A UNIFIED MULTINATIONAL APPROACH TO THE APPLICATION OF TORT AND CONTRACT PRINCIPLES TO OUTER SPACE

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I. INTRODUCTION

Do we need a unified approach to the resolution of tort and contract claims which have their genesis in outer space? During last year, a Czechoslovak, an East German, and a Pole joined Soviet Cosmonauts on the Soviet Space Station Salyut 6.[1] At least one West European citizen will participate with U.S. astronauts on board the first shuttle/space lab flight scheduled for December 2, 1980.[2]

By the end of this century there will be thousands of astronauts and mission personnel working together in an outer space environment.[3] With extraterrestrial human activity, there will inevitably come the extraterrestrial tort (delictual) and contractual default. A fundamental question which will arise with the commission of torts (delicts) and the breaching of contracts in space is how to determine which substantive national laws apply, and which states may assume adjudicative and enforcement jurisdiction.

Article 6 of the Outer Space Treaty[4] provides that party states

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1. *Spacecraft Switch at Salyut 6 Indicates Record Flight Attempt*, AV. WEEK & SPACE TECH., Sept. 4, 1978, at 27; *Soviets Refuel Orbiting Salyut by Unmanned Progress Tanker, id.*, July 31, 1978, at 23; *Salyut 6 Reoccupied by Soviets, id.*, June 26, 1978, at 24; *Soviets Preparing Salyut 6 Missions, id.*, Apr. 17, 1978, at 26; Covault, *Soviets Build Reusable Shuttle, id.*, Mar. 20, 1978, at 14.

2. *NASA Authorization for Fiscal Year 1979: Hearings on S. 2527 Before the Subcomm. on Science, Technology, and Space of the Comm. on Commerce, Science, and Transportation*, 95th Cong., 2d Sess. 185 (1978) (statement of John F. Yardley) [hereinafter cited as *NASA Authorization*].

3. Recent studies at Marshall and Johnson Space Flight Centers foresee 500 persons working together 23,000 miles above the earth in a giant space solar-powered satellite within 30 years. Covault, *Views Change on Power Satellite Work*, AV. WEEK & SPACE TECH., July 17, 1978, at 42. *See also* Lutz-Lazey, *Gerry O'Neill and his Solar-Powered Space Factory*, AUTOMATION, July, 1976, at 22; O'Neill, *Living Out There*, NEW SCIENTIST, June 23, 1977 at 718.

4. Treaty on Principles Governing the Activities of States in the Exploration and use of Outer Space, Including the Moon and Other Celestial Bodies, *done* Jan. 27, 1967, 18 U.S.T. 2410, T.I.A.S. No. 6347, 610 U.N.T.S. 205 (effective date Oct. 10, 1967) [hereinafter cited as Outer Space Treaty].

"shall bear international responsibility for national activities in outer space" and that activities of "non-governmental entities" in outer space shall require authorization and continuing supervision by the appropriate state party.[5] Article 7 provides that each launching state is internationally liable to other party states and their "natural or juridical" persons for damage caused by the launched object.[6] The Convention on International Liability for Damage Caused by Space Objects[7] (Liability Convention) implements Articles 6 and 7 of the Outer Space Treaty.[8] The thrust of the Liability Convention, however, is on damage caused by space objects,[9] not on damage caused by one spacefarer within a space vehicle or station to another person or to property. In addition, where damage is caused by a space object, other than on the surface of the earth or to an aircraft in flight, liability only attaches when fault can be proved.[10] The term "fault" is not defined.[11] Nor does the Liability Convention set forth any measurements for "standards of care" or "the unreasonable man."[12] The basis on which negligent conduct can be imputed to others, such as a principal's vicarious liability for

5. *Id.* art. 6. Article 6 states in part:

> States Parties to the Treaty shall bear international responsibility for national activities in outer space, including the moon and other celestial bodies, whether such activities are carried on by governmental agencies or by non-governmental entities, and for assuring that national activities are carried out in conformity with the provisions set forth in the present Treaty. The activities of non-governmental entities in outer space, including the moon and other celestial bodies, shall require authorization and continuing supervision by the appropriate State Party to the Treaty.

6. *Id.* art. 7. Article 7 states:

> 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 or other celestial bodies.

