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STATE RESPONSIBILITY FOR TRANSJURISDICTIONAL OIL POLLUTION DAMAGE RESULTING FROM THE EXPLORATION AND EXPLOITATION OF THE CONTINENTAL SHELF

*Niels-J. Seeberg-Elverfeldt**

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* Erstes juristisches Staatsexamen (J.D.) 1979, University of Hamburg/
West-Germany; Master of Laws, 1980, University of Virginia School of Law.

Part I

Introduction

On June 3, 1979, the exploratory oil well Ixtoc I blew out.¹ The well, which is located about fifty miles off the Yucatan peninsula in the Gulf of Mexico's Bay of Campeche, had spewed, according to official Mexican estimates, about 3.1 million barrels of oil into the sea when it was capped on March 24, 1980.²

The well was drilled by Perforaciones Marinas del Golfo S.A. (PEMARGO), a private Mexican drilling firm, under a contract with Petroleos Mexicanos (PEMEX), the state-owned Mexican national oil company.³ The rig itself, Sedco 135, was leased to PEMARGO by Sedco, the world's largest independent oil drilling firm.⁴

The oil spill resulting from the Ixtoc I blowout became the worst such incident in history, dumping more than twice as much oil into the ocean as had the worst previous such disaster, the wreck of the supertanker Amoco Cadiz off the French coast on March 16, 1978.⁵ Yet the Ixtoc I blowout (hereinafter referred to as the Mexican Oil Spill) was only the most recent incident in a chain of serious oil polluting accidents resulting from well blowouts, not to mention oil spills resulting from supertanker crashes,⁶ accidents which, as a whole, constitute a serious threat to the ocean's environment.

1. N.Y. Times, June 9, 1979, at A1, col. 1.

2. N.Y. Times, Mar. 25, 1980, at A1, col. 1. A number of unofficial estimates put the amount of oil at between three and four times what the Mexican government claims that the well discharged, or between nine and twelve million barrels. N.Y. Times, Feb. 28, 1980, at D18, col. 1.

3. See Oil & Gas J., Oct. 29, 1979, at 71.

4. *Id.*

5. See O'Sullivan, *The Amoco Cadiz Oil Spill*, 9 Marine Pollution Bull. 123 (1978), for an account of the Amoco Cadiz accident, which spilled 200,000 tons of oil into the ocean, see also the following issues of the New York Times: Mar. 21, 1978, at A3, col. 4; Mar. 22, 1978, at A6, col. 1; Mar. 23, 1978, at A2, col. 3; Mar. 24, 1978, at A6, col. 3; Mar. 25, 1978, at A8, col. 1; Mar. 26, 1978, at A8, col. 3; Mar. 27, 1978, at A10, col. 3; and Mar. 28, 1978, at A9, col. 2.

6. The last such accident, involving two supertankers carrying a combined cargo of nearly 3.3 million barrels of oil, occurred off the coasts of Trinidad and Tobago. See N.Y. Times, July 22, 1979, at A1, col. 2.

The first serious blowout, the Santa Barbara Channel accident off the coast of California, happened on January 28, 1969,⁷ only two years after the Torrey Canyon disaster⁸ which was the first spill resulting from a supertanker accident. In the thirteen-month period following the Santa Barbara Channel accident, at least three blowouts were reported to have occurred in the Gulf of Mexico.⁹ The most publicized incident resulted from the explosion of a platform belonging to Chevron Oil on February 10, 1969.¹⁰ It spewed out about 12,000 barrels of oil and was called by the Oil & Gas Journal the largest oil spill in United States history;¹¹ the giant oil slicks that resulted were a serious threat to the Louisiana coastline.¹²

Only one blowout to date, the Ekofisk well blowout of April 22, 1977, has occurred in the North Sea. This well, however, was capped before it caused serious damage.¹³ According to a spokesman of PEMEX, two other offshore wells have blown out recently.¹⁴ They were brought under control within 48 hours, but it was conceded that more accidents were likely to occur.¹⁵

These incidents and the many oil catastrophes resulting from vessel source pollution, of which no special mention will be made,¹⁶ serve as grim reminders and strong indicators of the seriousness of the oil pollution threat to the world's oceans. These incidents can be considered the undesirable byproducts and side effects of the generally beneficial undertaking of offshore oil exploration and exploitation. The tremendous increase in offshore oil production

7. See Utton, *A Survey of National Laws on the Control of Pollution from Oil and Gas Operations on the Continental Shelf*, 9 Colum. J. Transnat'l L. 331 (1970).

8. See Nanda, *The "Torrey Canyon" Disaster: Some Legal Aspects*, 44 Den. L.J. 400 (1967); E. Cowan, *The Torrey Canyon Disaster* (1968).

9. For an account of these blowouts, see Oil & Gas J., Mar. 31, 1969, at 40; Oil & Gas J., Jan. 19, 1970, at 23.

10. Oil & Gas J., Feb. 16, 1970, at 43. See also, Oil & Gas J., Feb. 23, 1970, at 65; Mar. 2, 1970, at 41.

11. Oil & Gas J., Apr. 6, 1970, at 78.

12. *Id.*

13. See N.Y. Times, Apr. 24, 1977, at A1, col. 5.

14. N.Y. Times, Oct. 8, 1979, at A2, col. 3.

15. *Id.*, according to a spokesman for PEMEX.

16. As the title indicates, this paper will be mainly concerned with oil pollution damage resulting from offshore activities. Mention of vessel source pollution will be made only if it is deemed pertinent for the present paper.

since World War II, namely from literally none in 1953 to some twenty percent of the world's oil production in 1975,¹⁷ is due to the increase in the world's need for oil.

As a consequence of this, the technology needed for exploiting offshore oil reserves has made a tremendous step forward. Exploration holes for petroleum have been drilled in water depths exceeding 650 meters (2100 feet) and production has been established in water depths of more than 125 meters (about 400 feet).¹⁸

The still growing need for energy will further encourage offshore activities which can be classified as one of the

[m]any large-scale enterprises operating on the frontiers of science and technology [which] engage in operations having a high degree of cost and risk. They all illustrate how some of the emerging scientific uses of what the ocean has to offer, which are generally thought of as justified by man's Scriptural mandate to exercise mastery over nature for the general benefit, may greatly threaten the environment and bring waste, poverty and misery in their train.¹⁹

The lamentable success of coastal states' efforts toward the implementation of the 200 nautical mile exclusive economic zone [hereinafter referred to as EEZ] in the negotiations of the Third United Nations Conference on the Law of the Seas [hereinafter cited as UNCLOS III]²⁰ will be another incentive for the promotion of new offshore technology.

The search for offshore oil and gas reserves and the exploitation thereof is expected to continue with unabated intensity for at least the next two decades.²¹ The magnitude of the offshore

17. C. Drake, J. Imbrie, J. Knauss & K. Turekian, *Oceanographic* 387 (1978).

18. *Id.* at 391.

19. Goldie, *International Principles of Responsibility for Pollution*, 9 Colum. J. Transnat'l L. 283, 284 (1970) [hereinafter cited as Goldie, *Responsibility for Pollution*].

20. See Draft Convention on the Law of the Sea (Informal Text), Aug. 28, 1980, Documents of the Third United Nations Conference on the Law of the Sea, U.N. Doc. A/CONF. 62/WP. 10/Rev. 3/Add. 1 (1980) [hereinafter referred to as I.C.N.T.], art. 55 *et seq.*, particularly arts. 56 and 57; see also art. 77 with regard to coastal states' rights over the continental shelf.

