

A LIABILITY TREATY FOR OUTER SPACE ACTIVITIES

By Paul G. Dembling*

Introduction

Much progress has been made in the law of outer space activities. The entry into force of the Outer Space Treaty of 1967¹ and the Treaty on Rescue and Return of Astronauts and Space Objects² climaxed almost a decade of efforts to secure widespread international agreement in these areas. The provisions of the Treaties had been advanced previously in the form of General Assembly resolutions, analogous international agreements, domestic legislation, statements by government officials, articles by scholars in the field, and other expressions of views.

Although the Outer Space Treaty contains a provision making any state party to the Treaty internationally liable for damage to another state as a result of its outer space activities,³ it was generally recognized

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The opinions expressed in this article are solely those of the writer and are not intended to reflect expressions of any agency or organization with which he may be connected.

1. The Treaty is officially entitled "Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies," and is annexed to a resolution of the General Assembly. U.N. Doc. A/C.1/L.396 (1966). For a full discussion of the Treaty, see Dembling and Arons, *The Evolution of the Outer Space Treaty*, 33 J. AIR L. & COM. 419 (1967). The Treaty entered into force on October 10, 1968, and as of October 15, 1969, 89 countries have signed, (plus the German Democratic Republic, the Ukraine U.S.S.R. and Byelo Russian U.S.S.R.), 41 have ratified, and nine have acceded.

2. The official title is "Agreement on the Rescue of Astronauts, and the Return of Astronauts, and the Return of Objects Launched in Outer Space," and is annexed to G.A. RES. 2345 (XXII), December 19, 1967. Texts of the Resolution and the Agreement appear in 58 DEP'T. STATE BULL. 85 (1968). For a full discussion of the Treaty, see Dembling and Arons, *The Treaty on Rescue and Return of Astronauts and Space Objects*, 9 WM. & MARY L. REV. 630 (1968). The Treaty entered into force on December 3, 1968, and as of October 15, 1969, 78 countries have signed, (plus the German Democratic Republic, the Ukraine U.S.S.R. and Byelo Russian U.S.S.R.), 24 countries have ratified, and 8 have acceded.

3. Art. VII: "Each State Party to the Treaty that launches or procures the launching of an object into outer space, including the moon and other celestial bodies, and each State Party from whose territory or facility an object is launched, is internationally liable for damage to another State Party to the Treaty or to its natural or juridical persons by such object or its component parts on the Earth, in air space or in outer space, including the moon and other celestial bodies."

by the 28 member nations of the Legal Subcommittee of the United Nations Committee on the Peaceful Uses of Outer Space and by the General Assembly⁴ that it was necessary to fashion a separate convention on liability. Therefore, the next step in the legal regime for outer space activities is a liability convention.

Throughout the development of the law applicable to activities in outer space, no one has seriously challenged the need to establish criteria for determining liability and procedures for assuring compensation in the event of damage caused by the launching of a space object.⁵ Through their systems of domestic law, individual nations are able to establish appropriate rules for compensating their own nationals who are affected by space accidents. However, the movement of objects in outer space is not constrained by national boundaries, and their return to a designated location cannot always be assured. The international consequences of outer space activity are readily apparent. In view of the possibility that residents of any state might suffer personal injury or property damage caused by the space activities of another state, the development of a broad multi-national consensus on criteria and procedures governing international liability is required.

Even before the launching of the first Soviet Sputnik in 1957, serious consideration had been given to the appropriate basis for assessing liability in the event of damage caused by a space object. The perceptive European scholar, Vladimir Mandl, proposed in 1932 that owners and operators of space vehicles should be subject to liability without limitation with respect to all personal injury and property damage.⁶ Upon the launching of Sputnik I, it became obvious that heavier pieces of space vehicles or spacecraft launched into outer space would not be entirely consumed in the earth's atmosphere upon return. With the likelihood of damage occurring on the surface of the earth having become apparent, the subject of liability for damages caused by space accidents began to receive extensive consideration by scholars and diplomats.

By Resolution 1348 (XIII) dated December 13, 1958,⁷ the United Nations General Assembly established an Ad Hoc Committee on the

4. Paragraph 4(a) of the General Assembly Resolution commending the Treaty requests the Subcommittee to continue its work on the elaboration of an agreement on liability. U.N. Doc. A/Res./2222 (XXI) (1966).