7. Convention on International Liability for Damage Caused by Space Objects, *done* Mar. 29, 1972, 24 U.S.T. 2389, T.I.A.S. No. 7762 (effective Oct. 9, 1973) [hereinafter cited as Liability Convention].

8. *Supra* note 4.

9. Liability Convention, *supra* note 7, art. 2. Article 2 states: "A launching State shall be absolutely liable to pay compensation for damage caused by its space object on the surface of the earth or the aircraft in flight."

10. *Id.* art. 3. Article 3 states:

> In the event of damage being caused elsewhere than on the surface of the earth to a space object of one launching State or to persons or property on board such a space object by a space object of another launching State, the latter shall be liable only if the damage is due to its fault or the fault of persons for whom it is responsible.

11. *See id.* art. 1.

12. *Id.*

his agent or an employer for his employee, is also left open.[13]

Neither the Outer Space Treaty nor the Liability Convention give any indication as to when liability in outer space for individual conduct should be based on a strict liability, and when it should be predicated on fault. The application of a strict liability rule for abnormally dangerous conditions and activities on earth is now settled, at least in common law jurisdictions, and considerable case law has accumulated on the exact reach of that phrase.[14] Until more experience is gained in outer space, it might seem that all activity is hazardous in a spatial environment, but existing treaties provide no such guidance.[15]

Where the default is contractual, an even more serious lack of legal principles exists in the treaties governing outer space activity.[16] Professor Leflar writes that no area in conflicts of law is more confusing than that concerning the general validity of contracts.[17] At common law as well as civil law there are three somewhat contradictory rules which have been used to determine a contract's validity. The first rule states that a contract's validity should be determined by the law of the place where the contract was made.[18] Under the second rule, the law of the place where the contract is to be performed has priority.[19] The third rule permits the intention of the parties to govern so long as the selected place has a substantial connection with the contract.[20] Many courts have vacillated among the three rules.[21] Where contracts are either entered into, or to be performed, in an extraterrestrial setting, the present status of earthly laws only lends to the further confusion on outer space contractual relations. Inevitably, we return to the question of which country's laws will govern in making the infinite variety of determinations that will naturally flow from outer space conduct.

Article 8 of the Outer Space Treaty provides that the state of registraton of the space vehicle, satellite, or station shall retain jurisdiction and control over such object and all the personnel on

13. *See id.* art. 3.

14. *See* W. PROSSER, THE LAW OF TORTS 505-40 (4th ed. 1971); RESTATEMENT (SECOND) OF TORTS §§ 519-20 (1977).

15. *See* notes 4 & 6 *supra*.

16. *Id.*

17. R. LEFLAR, AMERICAN CONFLICTS LAW 295 (3d ed. 1977).

18. *Id.* (citing J. BEALE, CONFLICT OF LAWS § 332.4 (1935)).

19. *Id.* (citing J. BEALE, *supra* note 18, § 332.3).

20. *Id.* at 296. (citing J. BEALE, *supra* note 18, § 332.2).

21. *Id.* at 295. *See, e.g.*, CIVIL CODE OF QUEBEC art. 8.

board "while in outer space or on a celestial body."[22] The limiting words "while in outer space or on a celestial body" make it clear that this treaty jurisdiction refers to command and disciplinary jurisdiction for the duration of the space voyage, not to adjudicative and enforcement jurisdiction which must attach to claims lodged back on earth.

As the number of multinational corporations exploiting the regions of outer space for commercial reasons, and the number of nongovernmental spacefarers increase, some systematic approach to the application of substantive legal rules for the settlement of disputes generated by extraterrestrial events, particularly outer space accidents and contractual deviations, will have to be formulated.

II. SEVEN CRITERIA FOR THE DETERMINATION OF THE APPLICABLE LAW AND/OR FORUM

The determination of the applicable law and/or forum for handling contract and tort (delictual) problems which arise in an outer space context may be based on one of seven possible criteria.

