *Outer Space Treaty* had not been intended to definitively resolve these questions, since the treaty was in several respects aimed at establishing ‘a set of basic principles’ for the exploration and use of outer space, rather than a detailed code of conduct.³² In addition to supplementing these basic principles of responsibility and liability arising from space activities, many non-space-faring states considered that it was necessary that some form of mechanism be established whereby claims for compensation could be effectively submitted and considered.

Formal work on the issue of liability for space activities had begun as early as 1962 when the Legal Sub-committee of the United Nations Committee on the Peaceful Uses of Outer Space (‘UNCOPUOS’) convened to begin the task of drafting appropriate rules.³³ Over the ensuing nine years, various countries submitted draft proposals and, after much delay and discussion, the *Liability Convention* was adopted by the United Nations General Assembly on 29 November 1971.³⁴ The conclusion of the treaty, following a lengthy period of gridlock in the negotiations, was largely made possible as a result of improving relations between the US and the USSR arising out of the disarmament negotiations which had taken place at that time.³⁵

30 Henri A Wassenbergh, ‘International Space Law: A Turn of the Tide’ (1997) 22 *Air & Space Law* 334, 339.

31 Carl Q Christol, *The Modern International Law of Outer Space* (1984) 59.

32 Maniatis, above n 25, 377.

33 UNCOPUOS is the main United Nations organ involved in the development of formal rules relating to the use and exploration of outer space. It was established as an ad hoc committee in 1958 (UN GA Res 1348, 13 UN GAOR (13th Session) Supp 18, UN Doc A/4090 (1958)) and was formally inaugurated by the United Nations General Assembly on 12 December 1959: Diederiks-Verschoor, above n 12, 75. Much of the work undertaken by UNCOPUOS is conducted by its two formal sub-committees – the Scientific and Technical Sub-committee and the Legal Sub-committee. Since its establishment, its membership has grown as more states have become interested in the use and exploration of space and the regulation of those activities. It currently has 61 members: Nandasiri Jasentuliyana, *International Space Law and the United Nations* (1999) 26.

34 The vote was 94 in favour, none against, with four abstentions (Canada, Iran, Japan and Sweden). These four abstaining states supported the goals of the *Liability Convention*, but wanted more favourable provisions for claimants included in the final text: Christol, above n 31, 88.

35 In 1972, the US and the USSR concluded a series of agreements following the Strategic Arms Limitation Talks (‘SALT 1’). The most important of these agreements was the *Limitation of Anti-Ballistic Missile Systems Treaty*, 26 May 1972, US-USSR, 23 UST 3435 (entered into force 3 October 1972) (‘*ABM Treaty*’). The US is currently questioning the relevance of the *ABM Treaty* following its decision to proceed with its proposed Missile Defence Shield (‘MDS’) system, the development and deployment of which is in breach of arts I and V of the Treaty.

The adoption of the *Liability Convention* represented a further important milestone in the evolution of space law, and established a formalised system designed to 'balance' those legal rights and obligations generally recognised among states under international law.³⁶ Non-space-faring and developing states, which had accepted the prerogative of the US and the USSR to undertake the exploration and use of outer space – though one could argue that in practical terms they had no real choice on this matter – at least now had access to a legal regime which expressed an intention to provide for prompt and adequate compensation in the event of damage arising from those activities.³⁷ Indeed, states not involved in space activities regarded the *Liability Convention* as a quid pro quo for the *Rescue Agreement*,³⁸ which many saw as favouring the space-faring states.³⁹ Whilst the regime established under the *Liability Convention* is neither perfect nor applicable to all situations where damage due to space activities may arise,⁴⁰ its adoption did provide an element of comfort to non-space-faring States, even those that were not parties to the treaty.⁴¹

The *Liability Convention* was perceived and drafted as a 'victim or claimant oriented' instrument.⁴² It was envisaged that the procedure for the determination of responsibility and the calculation of liability would be straightforward and capable of being completed within relatively short timeframes. In pursuit of this goal, the drafters included in the *Liability Convention* two innovative provisions that departed from general international law principles and were intended to provide more effective rights to non-state victims in specific circumstances. These relate respectively to the determination of those states that have competence to bring claims on behalf of individual victims,⁴³ and the waiving of the 'local remedies rule' in respect of claims made by states under the *Liability Convention*.⁴⁴ Following a brief overview of the basic tenets of the *Liability Convention*, these provisions are discussed in detail.

36 Aldo A Cocca, 'The Advances in International Law Through the Law of Outer Space' (1981) 9 *Journal of Space Law* 13, 19.

37 Carl Q Christol, *Space Law – Past, Present and Future* (1991) 209.

38 As an example of the views of developing states at the time, the representative of the Philippines complained in the United Nations General Assembly that 'the lack of agreements on the draft convention was discouraging to non-space powers which had signed the [Rescue] Agreement because [they] had been given the impression that the agreement on liability would be forthcoming as a complement to that Agreement': United Nations, *United Nations Yearbook* (1969), quoted in Bruce A Hurwitz, *State Liability for Outer Space Activities in Accordance with the 1972 Convention on International Liability for Damage caused by Space Objects* (1992) 10.

39 Hurwitz, above n 38, 10.

40 For example, the *Liability Convention* does not extend to damages which arise out of the establishment and use of space stations. Diederiks-Verschoor, above n 12, 94. See also below n 50. Article 17 of 1998 IGA relating to the ISS project expressly states that the participants in the project remain liable under the *Liability Convention*, subject to the cross-waivers of liability given pursuant to art 16.

41 Cheng, above n 29, 303.

42 Christol, above n 37, 211.

43 *Liability Convention* art VIII.

44 *Liability Convention* art XI(1).