5. A fundamental precept of any legal system is that a person who causes personal injury, death, or property damage should be required to provide compensation to the victim.

6. V. MANDL, *DAS WELTRAUMRECHT: EIN PROBLEM DER RAUMFAHRT* (1932).

7. U.N. Doc. A./Res./1348 (XIII) (1958).

Peaceful Uses of Outer Space consisting of representatives of eighteen nations. The Ad Hoc Committee established a Legal Subcommittee which considered liability for injury or damage caused by space vehicles to be a topic to be accorded priority treatment. In its report,⁸ the Ad Hoc Committee raised several pertinent questions:

First—What are the kinds of injuries for which recovery may be had?

Second—Should liability be based on fault, or without regard to fault for some or all activities?

Third—Should different principles govern, depending on whether the place of injury is on the surface of the earth, in the air space, or in outer space?

Fourth—Should liability of the launching state be unlimited in amount?

Fifth—Where more than one state participates in a particular activity, is the liability joint and several?

Sixth—What procedures should be utilized for determining liability and ensuring the payment of compensation?

Theories of Liability

Much attention was devoted earlier in this decade to the question of whether international liability for damages caused by the return to earth of a space object should depend upon a showing of fault on the part of the launching state or states. Essentially three theoretical bases for liability were advanced.

One possibility is that the claimant state would be required to prove at least that the launching state was guilty of negligence, in other words, a failure to exercise the degree of prudence considered reasonable under the circumstances. This is the traditional theory for assessing liability on the basis of fault. The principle drawback, however, is that the claimant would have great difficulty in determining the precise malfunction which caused the accident, and in proving that the malfunction was due to the negligence of the launching state or that of an instrumentality under its control. The number, complexity, and interrelationships of components inside a spacecraft would impose, in many instances, prohibitive technical obstacles to determining the exact cause of the accident even if the claimant were able to obtain all of the necessary data, some of which may not be subject to disclosure under domestic law.

8. U.N. Doc. A.4141/25 (1959). For discussion of the Ad Hoc Committee, See Jessup and Taubenfeld, *The Ad Hoc Committee on the Peaceful Uses of Outer Space*, 53 AM. J. INT'L L. 877 (1959); *United Nations Establishes Committee on Peaceful Uses of Outer Space*, 40 DEP'T STATE BULL. 24 (1959); Aaronson, *Ad Hoc Committee on the Peaceful Uses of Outer Space*, 227 LAW TIMES 17 (1959).

In order to alleviate the burden of proof imposed on the claimant, it has been suggested that the doctrine known in Anglo-American law as *res ipsa loquitur* should be employed. If applied, this doctrine would create a rebuttable presumption of negligence on the part of the launching state, similar to the presumption created in connection with claims for damages under the Warsaw Convention⁹ relating to aircraft accidents. Even with the assistance of such a rebuttable presumption, the claimant must persuade the appropriate court, claims commission, or adjudicating entity that the acts or omissions of the launching state were unreasonable under all of the circumstances. In determining what is reasonable, however, it is necessary to consider the technical state-of-the-art generally and the peculiarities of each space vehicle and components therein. In areas of the law where the criterion of reasonableness is the basis for decision, prior experience in the relevant activity is relied upon quite heavily. In view of the relative lack of duplicative experience, the rapid advance of space technology, and the peculiar characteristics of each space mission, the efficacy of applying a reasonableness test as the basis for assessing liability is at least open to doubt.

The third theory of liability, which has become accepted as the appropriate basis for determining whether a launching state should be required to pay damages to a foreign state on whose territory a space object has caused injury or damage, is liability without fault, or, as it is known in Anglo-American law, strict or absolute liability.¹⁰ In order to receive compensation for injury or damage, the claimant need only prove that the damage was caused by the space object or any component or substance therein. The claimant is not required to prove that the launching state was guilty of negligent or willful misconduct.