A. Law of the Registry State

Nations could uniformly decide to apply the law of the registry state.[23] The jurisdiction and control vested in the registry state over its space objects while in outer space could be enlarged to embrace adjudicative and enforcement jurisdiction on return to earth, as well as command and disciplinary jurisdiction in outer space.[24] Such a rule would provide a predictable basis for the exercise of jurisdiction in most instances. The space sojourner would know when he stepped on board an Italian spacecraft, that Italian law would follow him as

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22. Outer Space Treaty, *supra* note 4, art. 8. Article 8 provides in pertinent part:

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

23. *See* Convention on Registration of Objects Launched into Outer Space, *done* Jan. 14, 1975, 28 U.S.T. 695, T.I.A.S. No. 8480 (effective Sept. 15, 1976) [hereinafter cited as Registration Treaty]. Article 2, para. 1 provides:

> When a space object is launched into earth orbit or beyond, the launching State shall register the space object by means of an entry in an appropriate registry which it shall maintain. Each launching State shall inform the Secretary-General of the United Nations of the establishment of such registry.

24. *Id.*

There are many ways in which the term jurisdiction is used. The American Law Institute refers to prescriptive and enforcement jurisdiction. RESTATEMENT (SECOND) OF FOREIGN RELATIONS § 21 (1965). See Von Mehren & Trautman, *Jurisdiction to Adjudicate: A Suggested Analysis*, 79 HARV. L. REV. 1121 (1966), for use of the term "adjudicatory jurisdiction."

to all consequences which flowed from his conduct while on board. The longer his stay in space, the more natural it would be to require his conformity with the standards set forth by the state of the registry of the space object on which he lives for the duration of the voyage.

The application of registry law may be harsh under some circumstances. For example, if the negligence of one American causes injury to a fellow American, even though at the time they are both on board an Italian spacecraft,[25] the law of Italy would nevertheless govern. The rule is even harsher if the dispute centers around nonperformance of a contractual obligation entered into by the two Americans while on the Italian spacecraft. Under a rule that registry law controls, all the significant interest concerning a spaceborne tort or contract breach may rest elsewhere, in a locality far removed from the laws and jurisdiction of the registry state.[26]

B. Party Stipulation

The spacefarers could stipulate among themselves and, where appropriate, with the launching state, the law and the forum they prefer to govern. Many commercial contracts contain express provisions as to the law or forum that will determine the rights of the parties in the event a dispute between them arises.[27] As in the case of the first alternative, this approach would provide some measure of certainty as to which legal regime would govern the parties.

Contractual arrangements are, however, limited to those who sign them. As the number of space sojourners multiplies, and with the proliferation of joint ventures not only between states, but between companies, contractual stipulations will be less than all encompassing. Many interpersonal relationships will develop between

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25. *Cf.* Babcock v. Jackson, 12 N.Y.2d 473, 191 N.E.2d 279, 240 N.Y.S.2d 743 (1963). Babcock, a New York State resident sued Jackson, also a New York State resident, for injuries sustained in an automobile accident that occurred in Canada. The New York Court of Appeals refused to apply Canadian law because all dominant contacts were in New York. *Id.* at 484, 191 N.E.2d at 285, 240 N.Y.S.2d at 752.

For a further analysis of *Babcock*, see *Comments on Babcock v. Jackson, a Recent Development in Conflict of Laws*, 63 COLUM. L. REV. 1212 (1963).

26. *See, e.g.*, Lauritzen v. Larsen, 345 U.S. 571 (1953). In that case, a Danish national was injured while on board a Danish ship in Cuban waters. Notwithstanding the fact that the employment contract was executed in New York, the United States Supreme Court left the seaman to his remedies under Danish law as both parties were Danish nationals. *Id.* at 592-93.

27. Contractual stipulations with respect to choice of law and forum appear to be common place in maritime contracts. *See* Breman v. Zapata Off-Shore Co., 407 U.S. 1 (1972) (choice of forum); Lauritzen v. Larsen, 345 U.S. at 573 (choice of law).

parties who were not launched on the same spacecraft. The construction of large structures in space may require as many as 500 workers rotating constantly from earth to space station, and from space station to maneuverable satellite.[28] Torts which occur and breaches of obligations which arise between these individuals will not necessarily be covered by any prior agreements, particularly if spaceworkers transit from earth to construction site on different craft and from different countries.

Another disadvantage to this mode of dispute settlement is that many nations look with disfavor on any contractual provision which purports to divest their own national courts of their normal jurisdiction. In France, for example, a French citizen has the right to resort to French justice for any wrong done to him, contractual or delictual, even by a foreigner who has never been in France and regardless of where the wrong was committed.[29] A French court might still choose to disregard a contractual agreement which sought to deprive its citizen of the statutory right, despite evidence that its citizen freely stipulated for a forum other than one in France. Furthermore, the court which the private parties stipulate as their choice, might decide on the ground of forum non conveniens not to entertain any judicial proceedings. This might occur when the chosen court perceives no substantial connection between its forum as the place of adjudication, and the parties or the subject matter of the dispute.