21. See Jackson, *Offshore Pollution*, in 1975 Conference on the pre-

production development will unavoidably result in a considerable increase in marine oil pollution. This is also revealed by the President's Panel on Oil Spills which reported that by 1980, 3000 to 4000 wells will be drilled annually and that "we expect to have a major pollution incident somewhere every year."²²

The above mentioned incidents and the foregoing statistics greatly underscore the potential threat. The total annual influx of oil to the ocean is estimated to be between five and ten million tons.²³ The primary effects of oil spills in previously uncontaminated areas are well known since all large oil spills to date have occurred fairly near shore:²⁴ oil covered beaches; the subsequent reduction of the recreational value of the environment; and, due to the immediate toxicity of oil, the poisoning or, depending on the gravity of contamination, even the total destruction of a large range of marine species,²⁵ are all possible results of oil spills. The \$1.3 billion damage suit filed against the operators of the faulty Santa Barbara well²⁶ and the more than \$350 million worth of claims pending against Sedco, the Texas firm which supplied the Ixtoc I drilling platform,²⁷ might give a more vivid picture of the damage to be expected as a result of oil spills from well blowouts.

This brief outline was intended to point out the potentiality and magnitude of risk arising from offshore oil operations and to underscore the need for effective regulatory safeguards with respect to the prevention and control of oil pollution resulting from the

vention and Control of Oil Pollution 3 (1975). See also OEED, *Environmental Impacts From Offshore Exploration and Production of Oil and Gas* 3 (1977), for a recent forecast range of offshore oil production in the North Sea in the decade of 1975-1985.

22. *President's Panel on Oil Spills (2nd Report)*, Offshore Mineral Resources, Challenge and Opportunity 3 (1969).

23. Blumer, *Scientific Aspects of the Oil Spill Problem*, in *Oceanographic, Contemporary Readings in Ocean Science* 323 (R. Pririe, ed. 2d ed., 1977).

24. See Revelle, Wenk, Ketchum & Corino *Ocean Pollution by Petroleum Hydrocarbons*, in *Man's Impact on Terrestrial and Ocean Ecosystem* 298 (1971).

25. *Id.* at 307; see also Blumer, *supra* note 23, at 322, for a more detailed and scientific evaluation of primary and long-term effects of marine oil pollution.

26. See 10 Harv. Int'l L.J. 316, at 320 n. 26 (1969).

27. See N.Y. Times, Oct. 24, 1979, at A12, col. 1; Oil & Gas J., Oct. 29, 1979, at 71.

exploration and exploitation of the continental shelf as well as the need for regulations ensuring the compensation for transjurisdictional²⁸ oil pollution damage. Yet, except for one regional agreement which is not yet in force,²⁹ there is no international conventional regime governing the liability for offshore oil pollution, nor has there as yet been any international law case dealing with the problem.³⁰

Due to the absence of international regulation and of leading international law cases dealing with the issue of offshore oil pollution, much uncertainty and vagueness prevails with regard to legal aspects of the problem. It is also plain that the oil pollution resulting from offshore activities is really a problem which can be dealt with reasonably and effectively only by means of a unified international legal regime.³¹

This article shall be concerned with only one of the many legal aspects of oil pollution resulting from the exploration and exploitation operations on the continental shelf, namely, with the question of whether or not states under whose jurisdiction such operations are carried out are responsible for transjurisdictional damage resulting from such activities, and, if they are responsible, to what degree are they so held. So far, there have been some attempts to approach the subject on a general basis; yet they have

28. This expression has been chosen because offshore activities are often carried on in areas which are no longer subject to the unlimited jurisdiction a nation may exercise within its frontiers but are within the limited jurisdiction of coastal states for the purposes of exploration and exploitation on the continental shelf. In this sense, "transjurisdictional" is broader in scope than "transnational."

29. This is the 1976 Convention on Civil Liability for Oil Pollution Damage from Offshore Operations, *opened for signature* May 1, 1977, to April 30, 1978 [hereinafter cited as the Offshore Liability Convention]; text with final act in Bock, Ruster & Simma, XIX International Protection of the Environment, Treaties and Related Documents 9538 (1975-1979). The convention covers offshore operations carried out in the North Sea. Signatories to the Final Act of the Intergovernmental Conference on the Convention are Belgium, Denmark, France, the Federal Republic of Germany, Ireland, the Netherlands, Norway, Sweden, and the United Kingdom. The convention is intended to remain regional, but art. 18 provides that other states "which have coastlines on the North Sea, the Baltic Sea or that part of the Atlantic Ocea to the north of 36° North latitude" may, upon unanimous invitation of the parties, accede to it.

30. See Jackson, *supra* note 19, at 4.

31. Note, *Ocean Pollution: An Examination of the Problem and an Appeal for International Cooperation*, 7 San Diego L. Rev. 574, 590 (1970).

dealt with the problem *de lege ferenda* rather than reflect a solution *de lege lata*.³² But so long as there has not yet been created an international regime governing the liability for such pollution incidents, the *lex lata* solution of the liability problem gains priority over the *de lege ferenda* solution for the parties involved in a given incident.

The question, therefore, is whether international law does contain general principles which may appropriately be applied to such incidents. An answer to this question will also help solve the question as to whether the State of Mexico is responsible for the transjurisdictional oil pollution damage resulting from the Ixtoc I blowout.

Part II

Liability and International Law

A. The Traditional Law of State Responsibility: Is It Appropriate?

The traditional law of state responsibility is based on fault and requires the violation of a rule established by international law.³³ The violation of such a rule, or, in other terms, of an obligation of international law, results from an act or omission which

32. E.g., Goldie, *Liability for Damage and the Progressive Development of International Law*, 14 Int'l & Comp. L.Q. 1189, 1192 (1965) [hereinafter cited as Goldie, *Liability for Damage*].

33. "Responsibility is simply the principle which establishes an obligation to make good any violation of international law producing injury, committed by the respondent State. . . . Responsibility appears, in principle, at the moment that the internationally injurious act has taken place within the control of the State." C. Eagleton, *The Responsibility of States in International Law* 22-23 (1928) [hereinafter cited as Eagleton] (emphasis added). For a brief outline of the general principles governing State responsibility, see Eagleton, *id.*; E. Jiménez de Aréchaga, *International Responsibility*, in *Manual of Public International Law* 531 (M. Sorenson ed. 1968) [hereinafter cited as Jiménez de Aréchaga]; Verdross & Simma, *Universelles Völkerrecht* 613-14, n. 1 (1976); Berber, 3 *Lehrbuch des Völkerrechts* 1-2 (1977) [hereinafter cited as Berber].

thereby injures another state.³⁴

Here, a distinction has been made between direct and indirect state responsibility.³⁵ Direct responsibility connotes the responsibility of a state for the acts or omissions of its government and its agents.³⁶ Indirect responsibility is regarded as the responsibility for injurious acts of individuals residing within the state's territory.³⁷ Such acts, however, must be imputable to the state whereas acts of individuals acting under its authorization are generally imputed to the state even if they are committed "ultra vires."³⁸

The traditional doctrine of the law of state responsibility, heavily influenced by Roman law, was for a long time exclusively based and, to date, is still based overwhelmingly on the establishment of fault,³⁹ i.e., the intentional or negligent committance of the injurious act. There is now, however, a strong tendency toward an objective responsibility of states if the injurious act or omission is committed by an official or an individual authorized by the state to act on its behalf.⁴⁰ Thus, according to this doctrine, the proof of fault is no longer required and that the mere existence of a violation of international law suffices to establish the state's responsibility.⁴¹

If it is, however, a matter of an injurious act of a private individual, the state will be held responsible only to ensure that redress be given and, if necessary, to punish the private individual. This

34. Jiménez de Aréchaga, *supra* note 33, at 534.

35. See Eagleton, *supra* note 33, at 214.

36. L. Oppenheim, *International Law* (8th ed. 1955) [hereinafter cited as Oppenheim]. Oppenheim uses the term "direct" instead of "original" and the term "vicarious" instead of "indirect." He also interchanges "state responsibility" with "international liability of states." This confusion in terminology reflects, *inter alia*, the high degree of dispute within the field of state responsibility. "It would be difficult to find a topic beset with greater confusion and uncertainty." García-Amador, 2 *Yearbook of the International Law Commission* (ILC) at 175 (1956). See also Berber, *supra* note 33, at 2.