Assessment of liability on this basis in appropriate circumstances has long been accepted in Anglo-American law and to a lesser extent in Napoleonic Code and other legal systems. Its appropriateness, in situations involving damage caused by space objects, rests on two propositions. First, the claimant is relieved of the prohibitive burden of proof imposed by the traditional negligence test, and the claims

9. Convention for the Unification of Certain Rules Relating to International Transportation by Air, signed October 1929. For text of the Convention, see AIR LAWS AND TREATIES OF THE WORLD, prepared for the Committee on Commerce, U.S. Senate, 89th Cong., 1st Sess., July 1, 1965, Vol. III at 3103. For a thorough discussion of the Warsaw Convention and its subsequent revisions by Hague Protocol and Montreal Agreement, see *Symposium on Warsaw Convention*, 33 J. AIR L. & COM. 517 *et seq.* (1967).

10. For a thorough discussion of absolute or strict liability, see Goldie, *Liability for Damage and the Progressive Development of International Law*, 14 INT'L & COMP. L.Q. 1189 (1965).

tribunal need not determine whether the conduct of the launching state was reasonable under criteria drawn from a limited relevant experience. Second, and more fundamental, the launching of objects into outer space is an extrahazardous area of human endeavor. While no nation doubts the overall social and economic value of space activity, it has been generally accepted that the risk of injury or damage should not be passed from the creator of that risk to the public at large. Except in certain limited exculpatory circumstances, the rationale for imposing strict liability on the launching state is that the state which reaps the principle benefits of space activity should assume the risks imposed on all mankind.

In support of the principle of liability without fault in situations involving damages on the surface of the earth caused by space objects, a variety of existing treaties might be viewed as possible precedents. For example, a classic statement of liability without fault is provided in Article I of the Convention on Damage Caused by Foreign Aircraft to the Third Parties on the Surface, concluded in Rome in 1952.¹¹ Under that article:

Any person who suffers damage on the surface shall, upon proof only that the damage was caused by an aircraft in flight or by any person or thing falling therefrom, be entitled to compensation.

Since the risks associated with the launching of objects into outer space are often analogized to those incurred in peaceful uses of atomic energy, the treaties dealing with liability to third parties in the field of nuclear energy may also be viewed as precedents. The first of several multilateral agreements in this area is the Convention on Third Party Liability in the Field of Nuclear Energy, signed in Paris in 1960.¹² Under this Convention, the "operator" of the nuclear installation is liable, irrespective of fault, for damage or loss caused by a nuclear incident involving a nuclear installation. In the 1962 Brussels Conven-

11. The liability of aircraft owners and operators for damage or injury to persons or property on the ground is the subject of the Rome Convention of 1933 for the *Unification of Certain Rules Relating to Damage Caused by Aircraft to Third Parties on the Surface*, and its later revision, the so-called Rome Convention of 1952. For the texts of the two conventions, see AIR LAWS AND TREATIES OF THE WORLD, prepared for the Committee on Commerce, U.S. Senate, 89th Cong., 1st Sess., July 1, 1965, Vol. III at 3141 and 3211, respectively. For comment on the Conventions, see Rinck, *Damage Caused by Foreign Aircraft to Third Parties*, 28 J. AIR L. & COM. 405 (1962); Brown, *The Rome Conventions of 1933 and 1952: Do They Point a Moral?* 28 J. AIR L. & COM. 418 (1962).

12. 27 J. AIR L. & COM. 376 (1960).

tion on the Liability of Operators of Nuclear Ships,¹³ a similar basis for assessment of liability is set forth. Article II provides that:

The operator of a nuclear ship shall be absolutely liable for any nuclear damage upon proof that such damage has been caused by a nuclear incident involving the nuclear fuel of, or radioactive products or waste produced in, such ship.

Liability without proof of fault is also imposed on parties to the International Convention on Civil Liability for Nuclear Damage, signed in Vienna in May 1963,¹⁴ and the Supplementary Convention to the Paris Convention.¹⁵ In connection with the approval of these treaties, it was believed that the exposed public must receive adequate protection against unknown dangers and that the operators of nuclear facilities should assume all risks of damage up to stated monetary limitations, subject to certain exculpatory circumstances.