C. *Law of the Victim/Plaintiff*

The law of the victim/plaintiff may also be applied to settle a dispute. The aggrieved person may have the most at stake in determining his rights and measuring his recovery. This principle has found its way into a number of criminal codes where the national law provides for local jurisdiction.[30] For example, whenever the vic-

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28. See note 3 *supra* and accompanying text.

29. The Fr. C. civ. art. 14, *reprinted in* H. de Vries, N. Galston, & R. Loening, Materials for the French Legal System 2 (2d ed. 1977). Article 14 provides:

> An alien, even one not residing in France, may be summoned before the French courts for the fulfillment of obligations contracted by him in France; he may be brought before the French courts for obligations contracted by him in a foreign country toward French persons.

Under French law "obligations" refers to tortious (delictual) as well as contractual obligations.

30. In criminal law, this is known as the passive personality basis for the exercise of jurisdiction. In The Case of the S.S. "Lotus", [1927] P.C.I.J., ser.A, No. 9, the negligence of the French first officer on board a French vessel on the high seas caused a collision with a Turkish collier which sank and caused the death of eight Turkish seamen. The Turkish authorities in Istanbul applied the Turkish Criminal Code, which provides in Article 6:

tim is of Turkish or Mexican nationality, courts of those countries have the right under their laws to prosecute the offender although the latter is an alien and the offense was committed abroad.[31] A victim oriented rule would subject all space sojourners to the hazards inherent in a legal regime resting purely on the fortuitous circumstances of the nationality of the aggrieved party. In the case of delicts particularly, the nationality of the injured individual would be more important than how the injury occurred. The promotion of a multinational society in space, with citizens from a plurality of countries working and living together in the relatively closed environment of a space station or satellite could subject each sojourner to a variety of legal regimes. A rule following the victim's nationality would also benefit unfairly those spacefarers who hail from countries favoring liberal awards, a minimum standard of proof, and relaxed evidentiary standards.

D. Law of the Tortfeasor/Defendant

The law of the nationality of the tortfeasor/defendant may also be the basis for determining the appropriate law and forum.[32] This approach would provide some certainty to the party who may ultimately have to pay for his breach or neglect. He presumably is most familiar with the law of his own state. Further, his capacity to pay for his default could be best assessed by courts of his native country. Many developing countries do not provide the same liberal standards of compensation for wrongful death and injury, and for breach

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> Any foreigner who, apart from the cases contemplated by Article 4, commits an offense abroad to the prejudice of Turkey or of a Turkish subject . . . shall be punished in accordance with the Turkish Penal Code provided that he is arrested in Turkey.

Id. at 14-15 (quoting TUR. PENAL CODE, art. 6 (Law No. 765 of Mar. 1, 1926)).

31. With respect to the application of the passive personality principle in Turkey, see *id.* With respect to Mexico, see the Cutting Case, *reprinted in* W. BISHOP, INTERNATIONAL LAW CASES AND MATERIALS 549 (3d ed. 1971). In the *Cutting* incident, a United States citizen was convicted of libel in a Mexican Court for publication of defamatory remarks in a newspaper in El Paso, Texas. Article 186 of the Mexican Penal Code provided that "[p]enal offenses committed in a foreign country by a Mexican against a Mexican or foreigners, or by a foreigner against Mexicans, may be punished in the Republic . . . ." W. BISHOP, *supra*, at 550.

32. This basis for the exercise of jurisdiction is known as the nationality principle. It is well recognized in both civil and common law countries. *See* United States v. Flores, 289 U.S. 137 (1933); Blackmer v. United States, 284 U.S. 421 (1932). *See also* FR. C. CIV., art. 15 *reprinted in* H. DE VRIES, N. GALSTON & R. LOENING, *supra* note 29, at 2. Article 15 provides: "A Frenchman may be called before a French Court for obligations contracted by him in a foreign country even toward an alien." *Id.*

of contract, that obtain in the industrialized states of the Western world.