III THE LIABILITY CONVENTION – A BRIEF OVERVIEW

The drafters of the *Liability Convention* set out to build upon the foundations for a regime of state responsibility and liability for damage arising from space activities which had been introduced in arts VI and VII of the *Outer Space Treaty* respectively. Those provisions had not specified the basis for determining compensation for such damage, nor had they established machinery for the resolution of disputed claims. In addition, some commentators had expressed the view that the *Outer Space Treaty* provisions presupposed that the liability of a launching state for damage arising from space activities was to be based upon culpable conduct only⁴⁵ and this was considered by developing states as being too restrictive.

Against this background, it was intended that the *Liability Convention* would provide clarity, as well as a practical mechanism for the resolution of disputes arising from damage and injury due to space activities. This was clearly reflected in the Preamble to the *Liability Convention*, which asserts inter alia that the primary purposes of the treaty are:

to elaborate effective international rules and procedures concerning liability for damage caused by space objects and to ensure, in particular, the prompt payment ... of a full and equitable measure of compensation to victims of such damage.⁴⁶

Like other space treaties, the instrument which was to achieve these lofty goals was prepared in the context of the consensus approach traditionally adopted by UNCOPUOS during drafting negotiations.⁴⁷ The complexity and politically sensitive nature of the subject matter meant that the negotiations and drafting meetings concerning the *Liability Convention* were lengthy and difficult. Moreover, the consensus approach often brings with it the real risk that the final version of an agreement will reflect only the 'lowest common denominator'. Almost inevitably, therefore, the agreed text of the *Liability Convention* (like that of most of the other major space law treaties) was the result of compromise by all parties.

An illustration of this is provided by art XIX of the treaty, which restricts the 'final and binding' effect of the dispute resolution mechanism put into place only to those situations where 'the parties have so agreed'. This has been described as the 'most publicised defect' of the *Liability Convention*⁴⁸ and, in the opinion of most commentators (shared by this author), represents a significant weakness which in practical terms restricts the ability of the *Liability Convention* to meet its goal of providing 'effective ... rules and procedures concerning liability ... and to ensure ... the prompt payment ... of ... compensation to victims of such damage'.⁴⁹ This is discussed in more detail later in this article.

45 Gijsbertha C M Reijnen, *The United Nations Space Treaties Analysed* (1992).

46 *Liability Convention* Preamble para 4.

47 The incorporation of this mode of decision making within UNCOPUOS was itself the result of compromise, based in part on the prevailing tensions associated with the Cold War relationship between the two major space-faring states at the time: Jasentuliyana, above n 33, 27-8.

48 Christol, above n 31, 112.

49 *Liability Convention* Preamble para 4 (emphasis added).

In addition, the Legal Sub-committee of UNCOPUOS, under pressure from non-space-faring states and the United Nations General Assembly to finalise the *Liability Convention*, took a pragmatic approach by avoiding several 'relatively exotic'⁵⁰ questions in the final document.

Nevertheless, the *Liability Convention* is generally regarded as a much better drafted document than both the *Outer Space Treaty* and the *Rescue Agreement*.⁵¹ It focuses on some complex matters relating to space activities yet provides (relatively) clear guidelines for a determination as to who may be responsible, the scope of damage falling within the terms of the treaty, who may bring claims for compensation, how those claims may be brought and by what method the appropriate compensation is to be calculated. Despite its inadequacies, the *Liability Convention* has clarified and extended the scope of liability for damage arising from outer space activities, and imposes, on those states having the capacity to bear the losses following a determination, the responsibility to pay compensation by way of damages. No express limitation on the amount of compensation is specified. In this way, the treaty can be viewed as representing a significant inducement to space-faring states to exercise the utmost care in their own space activities and for those over which they have control and responsibility.⁵² Should they disregard these responsibilities of care and the duty to properly supervise, they are exposed to an 'increased international liability risk'.⁵³

The *Liability Convention* provides that the 'launching' state is liable for loss of life, personal injury or other impairment of health and loss or damage to property of states, their natural or juridical persons, or international intergovernmental organisations.⁵⁴ A launching state is one which 'launches or procures the launching of a space object' or 'from whose territory or facility a space object is launched'.⁵⁵ As a result, there is often more than one launching state for the purposes of the *Liability Convention*.

Liability is determined according to a tiered regime depending upon the location of the damage – a launching state is *absolutely* liable for damage caused on the Earth's surface or to aircraft in flight⁵⁶ while damage caused in outer

50 See above n 40. Another example of an issue not addressed by the *Liability Convention* is the risk of damage in outer space caused by space refuse: H A Baker, 'Liability for Damage Caused in Outer Space by Space Refuse' (1988) 13 *Annals of Air and Space Law* 183, 203.

51 Cheng, above n 29, 300.

52 Christol, above n 37, 232.

53 Susanne U Reif and Bernhard Schmidt-Tedd, *Legal Framework for Expanding Privatisation in Space: Views and Interim Results from the 'Project 2001' – Working Group on Privatisation* (Unpublished, 1999) (copy on file with author).

54 Article I(a) of the *Liability Convention* defines damage as meaning: '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'.

55 *Liability Convention* art I(c)(i), (ii). It should be noted that this definition does not specifically include the state of manufacture of the space object. Some commentators now believe that it is appropriate to expand the definition of a launching state to include the manufacturing state, particularly as private industry from many countries have become involved in this aspect of space activities. See, eg, Jasentuliyana, above n 33, 36.