The principle effort to develop criteria and procedures for the assessment of liability for damages caused by the launching of space objects has taken place in the Legal Subcommittee of the United Nations Committee on the Peaceful Uses of Outer Space. Throughout the deliberations in the Subcommittee, which began in 1962, the principle of liability without proof of fault has been accepted as appropriate for application to claims arising out of space vehicle accidents on the surface of the earth. This principle was impliedly adopted in Paragraph 7 of the 1963 Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space.¹⁶ While Article VII of the Outer Space Treaty provides only that international liability in connection with launchings is a general legal duty incurred by parties to the Treaty, it is generally recognized that fault need not be proved by the claimant state in order to recover damages against another party.

Notwithstanding the establishment of liability as a general obligation incurred by parties to the Outer Space Treaty, a variety of subsidiary issues, require further consideration. While it is comparatively easy to derive the general theory on which liability should be based, difficulties arise when attempting to apply the theory to various categories of possible factual situations. As stated above, the launching state may not be subject to liability under certain exculpatory circumstances. For

13. 2 INT'L LEGAL MATERIALS; CURRENT DOCUMENTS 685 (1963).

14. International Atomic Energy Agency Document CN 12/46 (May 20, 1963).

15. Signed in Brussels in 1963.

16. G.A. RES. 1962, 18 U.N. GAOR SUPP. 15, U.N. Doc. A/5515 (1963).

17. See discussion *supra*, note 3.

example, under the Rome Convention,¹⁸ the operator of an aircraft is not subject to liability where acts of persons on the ground cause or contribute to the cause of a crash. In connection with damage caused by space objects, it has been argued that the launching state should not be obligated to compensate the claimant state where the launching state can prove that the damage was caused by the willful misconduct of a resident of the claimant state, or by some event completely outside the control of the launching state, such as a meteor striking the spacecraft while in orbit.

Considerable attention has been devoted to determining the kinds of objects that may be considered space objects for the purpose of assessing liability. Even in the present state of technology, it is no longer a simple matter to make a clear distinction between all spacecraft and all aircraft, particularly if a distinction is sought to be made on the basis of whether the object can be sustained in flight by aerodynamic lift.¹⁹ Eventually, some definitional criteria are necessary in order to identify which treaty will be applied to determine liability—the Warsaw or Rome Conventions on the one hand, or the Outer Space Treaty on the other.

Liability of Cooperative Ventures

Where one or more states participate in a single launching, the liability of those states should be joint and several. In other words, the claimant state would be entitled to recover full compensation from any one of the participants in the launching. The launching states may provide for indemnification between themselves, either on a *pro rata* basis or in accordance with some other agreed upon formula. As a modification to joint and several liability, it has been suggested that if the joint launching parties place on record with the Secretary-General of the United Nations the terms of their agreement as to liability, claimant states would be on notice of the proportionate financial responsibilities of each, and recovery would be limited accordingly. However, to the extent that one or more of the launching parties fails to make timely payment, the principle of joint and several liability should become applicable.

While the basis for assessing liability against joint launching parties

18. See discussion *supra*, note 9.

19. There is no universally accepted boundary between air space and outer space. The problem of such a boundary has been placed on the agenda of the U.N. Legal Subcommittee. Legal scholars and commentators have discussed a wide variety of possible boundaries. See M.S. McDUGAL, H.D. LASSWELL and I.A. VLASIC, *LAW AND PUBLIC ORDER IN SPACE* (1963), pp 323-59, and J.E. FAWCETT, *INTERNATIONAL LAW AND THE USES OF OUTER SPACE* (1968), pp 20-24.

seems fairly clear, there may be instances in which the connection of a particular state with a launching is so attenuated that it should not be considered a participant in the launching and therefore not liable for damage. Questions that might be raised in this connection are whether a state whose only connection with the launch is a minor experiment aboard the spacecraft should be held responsible for any damage caused by the spacecraft; or whether a state which supplied only a small component in the spacecraft or booster should be liable; or whether a state which sent a technical observer should bear liability.

These kinds of questions are not readily susceptible to precise solutions except in the context of individual factual situations presented to claims tribunals. However, the meaning of substantial participation should be defined in advance, insofar as possible, and the questions raised above should all be answered in the negative by the definitions.²⁰ As can readily be seen, too broad a definition of joint ventures might adversely affect international cooperation in space.