A criticism of resorting to the law of the defendant's state is that it subjects the victim to the same capriciousness of law selection that prevails for the defendant when one looks to the law of the victim's nationality. It is not a criticism of any legal regime to suggest that the victim who comes from a common law jurisdiction, such as the United States, would prefer to have his case decided by common law standards, while the civil law victim might prefer civil law rules to apply.

E. Law of the Forum

Another approach would be to apply the law of the forum in all cases.[33] This has the advantage of simplicity and certainty. It is a clean, simple approach, because the forum can take cognizance of its own laws without extensive research, eliminating any need for interpretation and analysis of a foreign law or for foreign experts.

No substantive private law for the space environment currently exists. The application of forum law therefore does not detract from any common law rule which provides for the application of the law of the place of the tort *(lex loci delicti)*, or of the law of the place of the contract *(lex loci contractus)*. In many of the states of the United States and also elsewhere today, substantive law is governed by the locality of the most significant event, be it contractual or delictual.[34] Since no substantive law exists in outer space, forum law conveniently poses no conflict with any other jurisdiction.

Another advantage of applying forum law is that when public policy intervenes, forum states do not follow the otherwise applicable foreign law. For example, some states of the United States, as New York, have a strong public policy against the limitation of damages for wrongful death, while others, a dwindling few, place some monetary limitation on death claims.[35] When the death occurs

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33. *See* B. CURRIE, *Notes on Methods and Objectives in the Conflict of Laws*, in SELECTED ESSAYS ON THE CONFLICT OF LAWS 177, 183 (1963); W. REESE & M. ROSENBERG, CASES ON CONFLICT OF LAWS 525 (6th ed. 1971).

34. This, in essence, was the view of Professor Joseph H. Beale which was incorporated in the RESTATEMENT OF CONFLICT OF LAWS § 378 (1934). Section 378 provides: "The Law of the place of wrong determines whether a person has sustained a legal injury." *See* R. LEFLAR, *supra* note 17, at 173.

35. N.Y. CONST. art. 1, § 16, which provides:

> The right of action now existing to recover damages for injuries resulting in death, shall never be abrogated; and the amount recoverable shall not be subject to any statutory limitation.

Id.

in a jurisdiction limiting liability, as Massachusetts, a New York court will disregard that limitation, even though the accident causing the death occurred not in New York but in Massachusetts.[36]

Forum law is always the preferred law in that there will never be any public policy exceptions to its application. The application of forum law, however, gives the plaintiff a distinct advantage. He can avoid those jurisdictions which place a limit on his recovery, or have a short statute of limitations, or permit his own fault to defeat, rather than simply mitigate, his recovery. Depending on the nature of his claim and the possible nature of the defenses which might be raised in bar, the plaintiff can select a forum best suited to his own case and maximize his potential for recovery. It is true that the plaintiff may have to prove certain minimum contacts with his chosen forum to establish the right to sue there. Nevertheless, the long arm statutes of states in the United States, and the broad application of the Civil Codes in many civil law countries, often provide the plaintiff broad latitude for forum shopping.[37]

Another drawback to the unvarying application of forum law is that neither the plaintiff nor the defendant may have much in common with the place of the judicial action. The incident giving rise to the lawsuit may, for example, have occurred in earth orbit on board a satellite of French registry between two disputants from Latin America. In such a case, it is questionable whether the plaintiff should be able to seek redress in a New York court simply because New York has a record of granting the most liberal recoveries.

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36. *See, e.g.*, Rosenthal v. Warren, 475 F.2d 438 (2d Cir. 1973), *cert. denied*, 414 U.S. 856 (1973); Kilberg v. N.E. Airlines, Inc., 9 N.Y.2d 34, 172 N.E.2d 526, 211 N.Y.S.2d 133 (1961). In *Kilberg*, plaintiff's intestate was a passenger on board a plane owned by the defendant. The flight originated in New York, but crashed in Massachusetts. A wrongful death action could have been brought under the Massachusetts wrongful death statute. The New York Court of Appeals, however, held that the Massachusetts statutory limit of $15,000 for damages was against New York public policy. As a result, the damage limitation of the Massachusetts statute did not apply. *Id.* at 39, 172 N.E.2d at 529, 211 N.Y.S.2d at 135.