56 *Liability Convention* art II.

space is based on *fault*.⁵⁷ However, where the damage has resulted from gross negligence or an act or omission done with intent to cause damage on the part of the claimant state or the person(s) it represents, the launching state is exonerated from absolute liability, unless the activities from which the damage resulted were in breach of international law.⁵⁸

The *Liability Convention* does not apply to damage caused to nationals of the launching state or to foreign nationals during the time that they are participating in the operation of the space object or are in the vicinity of the planned launching or recovery area at the invitation of the launching State.⁵⁹ Partly as a result of this exclusion for nationals of the launching State, the deaths of the Challenger Space Shuttle astronauts in 1986 fell outside the scope of the *Liability Convention*.⁶⁰ However, had the shuttle debris fallen onto a foreign ship, for example, and caused damage or injury, both the *Outer Space Treaty* and the *Liability Convention* may have been applicable.⁶¹

Under the terms of the *Liability Convention*, therefore, in the event that the remains from Mir had crashed to earth and caused damage (or damaged an aircraft in flight), Russia as a launching state would have been absolutely liable for such damage, unless the exceptions or exonerations under the *Liability Convention* were applicable.

The *Liability Convention* establishes a mechanism by which claims may be made within specified timeframes. As a first step in the process, it envisages that a claim for compensation be presented through diplomatic channels.⁶² However, should that process fail to satisfactorily resolve the matter within one year, *Liability Convention* allows for the establishment of a Claims Commission, at the request of either party to a dispute, which is mandated to decide the merits of the claim and determine what, if any, compensation is payable.⁶³ Compensation is to be calculated 'in accordance with international law and the principles of justice and equity'⁶⁴ and is based primarily, and to the extent possible, on the notion of *restituto in integrum*, reflecting the usual position at international law.⁶⁵ This had also been an important element of the draft 1962 US proposal regarding the appropriate standard of compensation to be included in the treaty.⁶⁶

As mentioned above, the practical effectiveness of the *Liability Convention* is significantly compromised by the fact that the findings of the Claims Commission are final and binding only in the unlikely situation where 'the

57 *Liability Convention* art III.

58 *Liability Convention* art VI(1), (2).

59 *Liability Convention* art VII.

60 Paul G Dembling and Richard C Walters, 'The 1986 Challenger Disaster: Legal Ramifications' (1991) 19 *Journal of Space Law* 1, 4.

61 Stephen Gorove, 'The Shuttle Disaster and Issues of Liability' (1996) 14 *Journal of Space Law* 58, 58.

62 *Liability Convention* art IX.

63 *Liability Convention* arts XV, XVIII.

64 *Liability Convention* art XII.

65 At general international law, breach of an international obligation gives rise to a secondary obligation to make reparation based on the *restituto* principle: Martin Dixon, *Textbook on International Law* (4th ed, 2000) 240. See also the decision of the Permanent Court of Justice in *Chorzów Factory Case (Germany v Poland) (Indemnity) (Merits)* [1928] PCIJ (ser A), No 17.

66 Christol, above n 37, 212.

parties have so agreed'. In all other circumstances it only constitutes a recommendatory award which the parties 'shall consider in good faith'.⁶⁷ As such, it has been noted by a leading commentator that, should diplomatic negotiations fail to resolve a matter, 'the only procedure really assured [by the *Liability Convention*] is that of conciliation'.⁶⁸

There has only been one dispute thus far which has involved a close consideration of the *Liability Convention*. The 1978 crash of Cosmos 954 in the Great Slave Lake region of northern Canada spread radioactive contamination over an area 'covering thousands of square miles'.⁶⁹ In the following year, Canada filed a claim against the USSR in respect of this crash. This represented the first and, thus far, the only occasion in the history of space exploration where a claim was instigated at international law under a formal space law treaty as a result of damage caused by a falling space object.⁷⁰

From the point of view of the *Liability Convention*, and in particular the weaknesses of its dispute resolution mechanism, it was significant that the two states continued negotiations until an agreement was reached in April 1981 pursuant to which the USSR paid *half* of the amount originally claimed by Canada⁷¹ (and only about *20 per cent* of the actual cost incurred by Canada in the recovery and clean up operation),⁷² in full and final settlement of the dispute between the two states. The settlement was categorised as an *ex gratia* payment by the USSR, which did not accept any legal responsibility or liability for the damage caused and resultant costs incurred.

Much has been written about the coverage of the *Liability Convention* and its shortcomings.⁷³ It is beyond the scope of this article to consider its 28 provisions in detail – rather it will focus on two specific Articles of the *Liability Convention* which represent interesting departures from established principles of general international law, and relate their effectiveness to the overall scheme for dispute resolution established by the *Liability Convention*.

67 *Liability Convention* art XIX(2).

68 Karl-Heinz Böckstiegel, 'Settlement of Disputes Regarding Space Activities' (1993) 21 *Journal of Space Law* 1, 3.

69 F A Silane, 'Liability for Commercial Space Ventures' (1994) 8(4) *The Air and Space Lawyer* 3, 7.

70 Bryan Schwartz and Mark L Berlin, 'After the Fall: An Analysis of Canadian Legal Claims for Damage Caused by Cosmos 954' (1982) 27 *McGill Law Journal* 676, 677.

71 Böckstiegel, above n 68, 3 (emphasis added).

72 Baker, above n 50, 211.

73 See, eg, Diederiks-Verschoor, above n 12; Jasentuliyana, above n 33; Böckstiegel, above n 68; Stephen Gorove, 'Liability in Space Law: An Overview' (1983) 8 *Annals of Air and Space Law* 373; Andre DeBusschere, 'Liability for Damage Caused by Space Objects' (1994) 3 *Journal of International Law and Practice* 97; Carl Q Christol, 'Space Law: Justice for the New Frontier' (1984) 68 *Sky and Telescope* 406; and Nandasiri Jasentuliyana, 'Space Debris and International Law' (1998) 26(2) *Journal of Space Law* 139.