37. Oppenheim, *supra* note 36, at 339-40.

38. See Jiménez de Aréchaga, *supra* note 33, at 531, 546-47 and decisions discussed therein.

39. Berber, *supra* note 33 at 6. H. Grotius formulated the principle as "[q]ui in culpa non est, natura ad nihil tenetur." Quoted in Eagleton, *supra* note 33, at 308. Oppenheim contends that [a]n act of state injuriousness to another is nevertheless not an international delinquency if committed neither willfully and maliciously nor with culpable negligence." *Supra* note 36, at 343.

40. See Jiménez de Aréchaga, *supra* note 33, at 534-37.

41. *Id.* at 534-35.

is called indirect responsibility.⁴² If a state, however, had a duty under international law to prevent the individual from committing an injurious act, or if it failed to comply with the foregoing requirements, its hitherto indirect responsibility would turn automatically into direct or original responsibility.⁴³

To date, however, due to the ongoing developments in state responsibility and the many different opinions with respect to such developments, a general formula governing the subject cannot be established. Each case must be examined on its own merits.⁴⁴ Thus the question must be addressed of how these principles keep pace with activities which, due to their magnitude and potentiality for harm, constitute a permanent threat to the world environment and community—activities which, in spite of their dangerous aspects, are lawful in themselves and carried out for the benefit and well-being of a particular society and even that of the world community. These are activities such as nuclear development, space exploration and operations; and offshore exploration and exploitation. Although these activities are most often carried on by private individuals or juridical persons, they always need to be licensed by the state under the jurisdiction of which they are undertaken. Additionally, licensing state usually derives direct benefits from these activities, e.g., royalties and taxes, as well as indirect benefits through the subsequent promotion of the domestic economy. It would therefore seem appropriate to postulate that states, being thus related to these activities, should also share the burden of their disadvantages.

Assuming now that the question of liability for transjurisdictional pollution is governed by the law of state responsibility, the notion of fault appears to be, in this context, highly inadequate. For it must be borne in mind that, first, these activities operate at the frontiers of science and technology. Even though they are carried on with all due diligence, accidents resulting in widespread damage may occur. In that event, i.e., in the absence of fault, no compensation would have to be paid according to the traditional fault requirement, which would be tantamount to placing the burden

42. Oppenheim, *supra* note 36, at 338; Eagleton, *supra* note 33, at 214.

43. Oppenheim, *supra* note 36, at 338.

44. See the report of Max Huber regarding the *Affaire des biens britanniques au Maroc espagnol*: "Il n'est pas possible d'exiger l'application à toutes les situations, d'un système de justice répondant à des critères minima du droit international. . . ." 2 U.N.R.I.A.A. 627 at 646.

of the risk upon outsiders.⁴⁵

Second, the activity (*e.g.*, offshore oil exploration and exploitation) is lawful in itself. The undertaking of the activity as such does not constitute a violation of an international obligation.⁴⁶ Nonetheless, if an accident resulting in heavy transjurisdictional pollution occurs even though the operation was carried on using due diligence, how, in accordance with the law of state responsibility, shall the violation of an international obligation be established?⁴⁷ The term "violation" requires the act of an individual or a group of individuals: the occurrence of transjurisdictional pollution damage can hardly be called a violation of international law.

These questions and observations clearly reveal that the traditional law of state responsibility becomes arbitrary, inadequate and inequitable when applied to cases of transjurisdictional pollution,⁴⁸ since the undertaking of such acts is generally lawful. In addition, it appears to be in many instances impossible to prove the existence of fault if damage occurred because of such an activity. As stated above, no compensation is due in such a case according to the traditional law of state responsibility, which, in the event of disaster, is tantamount to having the injured party bear the risk of

45. It may be in any state's discretion to implement its own pattern of compensation regarding the question as to who has to bear the risk for activities which may cause serious damage, *e.g.*, the public or the private enterprise. In this context the notion of "social cost" has been introduced. See Goldie, *Liability for Damage*, *supra* note 32, at 1212-13, and Goldie, *Responsibility for Pollution*, *supra* note 19, at 284.

46. Offshore oil exploration and exploitation can only be carried out at the frontiers of a coastal state's jurisdiction. The activity as such is not only lawful but also legally encouraged. See art. 2 of the 1958 Convention on the Continental Shelf, 499 U.N.T.S. 311, as well as the corresponding I.C.N.T. provisions regarding the rights, jurisdiction and duties of the coastal state in the EEZ as set forth in art. 56, particularly in 56(1)9a) and in art. 77 with respect to the rights of a coastal state over the continental shelf. The situation, therefore, differs from that of constructing a nuclear power-plant near a frontier. See Randelzhofer & Simma, *Das Kernkraftwerk an der Grenze: Eine ultra-hazardous activity im Schnittpunkt von internationalem Nachbarrecht und Umweltschutz*, in *Festschrift für F. Berber* 388, especially at 423-26 (1973).

47. "Due diligence" means that the actor has taken every precaution to prevent an accident that would cause heavy pollution. Even so, "it may be impossible to arrive at a consensus as to the proper standard of care for the activity's operation." Kelson, *State Responsibility and the Abnormally Dangerous Activity*, 13 Harv. Int'l L.J. 197, 200 (1972).

48. *Id.*

the activity and thus engendering serious injustices.

Therefore, in the case of oil pollution, where the scope of potential harm is enormous, a necessary response to the insufficiency and inadequacy of the law of state responsibility in this respect is to provide appropriate standards which allow redress for injured parties without restricting them to the limited areas of the law of state responsibility. In fact, important conventions in the fields of civil aviation, nuclear energy, outer space, and maritime vessel-source pollution have departed from the traditional approach in that they impose strict liability on the undertaking of these activities, which have been described as "abnormally dangerous" or "ultra-hazardous."⁴⁹ Characterizing these activities as such

does not imply that the activity is ultra-hazardous [abnormally dangerous] in the sense that there is a high degree of probability that the hazard will materialize, but rather that the consequences in the exceptional and perhaps quite improbable event of the hazard materializing may be so far-reaching that special rules concerning the liability for such consequences are necessary if serious injustice and hardship are to be avoided. Liability has shifted from fault (including negligence) to risk with a view to spreading more fairly the possible consequences of improbable but potentially disastrous misadventure, making the burden of insurance or other provision of security for compensation in the event of misadventure a cost of the adventure.⁵⁰

This concept of strict liability relieves the injured party of the burden of proof of fault, a burden which might be impossible to meet.⁵¹ However, the notion "abnormally dangerous" must be extended because the above definition does not cover all cases to which the doctrine of strict liability should be applied.