37. *See, e.g.*, McGee v. Int'l Life Ins. Co., 355 U.S. 200 (1957); Frummer v. Hilton Hotels Int'l Inc., 19 N.Y.2d 533, 227 N.E.2d 851, 281 N.Y.S.2d 41 (1967), *cert. denied*, 389 U.S. 923 (1967); N.Y. CIV. PRAC. LAW § 302 (McKinney 1972). In *Frummer*, the plaintiff brought suit against defendant, a hotel in England, for damages sustained as a result of a personal injury incurred in the hotel in England. The Court of Appeals held that the common ownership of the hotel in England with reservation service in New York meant that the British hotel corporation was "doing business" in New York and therefore subject to suit in New York. *Id.* at 538, 227 N.E.2d at 854, 281 N.Y.S.2d at 45.

Several states provide that their courts may exercise jurisdiction on any basis not inconsistent with the state constitution or the United States Constitution. *See, e.g.*, CAL. CIV. PROC. CODE § 410.10 (West 1973).

F. *Unification of Substantive Law*

All substantive law could be unified into a *lex specialis* for outer space. A considerable unification of maritime law has resulted over centuries of maritime trade.[38] Though progress has not been as great with respect to the unification of air law, in one area at least, the unification of certain rules relating to the liability of carriers vis-á-vis passengers in international air transportation, there has been substantial codification.[39] Any attempt to enact community wide substantive law for outer space would be a very large undertaking. It would require the concerted effort of some established body such as the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS),[40] or an organization for the unification of private law such as the International Institute for the Unification of Private Law (UNIDROIT).[41]

There are several serious obstacles to embarking on such a task. First, there are significant differences in ethical, moral, and philosophical standards in many countries throughout the world which are reflected in their national laws. It would be a difficult task to secure any consensus on a unified substantive law for space. Even today, COPUOS is striving very hard for international agreement on broad principles for a legal regime for the moon and other celestial bodies, and for the operation of direct broadcasting and remote sensing satellites. No agreement has yet been possible.[42] In addition, broad political differences exist between the noncommunist and the communist world, and between industrialized and developing states. These differences will extend to the space environment making it virtually impossible to achieve a common universal accord on a substantive law for outer space.

The age of outer space is less than a quarter of a century old. Commercial exploitation, manned activity, and interhuman rela-

38. *See* G. Gilmore & C. Black, The Law of Admiralty 46-47 (2d ed. 1975).

39. Convention for the Unification of Certain Rules Relating to International Transportation by Air, *done* Oct. 12, 1929, 49 Stat. 3000, T.S. No. 876, 137 L.N.T.S. 11 (effective Oct. 29, 1934).

40. The Committee on the Peaceful Uses of Outer Space was established by the United Nations on December 12, 1959. G.A. Res. 1472, 14 U.N. GAOR, Supp. (No. 16) 5, U.N. Doc. A/4354 (1959).

41. UNIDROIT publishes a digest of legal activities of international organizations. *See* 1 & 2 UNIDROIT, Digest of Legal Activities (1967 & 1974).

42. *See* Report of the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space (17th Sess.) 6-10, U.N. Doc. A/AC. 105/218 (1978); Report of the Committee on the Peaceful Uses of Outer Space, 33 U.N. GAOR, Supp. (No. 20) 10-13, U.N. Doc. A/33/20 (1978).

tionships in space have yet to unfold in any meaningful way. It will be difficult enough to codify space law when centuries of outer space practice shed some light on the way to apply law in this new arena. Without any real predictability, as yet, of how outer space will be utilized by mankind, drawing up a set of succinct and ordered substantive laws would be an almost frivolous task. The time may come for the development of a *jus gentium* for outer space paralleling the same broad law of the sea, but it still rests in the distant future.

G. Unification of Choice of Law and Forum Rules

The seventh alternative would be to unify choice of law and choice of forum rules so that legal disputes resulting from activities in space could always be referred to a predictable law and forum. Choice of law and forum selection would be determined by a treaty arranged method by which weight would be given to the center of gravity of the most significant events, to the nationality and/or domicile of the parties, and to the locality of the most critical occurrences.

Unification of conflicts rules would not bring any uniformity to the result for all similar controversies. However, it would lend stability to the method of ascertaining which law to apply to the dispute. Such a limited goal favors neither the plaintiff nor defendant. Unification of conflicts rules could be considered the halfway house between total codification of a substantive law for outer space, which may someday either emerge by custom or be induced by treaty, and the near vacuum of law which seems to exist today in the extraterrestrial regions.