Collisions of Spacecraft

Most of the issues which have been raised in connection with liability for damage caused by space objects have concerned possible damage caused by impact of such objects with the surface of the earth. A difficult question to decide is whether the principle of liability without fault should also be applied to collisions between spacecraft in outer space, or between a spacecraft and an aircraft within air space. Application of strict liability to such collision situations would produce an anomalous result. Assuming that the damage to each vehicle is total, the owner of the more valuable vehicle would receive greater compensation solely because its vehicle is more valuable. Where the collision is between spacecraft, the recovery by one state would amount to a windfall since, under the rationale for assessing liability without proof of fault, each of the launching states is considered to have assumed approximately the same risks. To avoid these results, different rules have been suggested.

A useful precedent is afforded by the Brussels Convention of 1910²¹ regarding collisions between ships at sea. Article 2 provides that "if the collision is accidental, it is caused by *force majeure*, or if the cause of the collision is left in doubt, the damages are borne by those who have

21. *International Convention for the Unification of Certain Rules to Govern the Liability of Vessels When Collisions Occur Between Them* (signed Brussels 1910).

suffered them.” Article 3 provides that “if the collision is caused by the fault of one of the vessels, liability to make good the damages attaches to the one which has committed the fault”: In the case of collisions between aircraft in flight, no similar rule is presently in force. However, a draft convention was prepared by the International Civil Aviation Organization (ICAO) in 1961 which would provide for the liability of an aircraft operator on the basis of fault where fault can be ascertained.²² Both the Brussels Convention and the draft ICAO convention provide for apportionment of the liability in accordance with the relative degrees of fault of each operator and, if it is impossible to determine degrees of fault, the liability would be apportioned equally between them. These precedents lend support to the view that liability for damage arising out of a collision between spacecraft in flight, or between a spacecraft and an aircraft, should be assessed on the basis of fault as between the owners or operators of the spacecraft or aircraft. If fault cannot be proved, neither of the damaged parties should have recourse against the other. Of course, even where such a collision has occurred, liability for damage on the surface of the earth through the impact of the spacecraft, or a component thereof, would be assessed irrespective of fault.

Types and Measures of Damage

Once it is determined that the respondent's space activity has caused the damage for which he is liable, it is necessary to determine the types of damage compensable and the amount of compensation due. Ideally a claimant should be restored to his condition prior to the damage or injury, and for practical reasons monetary compensation is invariably used.

While it is quite clear that compensation should be provided for death of, or physical injury to, a human being, or physical damage to property, it is not clear that compensation should be afforded for every type of damage that might be perceived. Moreover, the measure of damages depends on the particular body of law relied upon to prescribe the kinds of injuries for which recovery may be obtained. For example, to what extent should loss of use of property be compensable, as distinguished from damage to the property itself? Should psychic injury to human beings be compensable? How does one measure the damage caused by pollution of the atmosphere by toxic fuels, or radiation? Should some form of what has been called “moral” damages be

22. Unpublished draft available at ICAO Headquarters, Montreal, Canada.

assessed? An analogous issue frequently discussed is whether electronic interference with communications caused by a satellite should be compensable,²³ and if so, how does one measure the extent of such interference in monetary terms?

Since none of these questions is answered by Article VII of the Outer Space Treaty, it appears appropriate that the text of a well-drafted treaty on liability should define, to the extent possible, the types of damages for which compensation will be paid, the methods of evaluating losses suffered, and the limitations, if any, to be imposed on the amount of recovery.

Defining the precise measure of damages in particular factual situations requires recourse to an appropriate body of law. Wide differences of opinion have been expressed on whether a court, claims commission, or other tribunal should look to a particular local law, such as the law of the state of the injured party, or should develop appropriate rules through reliance upon general principles of international law. It has been argued that certainty in defining the measure of damages requires recourse to local law. Where the applicable local law is that of the state of the injured party, a difficulty is created in that two or more persons suffering identical damages in different states might recover considerably different amounts, depending upon the kind of injuries deemed compensable in each respective state. However, if the claimant is to be restored to his condition that existed prior to the damage or injury, as well as monetary compensation is able to do so, it would appear that the law governing his environment should be applicable; therefore, the law of the claimant should be applied. The law of the launching state may bear little relationship to the claimant's conditions of life. Furthermore, launching states might readily enact domestic laws imposing limits on compensable injuries or amounts recoverable by individual claimants. Moreover, uncertainty would result where two or more states are responsible for a particular launching.