An oil spill, for example, might not be considered as disastrous as a nuclear accident, but it merits the same treatment (*i.e.*, the

49. *Id.* at 197; Jenks, *Liability for Ultrahazardous Activities in International Law*, 117 *Recueils des Cours* 105 (1966).

50. *Id.* at 107.

51. *Id.*

imposition of strict liability) since, as has been pointed out, oil spills occur more often and eventually add up to a similarly disastrous result.

How well the doctrine of strict liability is established in international law remains to be determined. In the event, however, that it does prove to be well established, there remains the question of whether its application can be extended to other abnormally dangerous activities where states have not as yet agreed—perhaps because of the newness of the activity—to accept strict liability. The applicability of the doctrine of strict liability to oil exploration and exploitation in the continental shelf depends on the answers to these questions.

B. Strict Liability for Abnormally Dangerous Activities as Applied in International Law

The question of whether the principle of strict liability for abnormally dangerous activities is firmly established in international law must be examined with reference to the sources of international law as set forth in Article 38(1) of the Statute of the International Court of Justice [hereinafter referred to as ICJ Statute],⁵² which provides that:

The Court, whose function is to decide in accordance with international law such disputes as are submitted to it, shall apply:

- (a) international conventions, whether general or particular, establishing rules expressly recognized by the contracting States;
- (b) international custom, as evidence of a general practice of law;
- (c) the general principles of law recognized by civilized nations;
- (d) subject to the provisions of Art. 59, judicial decisions and the teachings of the most highly qualified publicists of the various nations, as subsidiary means for the determina-

52. The statute was entered into force (for the United States as well) on Oct. 24, 1975, 59 Stat. 1055, TS 993, 3 Berans 1153. All members of the United Nations are *ipso facto* parties to the statute according to U.N. Charter art. 93.

tion of rules of law.

In the absence of a valid overall international convention applicable to liability for oil pollution damage resulting from the exploration and exploitation of the continental shelf,⁵³ we shall focus on customary international law, taking into account the general principles of law (Art. 38(1)(c), I.C.J. Statute) and the subsidiary sources as enumerated in Art. 38(1)(d) of the Statute.

1. Customary International Law

a. Definition

Customary international law may be briefly defined as the usage exercised by the overwhelming majority of states over a considerable period of time in the consciousness of acting under a legal obligation,⁵⁴ which is often referred to as '*longa consuetudo et opinio juris sive necessitatis*.'⁵⁵

b. Elements of Customary International Law

Difficulties arise with respect to the question of what can be considered sufficient evidence of such '*longa consuetudo et opinio juris sive necessitatis*.' The usual approach to proving a rule of customary international law is to adduce in a fairly undifferentiated manner all evidence which may support the establishment of such a rule.⁵⁶

Since it is quite difficult to distill persuasive evidence from state practice alone, richer and more accessible sources have to be

53. Offshore Liability Convention, *supra* note 29. Except for the regional Offshore Liability Convention concerning the civil liability for oil pollution damage, *see supra* note 29, the Offshore Liability Convention has not yet entered into force, as has been already mentioned. However, more special attention shall be given to this convention in the text accompanying notes 133-139, *infra*.

54. See the International Court of Justice in its Asylum Case opinion of Nov. 20, 1950: "*La Partie qui invoque une coutume . . . doit prouver que la règle est conforme à un usage constant et uniforme . . . et que cet usage traduit un droit et un devoir. Ceci découle de l'article 38 du Statut de la Cour. . .*" 1950 [I.C.J.] at 276-77. There is also a far-reaching agreement among scholars in the field; *see, e.g.*, F. Berber, *Rivers in International Law* 46 (1959).

55. See A. Verdross, *Quellen des universellen Völkerrechts*, at 95 (1973).

56. Baxter, *Multilateral Treaties as Evidence of Customary International Law*, 41 *Brit Y.B. Int'l L.* 275 (1965-66).

taken into consideration.⁵⁷

Such sources include treaties and international conventions,⁵⁸ as well as resolutions and declarations of international organizations. These latter are not legally binding but serve, nonetheless, as valuable and persuasive devices for the establishment of a rule of customary international law, in that they give strong evidence of an *opinio juris*.⁵⁹ Furthermore, the decisions of international courts and international arbitrations, as well as the writings of the most distinguished scholars in international law, should be taken into account.⁶⁰

2. Treaties

The concept of strict liability has been introduced in a number of international conventions. The following section will point out those conventions specifically and will examine the extent to which strict liability has been adopted as the appropriate answer to various kinds of activities involving a great deal of risk. Also, the basic structure and concept of those conventions will be outlined in order to reveal the concepts on which states are ready to agree, the extent to which states are involved in these activities and, whether an assumption of state responsibility for these activities can be made.

a. *Civil Aviation*

In civil aviation, a sharp distinction must be made between the carrier's liability respecting its passengers and its liability respecting third parties on the surface. The former differs from the latter in that the passenger is a consenting participant in the activity;⁶¹ only the latter, however, is of interest here, as we are essentially concerned with third-party damage.

As early as 1933, the concept of strict liability was incorporated into the Convention for the Clarification of Certain Rules relating to Damages Caused by Aircraft to Third-Parties on the Sur-

57. See Berber, *supra* note 56, at 48-49; see also E. Klein, *Umweltschutz im volkerrechtlichen Nachbarrecht* 87-88 (1976).

58. See Vedross & Simma, *supra* note 33, at 295; Berber, *supra* note 54, at 48-49; Klein, *supra* note 57, at 88-89.

59. *Id.* at 88. See also F. Berber, *1 Lehrbuch des Volkerrechts* 65 (1977).

60. Art. 38 I(4), I.C.J. Statute; see also I. Brownlie, *Principles of Public International Law* 19 (2d ed. 1973); Berber, *supra* note 54, at 49.

61. See Jenks, *supra* note 49, at 110.

face, opened for signature at Rome on May 29, 1933.⁶² The 1933 Convention, which has not come into force, has been superseded by the Rome Convention on Damage Caused by Foreign Aircraft to Third Parties on the Surface of Oct. 7, 1952.⁶³

Article 1(1) of the 1952 Rome Convention provides that

any person who suffers damage on the surface shall, upon proof only that damage was caused by an aircraft in flight or by any person or thing falling therefrom, be entitled to compensation. Nevertheless there shall be no right to compensation if the damage is not a direct consequence of the incident giving rise thereto, or if the damage results from the mere fact of passage of the aircraft through the airspace in conformity with existing air traffic regulations.

The first sentence is, in its content, essentially the same as Article 2 of the 1933 Rome Convention. The liability is attached to the operator of the aircraft,⁶⁴ *i.e.*, the one who utilizes the aircraft or authorizes his servants or agents to use the aircraft.⁶⁵

The person normally liable, however, is excused from liability if the damage resulted as a direct consequence of armed conflict or civil disturbance, or if such person has been deprived of the use of the aircraft by act of public authority.⁶⁶ Such person is also not liable if the damage was caused through the negligence or the wrongful act or omission of the injured person, and he is only partly liable if the injured person contributed to the damage.⁶⁷

62. I Foreign Relations of the United States 968 (1933) [hereinafter cited as 1933 Rome Convention].

63. Convention on Damage Caused by Foreign Aircraft to Third Parties on the Surface, Oct. 7, 1952, 310 U.N.T.S. 185 [hereinafter cited as 1952 Rome Convention].