IV THE 'NATIONALITY' OF CLAIMS

Under the terms of the *Liability Convention*, it is generally envisaged that claims for compensation can only be made by states.⁷⁴ Claims made by states are presented either on the state's own behalf or on behalf of an individual victim in respect of which the state has the right to claim. An individual victim is not permitted to bring claims against a launching state under the *Liability Convention*,⁷⁵ although the treaty does envisage the possibility that it may pursue a claim in the 'courts or administrative tribunals or agencies' of a launching state.⁷⁶

Article VIII of the *Liability Convention* specifies those states that may present claims to a launching state. It provides:

- (1) A State which suffers damage, or whose natural or juridical persons suffer damage, may present to a launching State a claim for compensation for such damage.
- (2) If the State of nationality has not presented a claim, another State may, in respect of damage sustained in its territory by any natural or juridical person, present a claim to a launching State.
- (3) If neither the State of nationality nor the State in whose territory the damage was sustained has presented a claim or notified its intention of presenting a claim, another State may, in respect of damage sustained by its permanent residents, present a claim to a launching State.

There has been some discussion as to the precise meaning of the expression 'State of nationality'. One commentator has interpreted it as referring to the nationality of *the space object*, asserting that this would allow *any* state, as well as any natural and juridical person, to submit a claim.⁷⁷ It is submitted, however, that a more appropriate interpretation of the scope of the expression within art VIII, and the one more widely accepted by commentators, is that it refers to the nationality of *the victim*.

On the basis of this interpretation, the effect of art VIII of the *Liability Convention* is to allow for the possibility of up to three separate States having the right to present a claim – the state where the injury or damage occurs, the

74 Frans G Von der Dunk, *Public Space Law and Private Enterprise – The Fitness of International Space Law Instruments for Private Space Activities* (Unpublished, 1988) 18, based upon chs II and III of Frans G Von der Dunk, *Private Enterprise and Public Interest in the European 'Spacescape'* (1988) (copy on file with author).

However, the wording of the treaty does appear to allow for the possibility that an international organisation might, in appropriate circumstances, also be able to submit a claim for damage 'sustained within the scope of employment of its personnel or even on behalf of its juridical entity' based on contractual, agency or organisational relationships rather than on issues of nationality. Stephen Gorove, *Developments in Space Law – Issues and Policies* (1991) 233.

This article, however, only deals with claims made by States in accordance with the terms of art VIII of the *Liability Convention*.

75 Paul B Larsen, 'Expanding Global Navigation Services' in *Proceedings of the Workshop on Space Law in the Twenty-First Century* (Paper presented at the UNISPACE III Technical Forum, Vienna, 20-23 July 1999) 165.

76 *Liability Convention* art XI (2).

77 Reijnen, above n 45, 193-4.

state of nationality of the individual victim and the state of permanent residence of the individual victim.⁷⁸ Assume, for example, that Mir had crashed onto Australian territory where it injured an American tourist whose permanent residence was in Spain. In those circumstances the *Liability Convention* gives each of Australia, the US and Spain a theoretical right at international law to initiate appropriate proceedings to seek compensation from Russia (as a launching state), subject to the legal 'hierarchy'⁷⁹ among those states that is established in art VIII. The right to present a claim lies 'first and foremost'⁸⁰ with the state which suffers damage or whose 'natural or juridical persons' suffer damage (the US in the example given). Where a state that itself has suffered damage chooses not to present a claim under the treaty for that damage, no other state may do so on its behalf.

However, if the state of nationality chooses not to present a claim on behalf of its nationals, then the state where those individuals were injured or suffered damage to their property (the 'territorial state' – in this case, Australia) may do so. If neither the state of nationality nor the territorial state present a claim for injury or damage suffered by individuals, then a state – Spain in the example given – may present a claim for damage suffered by its permanent residents.

The 'ranking' system of states established by this provision is designed to avoid a 'multiplicity of claims'.⁸¹ Assuming that all states with a right to do so present a claim, the minimum number of potential claims will be contingent on the number of states in whose territory damage was inflicted by an incident falling within the scope of the *Liability Convention*.⁸² The maximum number of potential claims will be determined by the number of states 'whose territory, property, nationals and permanent residents sustained damage'.⁸³

By providing for a broadening of the range of possible states which may present a claim on behalf of an individual victim beyond just the state of the victim's nationality, the terms of art VIII of the *Liability Convention* represent a departure from general principles of international law. Under international law, a state is entitled to protect its *nationals* when they are injured by acts contrary to international law committed by another state.⁸⁴ In circumstances where this 'diplomatic protection' is exercised, the state of nationality is regarded as 'in reality asserting its own rights – its rights to ensure, in the person of its subjects, respect for the rules of international law'.⁸⁵ In these circumstances, the claim becomes that of the state itself.⁸⁶

78 Hurwitz, above n 38, 49.

79 Cheng, above n 29, 307.

80 Hurwitz, above n 38, 49.

81 Ibid.

82 Maniatis, above n 25, 385.

83 W F Foster 'The Convention on International Liability for Damage Caused by Space Objects' (1972) 10 *The Canadian Yearbook of International Law* 137, 169.

84 *Mavromattis Palestine Concessions Case (Greece v United Kingdom) (Jurisdiction)* [1924] PCIJ (ser A), No 2, 12.

85 Ibid.

86 Dixon, above n 65, 244.

However, these rights do *not* extend under general international law to injury to, or damage suffered, by the nationals of *another* state, since this does not fall 'within the scope of the diplomatic protection which a state is entitled to afford, nor can it give rise to a claim which that state is entitled to espouse'.⁸⁷ This restriction of a state's right to exercise diplomatic protection only 'in respect of its nationals' has also been affirmed by the International Court of Justice ('ICJ')⁸⁸ and represents a clear principle of general international law.