III. UNIFICATION OF CHOICE OF LAW

The determination of applicable domestic law might vary with the nature of the controversy. In the case of contracts concluded in outer space, for example, between astronauts or other spaceborne personnel, the applicable law could be that chosen by the parties. Where no law is stipulated by the parties, the applicable law could be the law of the nationality, domicile, or permanent residence of the parties. When the parties have no common nationality, domicile, or permanent residence, the law of the most significant contacts relating to the contract could govern.[43]

In the case of torts (delicts) committed in outer space, where not covered by some contractual stipulation, or where such stipula-

43. *See* RESTATEMENT (SECOND) OF CONFLICT OF LAWS § 188 (1971).

tion appears to be invalid, the law of the nationality, domicile, or permanent residence of the victim could govern and subsidiarily the law of the most significant contacts.

For outer space, there is no *lex loci delicti commissi*. Thus, this venerable rule, so generously applied in both common and civil law countries, is impossible to follow for space related torts (delicts). The most significant events here would be those which occurred on earth.[44]

Where the contractual or tort liability of state entities is in issue, then a conflicts rule could be developed which established liability according to the law of the nationality of the space object. In the case of joint launchings, the applicable law could be the law of the state on whose registry the space object, which either gives rise to the dispute, or on board which the dispute arises, is carried.[45]

In the case of product or manufacturer's liability, national laws differ widely, and there are important differences between civil and common law jurisdictions. Except where the plaintiff bought his product directly from the manufacturer, the rule in most civil law countries is that the manufacturer's liability is delictual in nature and based on proof of fault. In some of these jurisdictions, the burden is on the plaintiff to prove the fault of the manufacturer. The modern trend of Civil Code countries, however, is to make the manufacturer prove his absence of fault.[46] In common law countries more and more jurisdictions are imposing a strict liability regime on product manufacturers.[47] Proof of defect, not fault, and a showing that

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44. The choice of tort law based on a "grouping of contacts" is the basic rule of the Restatement. *Id.* § 145.

45. *Cf.* Registration Treaty, *supra* note 23, art. 2, para. 2 which provides:

> Where there are two or more launching States in respect of any such space object, they shall jointly determine which one of them shall register the object in accordance with paragraph 1 of this article, bearing in mind the provisions of article VIII 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, and without prejudice to appropriate agreements concluded or to be concluded among the launching States on jurisdiction and control over the space object and over any personnel thereof.

46. *See* Cohen v. Coca-Cola Ltd., 1 D.L.R.2d 285 (1967).

47. *See* RESTATEMENT (SECOND) OF TORTS § 402A (1965). Section 402A provides:

> (1) One who sells any product in a defective condition unreasonably dangerous to the user or consumer or to his property is subject to liability for physical harm thereby caused to the ultimate user or consumer, or to his property, if
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> (a) the seller is engaged in the business of selling such a product, and
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> (b) it is expected to and does reach the user or consumer without substantial change in the condition in which it is sold.
>
> (2) The rule stated in subsection (1) applies although

the defect was the cause of the injury, suffices to establish plaintiff's case. French jurisprudence (case law) is also heading towards strict product liability.[48] So are two international instruments in this field, to wit, the European Convention on Products Liability in Regard to Personal Injury and Death[49] (Council of Europe) and an E.E.C. Council Directive[50] in this field. In ascertaining the manufacturer's responsibility, a choice must be made between the law of the domicile, or principal place of business of the manufacturer, and the law of the nationality, domicile, or permanent residence of the victim. Selecting the law of the victim's domicile or residence would, to some extent, favor the plaintiff, but it would also make damage awards consonant with the law of the place where the victim usually lives, rather than by making his case stand or fall on an alien law. The determination to apply the law of the victim's residence would need further study, however, since, in the case of a complex product, evidence of its defectiveness might be best established where the manufacturer has his place of business. In the case of employer liability (for acts of his employees on board a space station or craft), vicarious responsibility could depend on the law of the employer's place of business rather than the law of the aggrieved party.

At present, there are no definite plans for the operation of a space transportation system by private enterprise. The first space shuttle flight is scheduled for late 1979.[51] Although it will be under the operational control of NASA, that agency is already studying the possibility of operating future space shuttle flights by private contractors.[52] Expanded private space activity will generate a need for commercial space freighters and carriers.