64. Art. 2(1), 1952 Rome Convention; art. 4(1), 1933 Rome Convention.

65. Art. 2(2), 1952 Rome Convention; art. 4(2), 1933 Rome Convention.

66. Art. 5, 1952 Rome Convention.

67. *Id.*, art. 6. Although the 1952 Rome Convention provides for partial exoneration from liability in cases involving contributory negligence, it also provides: "Nevertheless there shall be no such exoneration or reduction if, in the case of negligence or other wrongful act or omission of a servant or agent, the person who suffers the damage proves that his servant or agent was acting outside the scope of his authority." *Id.*

The extent of liability, however, is limited, depending on the weight of the aircraft.⁶⁸

In order to secure the operator's capability of meeting the financial requirements which strict liability imposes on him, the Rome Conventions require that the operator obtain insurance or some other financial guarantee.⁶⁹

Even though, as has often been alleged, the likelihood of aircraft accidents is remote, the scope of harm in such an event must be deemed abnormally dangerous.⁷⁰ The main feature of the two Rome Conventions is that the mere fact that damage is directly caused by a lawful activity suffices for the establishment of liability.

As the *quid pro quo* of the operator's liability, however, the amount to which the operator can be held liable is limited.⁷¹ The injured person is relieved of the time-consuming and sometimes impossible burden of proving either fault or negligence on the part of the aircraft operator.

The extent of liability has to be limited for several reasons,⁷² the most obvious being that the threat of unlimited liability could deter private capital investment in an activity of general societal desirability. Furthermore, unlimited liability would be likely to preclude the insurability of the risk.

While the Rome Conventions in themselves cannot evidence the concept of strict liability for abnormally dangerous activities as a general principle of international law, they can, nonethe-

68. *Id.*, art. 11. This article sets forth limitations of property damage ranging from a maximum liability of 500,000 francs for an aircraft not exceeding 1,000 kilogrammes to "10,500,000 francs plus 100 francs per kilogramme over 50,000 kilogrammes for aircraft weighing more than 50,000 kilogrammes." *Id.* at art. 11(1)(a)-(e). Article 11 also provides that liability for death or injury to persons shall not exceed 50,000 francs per victim. *Id.* at art. 11(2). See also Art. 8, 1933 Rome Convention.

69. *Id.* art. 15(1)(4).

70. Air transportation is still regarded as the safest means of transportation. One nevertheless need only recall the May, 1979, crash of the DC-10 in Chicago and the fact that aircraft often fly over heavily populated areas in order to imagine the possible consequences of airplane crashes. See *N.Y. Times*, May 26, 1979, at A1, col. 6.

71. See Kelsen, *supra* note 47, at 213.

72. See also Brown, *The Rome Conventions of 1933 and 1952: Do They Point to a Moral?*, 28 *J. Air. L. & Comm.* 418, 420-21 (1962).

less, point out the direction in which international law tends to move.

b. *Peaceful Use of Nuclear Energy*
Nuclear Activities

The potential hazards of a nuclear accident and the extent of possible radioactive contamination have attracted widespread public interest in the use of nuclear energy.

Man's mastery of nuclear processes has enabled him to use nuclear energy for peaceful purposes. Yet a nuclear accident may well be beyond his ability to control. The likelihood of such an accident occurring is probably remote, but the Three Mile Island incident and other minor incidents which industry and government are normally unwilling to report serve as strong reminders that the possibility of accidents does still exist.

It is for this reason that the field of nuclear damage and possible compensation schemes have received such intensive international consideration and resulted, in a three-year period, in four multilateral conventions.⁷³

As one might expect, these conventions share great similarities. It is, however, appropriate to consider each one separately.

(1) *1963 Vienna Convention*. As is the case in the Rome Conventions, liability is channeled to the operator (*i.e.*, the operator of a nuclear installation).⁷⁴

The operator is to be liable when a nuclear accident causes damage in three instances: (a) in his nuclear installation,⁷⁵ (b) in situations involving nuclear material coming from or originating in his nuclear installations,⁷⁶ and (c) in instances involving nuclear

73. The Vienna Convention on Civil Liability for Nuclear Damage, opened for signature May 21, 1963, reprinted in Bock, Ruster & Simma, *supra* note 29, vol. XII, at 6082, hereinafter cited as Vienna Convention; Convention on Third Party Liability in the Field of Nuclear Energy, done at Paris, July 29, 1960, *id.* at 5972, [hereinafter cited as OEEC-Convention]; Convention Supplementary to the Paris Convention of July 29, 1960 (OEEC-Convention), done at Brussels, Jan. 31, 1963, *id.* at 5990, [hereinafter cited as Brussels Convention]; Convention on the Liability of Operators of Nuclear Ships, done at Brussels, May 25, 1962, 57 Am. J. Int'l L. 268 (1963) [hereinafter cited as Nuclear Ships Convention].

74. Art. 2 (1) of the Vienna Convention, *supra* note 73.

75. *Id.*, art. 2(1)(a).

76. *Id.*, art. 2(1)(b).

material sent to his nuclear installations.⁷⁷

In accordance with Article 4, the liability of the operator shall be absolute, *i.e.*, in the terms of this convention, liability for the nuclear damage arises upon the [mere] proof that it was caused in one of the above mentioned instances.⁷⁸

The absolute liability, however, is, as may be expected, subject to qualifications. The operator may be wholly or partially relieved from his obligation to pay compensation to the injured person if the damage was caused wholly or partially by the injured person's intent or negligence.⁷⁹ The operator is not liable if the incident is caused directly due to an armed conflict, hostilities, civil war or insurrection,⁸⁰ or if it is caused by grave natural disaster of an exceptional character unless the law of the installation state provides to the contrary.⁸¹

Again, as a *quid pro quo* for the imposition of absolute liability, the installation state may limit the operator's liability; however, this limit must be no less than \$5 million in United States currency.⁸² The operator, therefore, shall be required to obtain insurance.⁸³ Otherwise the injured party may not be able to recover damage. The "[r]ights of compensation [however] . . . shall be extinguished if an action is not brought within ten years from the date of the nuclear incident."⁸⁴ This provision takes the long-term effects of radioactive contamination into account.

(2) *OEEC Convention*. The pattern of the Vienna Convention substantially resembles the earlier, but merely regional, OEEC Convention. In the latter, although it is not expressly provided for as such, liability is strict, since proof that damage was caused by a nuclear incident involving either nuclear fuel or radioactive products, waste or nuclear substances coming from such an installation is sufficient to establish liability.⁸⁵ This liability is subject to the

77. *Id.*, art. 2(1)(c).

78. *Id.*, art. 2(1).

79. *Id.*, art. 4(2); *see also* art. 6 of the 1952 Rome Convention and art. 3 of the 1933 Rome Convention, *supra* note 62.

80. Art. 4(3)(a) of the Vienna Convention, *supra* note 73.

81. *Id.*, art. 4(3)(b).

82. *Id.*, art. 5(1).

83. *Id.*, art. 7.

84. *Id.*, art. 6(1).

85. Art. 3 of the OEEC Convention, *supra* note 73.

same qualifications set forth in the Vienna Convention. The right of compensation is, as in the Vienna Convention, extinguished after ten years, and, according to the OEEC Convention, liability is not to exceed 15 million European Monetary Agreement units of account.⁸⁶ In the more recent Brussels Convention, this figure was increased to 120 million European Monetary Agreement units of account.⁸⁷

A major difference, however, is that the installation state is obligated to play an active role in securing the compensation amount in that it must provide funds from public resources to cover damages assessed between 5 million and 70 million units,⁸⁸ the remaining 50 million units shall be provided by a joint effort of the contracting States.⁸⁹

(3) *Nuclear Ship Convention.* The Nuclear Ship Convention does not call for further discussion since it adopts substantially the same scheme as that used in the three conventions mentioned above. All of these conventions recognize beforehand the liability of the operator, but they also evidence a shift to ultimate state responsibility. Thus, Article 7 of the Vienna Convention expressly provides that:

The Installation State shall ensure the payment of claims for compensation for nuclear damage which have been established against the operator by providing the necessary funds to the extent that the yield of insurance or other financial security is inadequate to satisfy such claims, but not in excess of the limits, if any, established pursuant to Article 5 [i.e., \$5,000,000].