On the other hand, the *Liability Convention* widens the 'net' of states that may have the right to present a claim on behalf of a victim of damage. In so doing, it extends the possibilities that a victim may, through a state representing it, be able to seek compensation through the mechanisms established in the *Liability Convention*. This may be important in practical terms, particularly when political considerations are such that the state of nationality is disinclined to bring a claim on its national's behalf against a launching state with which it has close relations. In addition, the mechanism specified in art VIII also eliminates the 'theoretical possibility of stateless persons not being represented'.⁸⁹

In this regard, therefore, this variation of general international law principles represents a positive development in the overall context of the 'victim-oriented' bias generally ascribed to the *Liability Convention*. In certain circumstances, it will allow a victim to have a claim made on its behalf when this might not otherwise have been possible under ordinary international law rules.

However, the terms of the Article do give rise to some uncertainties which remain to be finally determined. Despite its attempt to control the order of claims that might be made on behalf of victims, the Article raises several interesting questions as to the restrictions on states 'lower down'⁹⁰ the hierarchy that has been established. There is no guidance in the provision as to when such a state may presume that a state above it has *not* presented a claim. Must it wait until that state has made a formal decision not to proceed and communicated to each launching state? Or should it only be required to wait until a reasonable period of time has elapsed sufficient for that state to have properly considered the matter? This brings with it difficult questions of trying to 'second guess' the intentions of other states, which also involve decisions of judgment replete with unavoidable political overtones.

Furthermore, if, for example, the territorial state presents a claim on behalf of an individual victim, what is the effect of a subsequent decision by the state of nationality to present a claim in respect of the same incident? Does the prior claim by the territorial state preclude the state of nationality from presenting its claim? Alternatively, does the state of nationality's claim take precedence, obliging the territorial state to withdraw (or suspend) its claim, pending

87 *Panevezys-Saldutiskis Case (Estonia v Lithuania)* [1939] PCIJ (ser A/B), No 76, 18.

88 See *Reparation for Injuries Suffered in the Service of the United Nations (Advisory Opinion)* [1949] ICJ Rep 174 and *Case Concerning The Barcelona Traction, Light and Power Company, Limited (Belgium v Spain)* [1970] ICJ Rep 3.

89 Hurwitz, above n 38, 50.

90 Cheng, above n 29, 307.

resolution of the claim by the state of nationality?⁹¹ In this case, can the territorial state present a fresh claim (or perhaps renew its original claim?) in respect of the same incident in the event that the claim by the state of nationality is not satisfactorily resolved – perhaps by the failure of the parties to agree that the decision of the Claims Commission is to be regarded as final and binding?

These questions may have practical consequences for the victims of a particular incident, depending upon the states involved and their international and political relationships. One can envisage a situation where a launching state may be prepared to negotiate in good faith and/or agree to the final and binding nature of a decision by the Claims Commission with certain states with which it maintains good diplomatic relations, but perhaps not with other states which may also have the right to make a claim under the convention. The ultimate practical result for an individual victim may therefore be dependent upon which state ultimately brings the claim against the launching state on its behalf.

Uncertainty for the victim might also arise in other ways. Article VI(1) of the *Liability Convention* exonerates the launching state from absolute liability to the extent that damage has resulted from gross negligence or 'from an act or omission done with intent to cause damage' on the part of the claimant state, as well as persons that it represents. If one were to assume that the state of nationality had acted in a grossly negligent manner in relation to an incident causing injury to an innocent individual victim such that a claim made by that state would result in significantly reduced compensation, the practical effect is that the victim bears the risk of those negligent acts.

In these circumstances, it would be preferable, from the victim's standpoint, that another state – perhaps the territorial state in circumstances where it had the right to do so under art VIII – present the claim on its behalf. Once again, the questions raised above as to when the territorial state in these circumstances can present its claim, and the effect of a subsequent claim by the state of nationality, will impact on the final result for the victim in these circumstances.

This issue has not yet been determined, but the uncertainties raised by the provision have led one commentator to remark that '[a]s far as these acts resulted in damage to persons other than the perpetrator of the acts, the risk thereof should be borne by the launching State, and not by those innocent victims'.⁹²

Yet another issue raised by art VIII which is not fully addressed under the terms of the *Liability Convention* is the question of a 'guarantee' that the state making the claim on behalf of a victim will actually pass on to that victim any compensation it receives from a launching state in response to the claim. Under general international law, the state of nationality has 'absolute right to control' the claim it makes on behalf of its nationals, which extends to 'complete control' over the ultimate disposal of compensation paid.⁹³ Despite recognition that the ultimate object of the claim is to 'provide reparation for the private claimant',⁹⁴

91 Ibid.

92 Nicolas M Matte, *Aerospace Law: From Scientific Exploration to Commercial Utilization* (1977) 160 (emphasis added).

93 *Administrative Decision No V (United States v Germany)* (1924) 7 RIAA 119.

94 Ibid 153.

the claim made by the state is in respect of an injury to itself perpetrated through one of its nationals.⁹⁵ A state is not obliged by international law to hand over to its national claimant compensation received in a claim; rather the question is one of municipal law,⁹⁶ even though it may be awarded in direct proportion to the injury suffered *by the national*.⁹⁷

This potential difficulty for the victim may be exacerbated under the *Liability Convention* where the connection between the victim and the 'claiming' state is negligible – for example, where the claim was made by the territorial state which the victim was merely visiting at the time of the incident and with which the victim retains no other link. Whilst this may represent a rather exceptional circumstance, it does further highlight the different practical consequences that may arise from the victim's perspective, depending upon which state presents a claim on its behalf under the terms of art VIII.

Despite these uncertainties in relation to the presentation of claims by states on behalf of an individual victim of damage caused by activities within the scope of the *Liability Convention*, the system provided for in art VIII is a positive illustration of the 'victim orientation' of the convention. The regime allows for the possibility that there will, in many circumstances, be a state authorised to submit a claim on behalf of an individual victim, even in circumstances where the state of nationality chooses not to proceed with a claim. However, if *none* of the possible 'representative' states under art VIII choose to bring a claim on behalf of a particular individual victim, then the victim, not being regarded as a legal person at international law, is unable to bring a claim for compensation under the treaty or at an international level.⁹⁸ In these circumstances, the individual victim might still be able to instigate proceedings before the courts, administrative tribunals or agencies of the launching state, as envisaged by art XI(2).