In some jurisdictions the liability of a common carrier by air or rail for passenger safety is predicated on the highest degree of care, in others only ordinary care suffices. Some jurisdictions follow a rule which requires the carrier to prove his freedom from negligent acts,[53]

(a) the seller has exercised all possible care in the preparation and sale of his product, and

(b) the user or consumer has not bought the product from or entered into any contractural relation with the seller.

48. [1974] J.C.P. iv, 28 (Cour de Cass., Fr. 1973).

49. *Done* Jan. 27, 1977, Europ. T.S. No. 91.

50. For the text of the Council Directive, see PRODUCT LIABILITY IN AIR AND SPACE TRANSPORTATION 307 (Karl-Heinz Bockstiegel ed. 1977).

51. *See NASA Authorization, supra* note 2, at 181.

52. NASA is considering the alternative of turning all space shuttle operational activities over to private contractors by 1981-82. Covault, *Shuttle Operations Shift Studied*, AV. WEEK & SPACE TECH., Mar. 6, 1978, at 12.

53. *See* Arrow Aviation, Inc. v. Moore, 266 F.2d 488 (8th Cir. 1959), in which the United

other jurisdictions lay the burden on the plaintiff passenger to establish fault.[54] There are many other variations. The carrier's liability with respect to passengers and third parties for torts could be predicated on its domicile or principal place of business, or could be determined by the victim's residence or domicile. If the general rule is that torts are governed by the law of the victim/plaintiff, to be consistent the same choice of law principles for the common space carrier should be adopted as would apply to private individuals.

IV. CONCLUSION

None of the seven alternative paths for determining applicable law and forum is wholly advantageous. When priority is given to a flexible approach, certainty of law selection is sacrificed. When the interests of the grievant are accommodated by seeking the rule most favorable to him, the defendant loses the benefit of a potentially hospitable law. When nationality or domicile is selected, then the place of most significant contacts may be neglected, and the opposite is true, if one focuses exclusively on the center of most significant contacts. Given the embryonic development of space law, no choice of law or forum rule can be tailored to accommodate all interests. Yet some start must be made so that the utter chaos one finds in the conflicts of law on a transnational scale on earth is at least mitigated in outer space.

The Hague Conference of Private International Law[55] provides a good basis for drafting a suggested choice of law rule for outer space. The Conference meets at four-year intervals and consists of delegates from member governments. Although the Conference was originally unstructured and consisted entirely of a West European membership, it has now assumed a permanent basis with a more cosmopolitan membership. There are now twenty-eight members, including a number of non-European Community countries such as the United States and Japan. Though the ten Conferences held from 1893 to 1964 produced a number of conventions treating principally

States Court of Appeals for the Eighth Circuit, held that in an action to recover damages for injury sustained during an airplane landing, the burden of proof was on the carrier to establish freedom from negligence. *Id.* at 491.

54. Sleezer v. Lang, 170 Neb. 239, 102 N.W.2d 435 (1960). Plaintiff, a passenger, was injured during an emergency landing. The court held that the plaintiff must prove both the negligence of the defendant and that such negligence was the proximate cause of the injury. 102 N.W.2d at 443.

55. *Done* Oct. 9, 1951, 15 U.S.T. 2228, T.I.A.S. No. 5710.

choice of law,[56] only a small percentage were ratified by member countries. Since 1964 their record has improved.[57]

The Hague Conference would be an excellent starting point for initiating a choice of law treaty for outer space. A Conference proposal could be submitted to the United Nations, and specifically the General Assembly for consideration. COPUOS would then have the opportunity to consider the draft *after* it had been prepared by experts in comparative and international law. It seems probable that COPUOS, in the role of a reviewing and editing authority, would have more success, and be more constructive than as a developer of the initial treaty rules in such a complex area as unification of law. Once COPUOS had the opportunity to comment on the work of the Hague Conference, the tremendous prestige of that Committee would lend to passage of a United Nations resolution endorsing the proposal and commending it to all UN members for ratification.

56. Lipstein, *The Hague Conventions on Private International Law, Public Law and Public Policy*, 8 INT'L & COMP. L.Q. 506 (1959).

57. *See* H. STEINER & D. VAGTS, TRANSNATIONAL LEGAL PROBLEMS 304 (2d ed. 1976).