86. *Id.*, art. 2(b). One unit of account of the European Monetary agreement was, according to art. 24 of the agreement, based on 0.88867088 grams of fine gold. For the text of the agreement, see 3 Eur. Y.B. 213. Yet the European Monetary Agreement is not in force anymore. The present European Unit of Account consists of a basket of fixed amounts of the nine currencies of the member countries of the European Community. Its current value must be determined on a daily basis. As of February, 1980, one unit of account equalled approximately \$1.35. For more details on the exchange rate mechanism, see the IMF Survey, March 19, 1979, Supplement: The European Monetary System, at 97-100.

87. Art. 3(a) of the OEEC Convention, *supra* note 73.

88. Art. 3(b) (ii) of the Brussels Convention, *supra* note 73.

89. *Id.*, art. 3(b)(iii).

This approach is also taken by the OEEC Convention as the Explanatory Memorandum reveals:

Whatever conditions are laid down by the competent public authority, something untoward could happen, such as where the financial guarantor is bankrupt, or where insurance is per installation for a fixed period and after a first incident it is impossible to reinstate the financial security up to the maximum liability of the operator. It was recognized that these circumstances could not set aside the obligation of the operator under Article 10 or that of the State which is required to ensure that the operator always holds financial security up to his maximum liability. *The Contracting Parties may therefore be led to intervene in such a situation to avoid their international responsibilities being involved.*⁹⁰

The same pattern has been adopted by the Nuclear Ship Convention,⁹¹ in that it requires the licensing state to provide the necessary funds up to the limit laid down in the Convention,⁹² i.e., to ensure the payment of claims for compensation for nuclear damage.

The term "absolute" liability as used in the Vienna Convention is, however, somewhat misleading. It indicates that the liability is not subject to qualifications which, as has been mentioned, is not the case in the four "nuclear" conventions.⁹³

It is, therefore, suggested that for the purpose of this paper the term "strict liability" applies to the nuclear conventions as well.

c. *Space Activities*

The question of international liability for damage caused by activities carried on in space arose early in the history of the peaceful exploration of space.⁹⁴ In 1963 the General Assembly of the

90. OEEC Convention, *Explanatory Memorandum* [1960], Eur. Y.B. 225, ¶49 (emphasis added). This view is explicitly incorporated in art. 3(a) of the Brussels Convention, *supra* note 73.

91. See *Nuclear Ships Convention*, *supra* note 73, art. 3(2).

92. *Id.*, art. 3(1).

93. See Jenks, *supra* note 49, at 144.

94. See Hosenhall, *Space Law, Liability and Insurable Risks*, 12 *The Forum* 141 (1976-77).

United Nations declared:

Each State which launches or procures the launching of an object into outer space, and each state from whose territory or facility an object is launched, is internationally liable for damage to a foreign State or its natural or juridical persons by such object or its component parts on the Earth, in air space, or in outer space.⁹⁵

This principle was later incorporated into Article VII of the 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies.⁹⁶

The international concern with compensation for damage arising out of space activities led to the Convention on International Liability for Damage Caused by Space Objects.⁹⁷ Article II of the Space Objects Convention makes clear that the phrase "internationally liable" refers to a strict liability standard.

The necessity of adopting either responsibility for risk or strict liability as a governing principle for space activities has never been seriously questioned.⁹⁸ Here again, it appears to be difficult, if not impossible, to prove negligence or fault. Further, the grave risk to third parties posed by space activities justifies the imposition of absolute liability.

The Space Liability Convention marked the first time that such liability was to be borne directly by the launching state.⁹⁹

95. Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space, U.N. General Assembly Resolution 1962 (XVIII), Dec. 13, 1963.

96. Jan. 27, 1967, 18 U.S.T. 2410, T.I.A.S. No. 6347 [hereinafter referred to as the Outer Space Treaty]; Cf. Hosenball, *supra* note 94.

97. Mar. 29, 1972, 24 U.S.T. 2389, T.I.A.S. No. 7762, [hereinafter referred to as the Space Liability Convention]; see generally Foster, *The Convention on International Liability for Damage Caused by Space Objects*, [1972] Can. Y.B. Int'l L. 137.

98. See Wiewiorowska, *Some Problems of State Responsibility in Outer Space Law*, 7 J. Space L. 23, 32 (1979).

99. See Foster, *supra* note 97, at 150; see also, Wiewiorowska, *supra* note 98, at 25-28. The Space Liability Convention does, however, constitute some disadvantages with respect to private individuals: see Wilkins, *Substantial Bases for Recovery for Injuries Sustained by Private Individuals as a Result of Fallen Space Objects*, 6 J. Space L. 161 (1978). Article I(c) of the Space Liability Convention, *supra* note 97, provides that "[t]he term 'launching State' means: (i) a State which launches or procures the launching of a space

The development of space activity has shown that such activities are carried out by the States themselves because of the prohibitive cost of such enterprises, and, consequently, private parties play only a subordinate role.¹⁰⁰ Since the launching state generally draws substantial benefits from space activity, it seems appropriate to hold it responsible for the damages it causes thereby.

The convention also provided that liability for damage incurred on the surface of the Earth is absolute,¹⁰¹ with the only exception being cases involving either gross negligence or intentional act or omission on the part of the injured party.¹⁰² The limitation of liability normally involves four factors: 1) strict and absolute liability, as in the present convention; 2) the incalculability of risk; 3) the societal desirability of continuing the abnormally dangerous but beneficial activity; and, 4) the channeling of liability to a private operator who is charged with the duty to obtain insurance so as to assure the payment of compensation should it become necessary. It must be noted that the operator cannot obtain insurance or security beyond a certain limit.¹⁰³ However, the launching state upon which absolute liability is imposed usually possesses the economic strength to bear the burden of unlimited absolute liability.¹⁰⁴

d. *Marine and Fresh Water Pollution*

(1) *Pollution of Fresh Water Resources.* Because fresh water resources are of pressing concern only to a relatively small number of states, this field has not generally been subject to multilateral agreement. A substantial number of bi- and trilateral agreements exist to regulate the use of international rivers, drainage basins and lakes.¹⁰⁵ These do not, however, generally provide a basis for liability; far less do they provide for strict liability.¹⁰⁶ The Council of Europe and the European Communities have attempted a multilateral approach to the utilization and prevention of pollu-

object; (ii) a State from whose territory or facility a space object is launched."

100. See Kelson, *supra* note 47, at 215.

101. Art. II, Space Liability Convention, *supra* note 97.

102. *Id.*, art. IV.

103. See Foster, *supra* note 97, at 153-54.

104. *Id.*, at 154.

105. See J. Ballenegger, *La Pollution en Droit International* at 26 (1975).

106. *Id.* The USSR seems to be an exception in this respect. *Id.* at 26-28.

tion of fresh water resources.¹⁰⁷ These attempts have not yet led to a valid legal regime of liability.