V EXHAUSTION OF LOCAL REMEDIES

Article XI of the *Liability Convention* represents another example of how certain terms of the *Liability Convention* are at variance with principles of general international law, in an attempt to provide further assistance to a victim in the presentation of a claim. The Article provides:

(1) Presentation of a claim to a launching State for compensation for damage under this Convention shall not require the prior exhaustion of any local remedies which may be available to a claimant State or to natural or juridical persons it represents.

95 Dixon, above n 65, 245.

96 Harris, above n 17, 522.

97 Dixon, above n 65, 150.

98 Hurwitz, above n 38, 50.

(2) Nothing in this Convention shall prevent a State, or natural or juridical persons it might represent, from pursuing a claim in the courts or administrative tribunals or agencies of a launching State. A State shall not, however, be entitled to present a claim under this Convention in respect of the same damage for which a claim 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.

The effect of art XI(1) is to dispense with the 'local remedies rule' under international law. At general international law, aliens who have suffered injury or loss are required to exhaust all available local remedies before the state of nationality can exercise the right of diplomatic protection and bring a claim at the international level in respect of that injury or loss. Defendant states are entitled to 'demand that full advantage [be] taken of all local remedies' by injured nationals of a state before the matter can be instigated as a claim under international law.⁹⁹ The underlying reasons for the rule are to allow a defendant state to have the opportunity to redress a wrong itself within 'its own legal order'¹⁰⁰ and also to ensure that international tribunals are not 'engulfed by interstate claims that could have been more easily and more profitably dealt with at the local level'.¹⁰¹ The principle has been described as a 'well-established rule' of customary international law by the ICJ.¹⁰²

The local remedies rule is not applicable in situations where one state injures another state by virtue of a breach of an international obligation¹⁰³ and it is further qualified by the fact that the injured party need not pursue local remedies which are 'obviously futile'¹⁰⁴ or in circumstances where 'there is no justice to exhaust'.¹⁰⁵

The requirement of the exhaustion of local remedies can be waived by treaty or international agreement. Claims heard by the US–Mexican General Claims Commission in accordance with the 1923 *US–Mexican General Claims Convention*,¹⁰⁶ for example, did not have to satisfy the local remedies rule.¹⁰⁷ This was also the de facto position with respect to the US–Iran Claims Tribunal under the *US–Iran Claims Settlement Declaration 1981*.¹⁰⁸ The ICJ has, however, stated that such an important principle of customary international law such as the local remedies rule cannot be regarded as having been 'tacitly dispensed with', so that any such waiver of the rule must be clearly and unequivocally expressed.¹⁰⁹

Article XI(1) of the *Liability Convention* clearly establishes that the rule is to be waived for claims made in accordance with the treaty. Once again, this

99 *Ambatielos Arbitration (Greece v United Kingdom)* (1956) 12 RIAA 83. Harris, above n 17, 617.

100 Reijnen, above n 45, 197.

101 Dixon, above n 65, 153.

102 *Interhandel Case (Switzerland v United States)* [1950] ICJ Rep 5, 25.

103 Harris, above n 17, 621.

104 *Finnish Ships Arbitration (Finland v Great Britain)* (1934) 3 RIAA 1479. Harris, above n 17, 622.

105 *Robert E Brown Case (United States v Great Britain)* (1923) 6 RIAA 120, 129. Harris, above n 17, 622.

106 (1923) 4 RIAA 11.

107 Harris, above n 17, 623.

108 As referred to in Dixon, above n 65, 248.

109 *Elettronica Sicula SpA Case (United States v Italy)* [1989] ICJ Rep 15, 42.

represents a positive development designed to 'speed up' the process of settlement of claims. In this regard, the ability of a state to present a claim on behalf of an individual victim without having to wait for the prior exhaustion of local remedies illustrates a willingness on the part of the drafters of the treaty to adapt prevailing international law principles in an attempt to further the goals of 'prompt' payment of compensation.

This waiver of the local remedies rule does not, however, deprive the state or an individual victim from pursuing local remedies in the courts, administrative tribunals or agencies of a launching state should they wish to do so. Article XI(2) allows an individual victim the opportunity to press its claims directly under the judicial system of a launching state should it see fit. This opportunity can, for example, be utilised in circumstances where none of the states with the right to bring a claim on behalf of the victim under art VIII actually proceeds to do so.

By allowing private individual victims the right to bring a claim against a launching state in the domestic courts, it has been asserted that those launching states which are parties to the *Liability Convention* have 'renounced their jurisdictional immunities'.¹¹⁰ This also raises the question as to whether there is a need for launching states – and indeed other state parties to the *Liability Convention* – to promulgate domestic legislation in order to incorporate the terms of art XI(2) into their national law. This will be a matter for the appropriate national court to determine 'if and when the time comes'.¹¹¹

Furthermore, art XI(2) only prevents the presentation of a claim by a state under the terms of the treaty when 'a claim is being pursued' within the jurisdiction of the launching State. Consequently, should a victim choose to pursue a claim within the domestic courts of a launching state – perhaps in those cases where it regards the law of the launching state as being 'more generous'¹¹² in its treatment of victims – there appears to be no reason why, if it were not successful in those proceedings, it could not then request that a state with the right to represent it under art VIII present a claim in relation to the same incident.¹¹³

In this case, the decision as to whether to accede to the request and proceed with a claim under the *Liability Convention* would normally be at the discretion of the relevant state(s). One commentator asserts that the 'spirit if not the letter of the [Liability] Convention' coupled with the wording of art XI go even further by, in effect, compelling a state to either exhaust local remedies or follow the procedures outlined in the *Liability Convention* in respect of damage suffered by an individual victim whom it has the right to represent.¹¹⁴ If this view is a correct interpretation of the terms of art XI – and this author believes that it is too wide an interpretation given the discretionary language ('may') used in art VIII – the question would remain as to whether the state would equally be compelled to undertake a claim under the *Liability Convention* following the (unsuccessful)

110 Hurwitz, above n 38, 53.

111 Ibid.

112 Cheng, above n 29, 345-6.

113 Hurwitz, above n 38, 52-3.

114 Gorove, above n 74, 235.

actions of the victim itself (without any state involvement) in pursuing available local remedies in the launching state.