While reliance upon general principles of international law may, in the abstract, seem to impose a greater degree of uncertainty, decisions of the International Court of Justice and claims commissions in analogous cases may afford some guidance. To the extent that damages caused by space objects might inject novel factors into the substance of decisions, a greater degree of flexibility in the decision-making process would seem desirable.

23. See, for example, colloquy between Ambassador Arthur J. Goldberg and Senator Albert Gore, *Hearing on Executive D, Before the Senate Comm. on Foreign Relations*, 90th Cong., 1st Sess., "Treaty on Outer Space," March 7 and 13, and April 12, 1967.

Claimant States and Injured Parties

It is well settled in international law that only the state of which the injured party is a national may advance a claim on his behalf.

In determining the international obligations of a launching state to provide compensation for damages, it has been generally agreed that no duty is owed to nationals of the launching state. Moreover, aliens in the immediate vicinity of the launch or planned recovery area may be considered to have assumed certain of the risks, and perhaps ought not to recover except on the basis of proof of fault. However, it is open to question whether alien residents of the launching state should be entitled to press a claim internationally. It would seem fair to provide an international remedy to aliens merely visiting the launching state, or travelling through it at the time of the accident.

When several states participate in a space activity which has resulted in damage, these parties could agree among themselves as to the treatment to be accorded to their respective nationals.

A nation might represent its "permanent" residents, but not the nationals of the state causing the damage or injury.

Liability arising from space activities is not so unique as to require a legal regime which differs substantially from that applicable to international claims generally. Authorizing states in whose territory damage is sustained to present claims for residents could result in their presenting claims for nationals of states not parties to the treaty. This might tend to reduce the incentive for states to become parties to the convention.

Where dual nationality exists, the difficulty could be eliminated by adopting the present procedure of priorities which could be waived in favor of another state or by permitting only one state to represent all of the injured parties.

Since tradition and international politics demand that the state of nationality retain the primary right to present claims for its nationals, it is suggested that this procedure be followed with the right waived by such states to the state of residence or the state where the damage or injury occurred, whenever deemed efficacious.

Limitation of Liability

Even though it has been generally agreed that space activity creates extraordinary risks which should not be imposed on the public at large, it has been contended that the further encouragement of the exploration and use of outer space requires the establishment by multilateral convention of an overall monetary limitation, or scale of limitations,

on the extent of liability incurred by a launching state for damage caused by a single launch. It is difficult to determine with precision the amount of damages that might conceivably be caused by the return of a space object. One might invoke theories of probability to ascertain the approximate amounts of damages depending on variation in circumstances. Much depends on the size of the space object, and the nature of the components or the substances therein. Much also depends on the location of impact. Urban areas with dense population and concentrations of valuable property would, presumably, suffer far greater damages than rural areas.

Where a conceivable radiation hazard is imposed by the use of nuclear rocket engines or nuclear power sources in spacecraft, estimates of possible damage caused by impact alone are no longer applicable. Indeed, the strength of arguments in favor of an overall monetary limitation on liability would be lessened were it not for speculations over the possibility of liability of hundreds of millions of dollars in the event of a nuclear incident. Experience may prove these speculations to be unfounded. Nevertheless, much of the discussion on limitation of liability has been in the context of possible nuclear damage. As precedents for international agreement on an appropriate monetary limitation, one can point to the Brussels Convention on the Liability of Operators of Nuclear Ships, in which the overall limitation is 100 million dollars, and the 1963 Supplement to the 1960 Paris Convention, in which the overall limitation is 120 million dollars. The United States has also entered into bilateral agreements with several states providing for a maximum limitation of 500 million dollars on liability rising out of a nuclear incident involving the nuclear ship *Savannah*.²⁴ Even these precedents may be only partially in point, in view of the vast differences between the use of nuclear energy in space vehicles, and its use in reactors on land and in ships. If an overall limitation is established, how should account be taken of claims which exceed the limitation? Should all claims be reduced *pro rata*? Should claims for death and personal injury be satisfied in their entirety before claims for property damage are satisfied? These and similar questions would have to be resolved, probably not in any convention, but rather by the state representing the claims.

However strong the arguments for unlimited liability, some states are of the opinion that without some limit, agreement on a liability convention is not possible.