(2) *Marine Pollution*. The question of liability has received widespread attention in regard to the pollution of the marine environment. This is especially true in the case of marine pollution by hydrocarbons.¹⁰⁸ Whereas the likelihood of a nuclear or space accident may still be considered remote, "the risk of harm from oil pollution is major in both probability and magnitude."¹⁰⁹

(i) *The 1958 Geneva Convention*. Article 24 of the Convention on the High Seas¹¹⁰ provides that:

Every state shall draw up regulations to prevent pollution of the seas by the discharge of oil from ships or pipelines or *resulting from the exploitation and exploration of the seabed and its subsoil*, taking account of existing treaty provisions on the subject.¹¹¹

This provision explicitly requires states to take precautions to prevent the pollution of the seas. If a member state falls short of this obligation, it will certainly be viewed as being in breach of the treaty.

However, the Convention does not set forth specific standards to be incorporated in such regulation. Hence, in the event of pollution, a member state which has drawn up regulations with a view toward preventing the pollution of the seas could not be held responsible since it has complied with the obligation as set forth in Article 24 of the Convention on the High Seas.

State responsibility under the regime of this provision can be established only upon proof that the event occurred due to the failure of a state to adopt such regulations. Therefore, in a given event of pollution it would be difficult, if not impossible, to establish state responsibility under the regime of this convention, not to mention

107. See European Communities: Proposal for a Council Decision establishing a uniform procedure for the exchange of information on the quality of surface fresh water in the Community, May 4 1976, *reprinted in* Ruster & Simma, *supra* note 29, vol. XI at 5842, for an example of the European efforts in this area. See also recommendation 436 on Fresh Water Pollution Control in Europe, Oct. 1, 1965, *reprinted in* Ruster & Simma, *supra* note 29, vol. XI at 5728.

108. The potential for harm resulting from marine oil pollution was discussed in the introduction to this article.

109. See Kelson, *supra* note 47, at 224.

110. Apr. 29, 1958, 450 U.N.T.S. 82, *entered into force* June 10, 1964.

111. Emphasis added.

state responsibility based on the concept of strict liability.

Article 5(7) of the Convention on the Continental Shelf¹¹² seems to apply an even more stringent standard: "The coastal State is obliged to undertake, in the safety zones, all appropriate measures for the protection of the sea from harmful agents."¹¹¹ What, however, are these appropriate measures? They are still subject to determination. The more stringent standard seems, nonetheless, to facilitate the burdensome task of establishing state responsibility in the absence of corresponding action on the part of the coastal state. If such a state, however, is able to prove successfully that the highest safety standards known were applied prior to a given polluting event, the state will not be responsible under Article 5(7).

Thus, this provision cannot be taken as an example of the application of strict liability. It does, however, indicate that a coastal state is not free from international obligations with respect to activities on the continental shelf.

(ii) *Vessel Source Pollution*. The heightened public concern over increased oil pollution that came in the wake of the *Torrey Canyon* disaster¹¹³ eventually led to the adoption of the International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties¹¹⁴ and the International Convention on Civil Liability for Oil Pollution Damage,¹¹⁵ both of which were prepared by the Intergovernmental Marine Consultative Organization (IMCO).

As the title indicates, the Intervention Convention regulates the legal options open to coastal states to take such measures "on the high seas as may be necessary to prevent, mitigate or eliminate grave and imminent danger to their coastlines or related interests from pollution or threat of pollution of the sea by oil. . . ."¹¹⁶ Thus, this convention is of little concern in the context of this article, because the scope of this paper is limited to liability that attaches after the polluting incident has occurred.

It was only after long debate that the principle of strict liability

112. Apr. 29, 1958, 499 U.N.T.S. 311, entered into force June 10, 1964.

113. See Nanda, *supra* note 8.

114. Nov. 29, 1969, 26 U.S.T. 765, T.I.A.S. 8068, reprinted in 64 Am. J. Int'l L. 471 (1970) [hereinafter cited as the Intervention Convention].

115. Done at Brussels, Nov. 29, 1969, reprinted in Am. J. Int'l L. 481 (1970).

116. *Id.*, art. 1(1). This issue was at stake when the English bombed the *Torrey Canyon*; see Balleneger, *supra* note 105, at 93-94, especially at n. 82.

was incorporated into the Oil Pollution Convention.¹¹⁷ Here again, the *Torrey Canyon* disaster provided the incentive.¹¹⁸ Article III(1) of the Convention provides that "the owner of a ship . . . shall be liable for any pollution damage caused by oil which has escaped or been discharged from the ship. . . ." The strict liability of the owner is subject to the usual qualifications,¹¹⁹ with the addition of *cause étrangère* as an additional exoneration.¹²⁰

The meaning given to the words "pollution damage" is relatively broad in that it covers "loss or damage caused outside the ship carrying oil by contamination resulting from the escape or discharge of oil from the ship, wherever such escape or discharge may occur, and includes the costs of preventive measures and further loss or damage caused by preventive measures."¹²¹ However, the Convention is limited in scope to "pollution damage caused on the territory including the territorial sea of a contracting state and to preventive measures taken to prevent or to minimize such damage."¹²² Therefore, the Convention does not consider pollution damage to living resources nor does it address possible detrimental effects to the ecological balance of the oceans.¹²³

As *quid pro quo* for the imposition of strict liability, the ship owner may limit his liability to an amount of 2,000 francs for each ton of the ship's tonnage, whereby the maximum amount of 210 million francs shall not be exceeded,¹²⁴ unless the incident occurred "as a result of the actual fault or privity of the

117. *Id.* at 100; see also Goldie, *Liability for Oil Pollution Disasters: International Law and Delimitation of Competences in a Federal Policy*, 6 J. Mar. L. & Com. 303, at 305-07 (1974-75).

118. *Id.* at 305.

119. *Oil Pollution Convention*, *supra* note 115, art. III (2), (3).

120. *Id.*, art. III (2)(b).

121. *Id.*, art. I(b).

122. *Id.*, art. II. For a discussion of the shortcomings of such a restriction, see Ballenegger, *supra* note 107, at 104 n. 128.

123. Damage to areas of the ocean beyond the territorial seas might, as well, have detrimental effects on the ecological balance within the territorial sea. For a discussion of the potential effects, see Blumer, *supra* note 23, at 322. In the 11-year period between the *Torrey Canyon* accident in 1967 and the *Amoco Cadiz* disaster, there were sixty major oil spills from tankers dumping a total of 1.64 million tons of oil into the ocean. *N.Y. Times*, March 23, 1978, at A2, col. 1.

124. *Oil Pollution Convention*, *supra* note 115, 145, V(1).

owner. . . ."¹²⁵ Further, the owner of a ship carrying more than 2,000 tons of oil in bulk as cargo is required to obtain insurance or otherwise post security.¹²⁶ The ultimate responsibility of a flag state, albeit not expressly provided, is nonetheless implied if a contracting state falls short of the obligation to ensure that the owner of a ship maintains insurance or another form of financial security as provided by the Convention.¹²⁷

A major disadvantage of the Oil Pollution Convention is that the insurer or other person providing financial security, against whom the claim for compensation may be brought directly, can invoke the defense that the pollution damage was caused by the willful misconduct of the owner of the ship.¹²⁸ This obviously raises the possibility that the Convention's clear intent to assure that all pollution incidents are adequately covered against risk will be defeated.