In addition, art XI(2) does not expressly refer to the situation of a state claimant under the *Liability Convention* also seeking to pursue a claim under general international law through other channels, apart from an international agreement binding on the States concerned. However, it is generally regarded that the provision would not permit state claimants to resort to those channels, relying on other theories of liability, to press claims for the same damage, at least not *at the same time*. Whether this means, however, that the *Liability Convention* 'must be used exclusively or not at all'¹¹⁵ is an issue which has not been conclusively determined.

Once again, these questions remain to be clarified should an appropriate situation ever arise in practice. However, despite any uncertainties associated with the provision, it is undeniable that the terms of art XI have been drafted with the intention of giving victims a significant opportunity to have a claim for compensation raised in an appropriate forum. It even enables a victim, to a certain extent, to 'cherry pick' the most favourable means of progressing its claim in the particular circumstances. The fact that an individual victim has first resorted to local remedies within the jurisdiction of a launching state and found them 'wanting by international law standards' does not in itself prevent the claim from subsequently being presented in accordance with the terms of the *Liability Convention*.¹¹⁶

Furthermore, by waiving the local remedies rule, art XI represents another example of how the general principles of international law have been varied for the specific purposes of the *Liability Convention* in order to promote the interests of victims.

VI ONE CHEER FOR LEGAL INNOVATION?

It has been said by one of the foremost space commentators that, in the context of meeting the new legal challenges which arise from ever expanding space activities, an essential element for effective international rule making at an international level is a 'perceived need on the part of the states concerned' to devise or change certain rules.¹¹⁷ Whilst these comments were directed more to the amendment of the specific rules forming part of space law, they are equally valid in the wider context of general international law principles.

In this regard, the drafters of the *Liability Convention* quite properly included provisions which were at variance with otherwise accepted general principles of international law, in an attempt to facilitate more effective procedures for the presentation of claims on behalf of individual victims of damage caused by a space object. Both arts VIII and XI of the *Liability Convention* specifically allow

115 Schwartz and Berlin, above n 70, 711.

116 Cheng, above n 29, 346.

117 Cheng, above n 14, 43.

for claims to be made in circumstances which would otherwise not be possible if certain general international law principles were to be applied.

Article VIII allows for states other than the state of nationality of the victim to have the right to present a claim, in certain circumstances, on behalf of the victim. In addition, claims made by states under the *Liability Convention* are not contingent on the prior exhaustion of effective local remedies, as would have been the case in the absence of art XI(1).

These provisions were included so as to enhance the 'victim orientation' of the *Liability Convention* and promote its goal of providing 'effective international rules and procedures'¹¹⁸ concerning the issue of liability for damage caused by space objects. As such, and despite some uncertainties that they raise, these provisions represent a welcome example of the logic of adapting principles of international law, where necessary, to more appropriately reflect the needs of the international community. Indeed, this more flexible approach to these general international law principles is being taken in other contexts, having also now been incorporated into the draft of the Articles on State Responsibility, being prepared by the International Law Commission ('ILC Draft Articles').¹¹⁹ In contrast to earlier versions of the document,¹²⁰ art 44 of the ILC Draft Articles now envisages that there may be situations where a claim by an injured state invoking the responsibility of another state for its breach of an international wrong may not necessarily need to comply with strict nationality or local remedies principles.¹²¹

Despite the legal innovations contained in arts VIII and XI, however, the *Liability Convention* may still fail the victim. If diplomatic negotiations should break down, the *Liability Convention* allows for the establishment of a formal mechanism to determine the extent of liability of the launching state and the commensurate level of compensation payable to victims of damage by space

118 *Liability Convention* Preamble para 4.

119 The International Law Commission ('ILC') was established by the United Nations General Assembly in 1947 as part of the General Assembly's mandate to 'encourag[e] the progressive development of international law and its codification' (art 13(1) UN Charter). This also reflects the object of the ILC (art 1(1) of the Statute of the International Law Commission). In 1949, the ILC selected the area of state responsibility as one which was suitable for codification. It commenced its work on this topic in 1955: International Law Commission, *The Work of the International Law Commission* (3rd ed, 1980) 80.

The ILC Draft Articles deal with the international responsibility of a state for an 'internationally wrongful act' (art 1). Article 43 provides that an injured state is to notify the state in breach of an international obligation of its claim arising from that breach.

120 Article 22 of the consolidated text of Draft Articles, adopted in 1998 by the ILC's Drafting Committee on first reading (United Nations General Assembly, *Draft Articles on State Responsibility*, UN Doc A/CN.4/L.569), was titled 'Exhaustion of local remedies' and provided that there could only be a breach of an international obligation for the purposes of the ILC Draft Articles 'if the aliens concerned *have exhausted the effective local remedies* available to them' (emphasis added).