24. *Agreement on Public Liability for Damage Caused by N.S. Savannah*, 14 U.S.T. 786; TIAS 5357; 487 UNTS 113. See also, *Operational Agreement on Arrangements For a Visit of the N.S. Savannah to the Netherlands* 14 U.S.T. 792; TIAS 5357; 487 UNTS 113.

International Organizations

Although traditionally only states may be parties to actions before international tribunals, this concept has been modified and some treaties now give such status to nongoverning entities. In space activities, the question is whether international organizations may be accorded status before international tribunals. Generally, the answer is found in international agreements which establish the organization and the tribunal in question.²⁵

Article VI of the Outer Space Treaty deals with this problem by holding State Parties to the Treaty internationally responsible for space activities whether "carried on by governmental agencies or by nongovernmental entities." When nongovernmental entities perform outer space activities, the State Party to the Treaty is to authorize and supervise such activities. Responsibility for such activities "shall be borne both by the international organization and by the States Parties to the Treaty participating in such organization."

The "Agreement on the Rescue of Astronauts, the Return of Astronauts, and the Return of Objects Launched in Outer Space" also recognizes an international organization whenever such an organization assumes the rights and obligations of the Treaty and a majority of the State Members or the organization are Parties to the Treaty.²⁶

With such precedents, it appears that international, intergovernmental organizations should be permitted to receive the benefits and incur the obligations of the Treaty without being necessarily treated in the same fashion as states.

Procedural Issues

As if the substantive issues were not sufficiently complex, several procedural issues have been raised in connection with prosecuting possible claims for damage arising from space activities. On an international level, claims are prosecuted by states or international organizations against other states or international organizations. Should claimants be required to rely on diplomacy, or should a claims commission or other tribunal be established? A combination of both of these procedures appears to be acceptable to many states which have

25. It appears that the test of legal personality for an international organization is its capacity for independent action involving reciprocal rights and duties. *See, generally*, JENKS, THE LEGAL PERSONALITY OF INTERNATIONAL ORGANIZATIONS (1945) BRIT. Y.B.I.L. 267; C.W. JENKS, THE PROPER LAW OF INTERNATIONAL ORGANIZATIONS (1962); D.W. BOWETT, THE LAW OF INTERNATIONAL INSTITUTIONS (1963).

26. U.N. Doc. No. A/AC.105/C.2/2, 5-7 (1962).

expressed their views on this matter. Claimants would be required to utilize diplomatic channels initially in presenting their claims. However, if satisfaction is not obtained within a reasonable time, the claimant should have recourse to a claims commission.

Another question concerns the period following the accident during which a claimant may present its claim for damage caused by a space activity. While a period of one year has been suggested, there may be an interval of many years before the full extent of damage is realized, particularly where injuries are caused by nuclear contamination. Thus, it would only be fair to begin the applicable period for presentation of claims after the facts giving rise to the claims have been fully ascertained.

Under international law, claimants are often required to exhaust remedies available under the domestic law of the state that caused the damage before resorting to diplomacy or other international procedures. In order to afford claimants an expeditious and effective remedy, the presentation of a claim through diplomatic channels should not require the exhaustion of local remedies. However, a claimant should not be permitted to prosecute its claim concurrently in a domestic forum and before an international tribunal.

Conclusion

While there are other issues, these are the major problems which have been explored in connection with liability for damages caused by objects launched into outer space. It is obvious that the subject is extremely complex. Yet it is one of practical importance in connection with activity in outer space being carried on at the present time. A large measure of international agreement has been achieved on solutions to many of the issues that have been raised. This agreement has been achieved despite the lack of extensive experience that ordinarily precedes the establishment of rules governing most areas of human affairs.

Thus far, actual experience in outer space activities has been very encouraging. No deaths, injuries, or appreciable property damage cognizable under international law have been caused by space activities, and no international claims have been presented. Nevertheless, the establishment of criteria and procedures governing liability for damages would afford protection to mankind from the hazards created by the exploration and use of outer space. This protection is essential if people of all nations are to regard space exploration as being in the interest of all mankind. Progress in outer space depends upon the

lawyers and the policymakers no less than upon the scientists and engineers.

When the issues related to liability have been resolved, a major step will have been taken to assure that progress in the developing legal regime for outer space activities is continuing.