121 Article 44 Draft Articles adopted by the ILC at its 53rd Session on 31 May 2001 and 3 August 2001 and which the it has recommended for consideration by the United Nations General Assembly, *Draft Articles on State Responsibility*, UN Doc A/CN.4/L.600, provides as follows (emphasis added):

The responsibility of a State may not be invoked if:

The claim is not brought in accordance with *any applicable rule* relating to the nationality of claims; The claim is one *to which the rule of exhaustion of local remedies applies* and any available and effective local remedy has not been exhausted.

objects. Yet the treaty fails to ensure that this represents a *binding* dispute resolution process in all cases. It would only be so when the parties to the dispute 'have so agreed' that the decision of the Claims Commission represents a final and binding decision.

From a practical viewpoint, this would not be likely to happen in most instances. States are generally reluctant to agree to a binding dispute resolution mechanism. This is reflected in the fact that many states have not accepted unconditionally (or at all) the jurisdiction of the ICJ.¹²² In the much more likely event that the parties to a dispute do not agree to be bound by the determination of the Claims Commission, its decision constitutes only a 'recommendatory award' to be considered 'in good faith' by the parties.

In the end, this will mean that the solution to any such dispute will remain a political one. In these circumstances, it is to be generally anticipated that the amount of compensation actually *received* by a victim will not be sufficient to restore it 'to the condition that would have existed if the damage had not occurred'.¹²³

It is not difficult to imagine scenarios where a victim will receive compensation based on political realities rather than any notion of 'justice and equity',¹²⁴ with the consequence that the victim will not be restored to the condition it would have been in if the damage had not occurred.¹²⁵ In essence, the dispute remains in these circumstances the subject of negotiation between the parties – even though diplomatic negotiations had previously failed to successfully resolve the matter. This allows political factors to continue to play a significant part, even in the event that the dispute is resolved. Often this will not be in the best interests of the victim.

VII CONCLUDING REMARKS

The terms of the *Liability Convention* were not, thankfully, at issue with respect to the safe return to Earth by Mir, and the insurance protection reportedly sought by Russia was not called upon. Indeed the mechanism established for claims under the *Liability Convention* has never been formally implemented. However, this situation may change in the future. From a simple 'weight of numbers' viewpoint, it is likely that the re-entry of some future satellite will not

122 The ICJ is competent to hear a dispute only if the states involved have voluntarily accepted its jurisdiction. One of the ways that this consent is given is by way of an optional Declaration made by a state under art 36(2) of the Statute of the International Court of Justice to the effect that it accepts the compulsory jurisdiction of the ICJ. Such Declarations may be made unconditionally or subject to reservations. In most cases, those states that have deposited Declarations have incorporated some form of reservation, the effect of which has been to limit the matters over which the ICJ may exercise jurisdiction: Dixon, above n 65, 280. As at October 2000, there were 60 Declarations deposited with the ICJ. A state may also withdraw its Declaration, as the US did in October 1985, following the decision in *Nicaragua v USA* [1984] ICJ Rep 169.

123 *Liability Convention* art XII.

124 *Liability Convention* art XII.

125 *Liability Convention* art XII.

be as successful as that of Mir. The growing number of space objects launched on an annual basis,¹²⁶ and the expanding number of states¹²⁷ and private entities involved in the increasingly lucrative space industry, means that there will at some stage be an accident during re-entry. In that case, the potential for significant damage and loss of life could be high.

In these circumstances, the *Liability Convention* would be an important legal tool through which the responsibility and liability for such damage could be determined at international law. Indeed, the intention of the *Liability Convention* was that it would provide a mechanism whereby responsibility for accidents of this kind could be attributed to the appropriate state, which would then be liable to make reparation as agreed through diplomatic negotiations or as determined under the formal dispute resolution scheme established by the *Liability Convention*.

However, the lack of a compulsory and binding determination by the Claims Commission continues to represent a 'decisive weakness'¹²⁸ in the mechanism established by the *Liability Convention*, and conflicts with the treaty's overriding intent. Not even the otherwise helpful adaptation of general international law principles within arts VIII and XI of the *Liability Convention* can compensate for this shortcoming. As a result, the *Liability Convention* would fail to meet its goals in most circumstances.

What is required if the *Liability Convention* is to allow for the 'prompt payment ... of a full and equitable measure of compensation to victims'¹²⁹ is for the decisions of the Claims Commission to be made final and binding in *every case*, and not contingent on the agreement of the parties to the dispute. This will, of course, require the amendment of the *Liability Convention*, which may not be possible in the foreseeable future, given the practical difficulties associated with the amendment of an international agreement,¹³⁰ as well as the political sensitivities that are involved. However, this is a necessary step if the innovative drafting of arts VIII and XI of the treaty are to be of real benefit to the future victims of damage caused by space objects.

126 For example, during the two year period 2000-01, Russia alone plans to launch 67 space vehicles: 'Russia Plans 29 Launches in 2001', *Space Daily*, 10 January 2001, <<http://www.spacedaily.com>>.

127 At the time that the *Liability Convention* entered into force, only the US and the USSR were engaged in space activities of any significance. The position has since changed radically, with many other states now also involved. These include such diverse countries as the eleven ESA Member States, Japan, Canada, Indonesia, China, Taiwan, Vietnam, Australia, Brazil, Egypt, India, Ukraine, South Korea, Iran, South Africa and Turkey.

128 Böckstiegel, above n 68, 3.

129 *Liability Convention* Preamble para 4.

130 This seems to be particularly the case in the current political climate; eg, attempts to amend the *Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction*, 10 April 1972, TIAS 8062 (entered into force 26 March 1975) by the addition of a new protocol have been thwarted by the stand taken by the US. In addition, amendments to the *United Nations Framework Convention on Climate Change*, opened for signature 4 June 1992, 31 ILM 849 (entered into force 21 March 1994) ('UNFCCC') by the introduction of the *Kyoto Protocol to the UNFCCC*, opened for signature 16 March 1998, 37 ILM 22 have also been met by US opposition, and it remains to be seen whether sufficient countries will ratify that agreement in order for it to come into force in 2002, as initially intended.