(iii) *1976 London Convention.* The 1976 London Convention on Civil Liability for Oil Pollution Damage From Offshore Operations¹²⁹ essentially copied the 1969 Oil Pollution Convention, but this article will discuss, albeit briefly, those provisions which depart from those of the 1969 Convention. The Offshore Convention channels the strict liability to the operator of the polluting installation.¹³⁰ In contrast to the Oil Pollution Convention, *cause étrangère* does not constitute an exoneration from liability.¹³¹ This more stringent approach apparently derives from the fact that the potential for a well blowout is considered to be higher than that for a vessel-source pollution accident.¹³²

The amount up to which the operator can be liable is limited

125. *Id.*, art. V(2).

126. *Id.*, art. VII(1).

127. *Id.*, art. VII(9), in accordance with art. VII(1) and (2). Art. VII(9) provides: "A Contracting State shall not permit a ship under its flag to which this Article applies to trade unless a certificate has been issued under Paragraph 2 or 12 of this Article."

128. *Id.*, art. VII(8).

129. See note 29 *supra*; see generally Dubois, *The 1976 London Convention on Civil Liability for Oil Pollution Damage from Offshore Operations*, 9 J. Mar. L. & Com. 61 (1971) [hereinafter cited as *Dubois*].

130. Art. 3(1) of the Offshore Liability Convention, *supra* note 29.

131. See Dubois, *supra* note 129, at 64-65.

132. *Id.* at 65.

to 30 million Special Drawing Rights¹³³ until five years have elapsed from the date on which the Convention opened for signature, and to the amount of 40 million Special Drawing Rights thereafter.¹³⁴ As in previous conventions, the operator is required to obtain insurance or otherwise to demonstrate financial security.¹³⁵

3. Declarations and Resolutions of Public International Bodies

Public international bodies obviously play a major role in the formulation and advancement of international law. Although they are generally incapable of establishing binding rules of international law, their work as manifested in declarations and resolutions may serve as evidence of customary international law, reaffirm its existence, or indicate its emergence. In this light, declarations, resolutions or pronouncements of public international bodies can generally be viewed as an indication of *opinio juris*.

a. 1972 United Nations Conference

Principle 21 of the Declaration on the Human Environment issued by the United Nations Conference on the Human Environment held in 1972 at Stockholm proclaims that the States bear the "responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limit of national jurisdiction."¹³⁶ While this principle does not explicitly mandate strict liability, it does make clear that the establishment of state responsibility depends on the fact that the damage was caused by an activity carried out within a state's jurisdiction. No reference to a breach of an international obligation is made. According to Principle 21, the state should either refrain from or prohibit activities where it is incapable of ensuring that no damage will be caused beyond the limits of national jurisdiction. If the state nevertheless carries out or allows a private entity to carry out such activities because of their benefit to the

133. "Special Drawing Right" means Special Drawing Right as defined by the International Monetary Fund and used for its own operations and transactions." Art. 1(9) of the Offshore Liability Convention, *supra* note 30.

134. *Id.*, art. 3(1).

135. *Id.*, art. 8(1).

136. Declaration of the United Nations Conference on the Human Environment, Ruster & Simma, *supra* note 29, Vol. 1, at 118.

state's society, it will then also have to bear the responsibility for transjurisdictional damage which might be caused. Principle 22 emphasizes the need for furthering the elaboration of rules concerning liability and compensation for transjurisdictional pollution damage.

b. *United Nations Resolutions*

Principles 21 and 22 of the Stockholm declaration have been reconsidered and affirmed in United Nations General Assembly Resolutions 2995 and 2996 of December 15, 1972.¹³⁷

Resolution 2996, which was adopted by 112 votes with no counter-votes and 10 absentions, expressly states that "those principles [21 and 22] lay down the basic rule governing this matter."¹³⁸

Although the Stockholm Declaration and the just-mentioned United Nations resolutions are not sufficient to establish customary international law, they nevertheless provide, through their widespread acceptance, strong evidence of *opinio juris*.

c. *Draft European Convention on the Protection of Fresh Water Against Pollution*

Article 7(1) of the Draft Convention on the Protection of Fresh Water Against Pollution¹³⁹ provides: "Any person who suffers damage in any contracting state arising from water pollution in any other contracting state shall be entitled to compensation. . . ." Damages shall be recoverable only insofar as the harm was caused by acts that contravene existing international standards of water quality.¹⁴⁰

Article 8 attaches liability for compensation to the contracting state in whose territory any water pollution arises, whether wholly or in part. This Draft Convention is of interest in the context of this article in that it essentially reflects the approach to trans-

137. U.N. General Assembly Resolution 2995 (XXVII) (Co-operation Between States in the Field of the Environment), Dec. 15, 1972, *reprinted in* Ruster & Simma, *supra* note 29, at 149, and Resolution 2996 (XXVII) (International Responsibility of States in Regard to the Environment), Dec. 15, 1972, *id.* at 151.

138. *Id.*

139. Adopted by Recommendation 555 by the Consultative Assembly of the Council of Europe, May 12, 1969; text *reprinted in* Ruster & Simma, *supra* note 29, Vol. XI, at 5748.

140. *Id.* at 5748.

jurisdictional pollution as set forth in Principle 21 of the Stockholm Declaration. The burden of liability is to be borne directly and totally by the state in whose jurisdiction the pollution originated.

4. International Judicial Decisions

Generally, international judicial decisions bind only the parties who litigate those decisions, and therefore constitute a merely supplemental source of international law.¹⁴¹ This, however, is somewhat misleading, because international judicial decisions are customarily accorded great weight and authority and are constantly relied upon by parties to disputes in the public international law arena. The International Court of Justice has, for example, developed a consistent jurisprudence with respect to various questions and issues in international law.¹⁴² Of similar importance is the jurisprudence of the various international courts of arbitration.

Accordingly, the outcome of international judicial decisions, especially if they reflect agreement on a particular issue, must be given great weight. The following is a discussion of some judicial decisions which are relevant in the context of this article: the Trail-Smelter arbitrations,¹⁴³ the Corfu-Channel case,¹⁴⁴ the Lac Lanoux arbitration,¹⁴⁵ and the Gut Dam arbitration.¹⁴⁶

141. See generally Verdross & Simma, *supra* note 33, at 319-22 with extensive reference. See also C. F. Amerasinghe, *State Responsibility for Injuries to Aliens* 32-35 (1967).

142. See Bernhardt, *Homogenität, Kontinuität und Dissonanzen in der Rechtsprechung des Internationalen Gerichtshofs*, 33 *Zeitschrift für ausländisches öffentliches Recht und Völkerrecht* 1 (1973).

143. 3 U.N.R.I.A.A. 1905, 1938 (1938 & 1941); see generally Hoffman, *State Responsibility in International Law and Transboundary Pollution Injuries*, 25 *Int'l & Comp. L.Q.* 509 at 513-16 (1976); Goldie, *supra* note 32, at 1226-31.

144. 1949 I.C.J. 4; see Goldie, *supra* note 32, at 1226; Utton, *International Water Quality Law*, in L. Teclaff & A. Utton, *International Environmental Law* 154 at 160 (1974); Teclaff, *International Law and the Protection of the Oceans from Pollution*, *id.*, 104 at 120; I. Schneider, *World Public Order of the Environment* 49 (1979).

145. 12 U.N.R.I.A.A. 281 (1957), *digested in* 53 *Am. J. Int'l L.* 156 (1959); see also Utton, *supra* note 144; Schneider, *supra* note 144.

146. See Canada-United States Settlement of Gut Dam Claims, Sept. 22, 1968, Report of the Agent of the United States before the Lake Ontario Claims Tribunal, 8 *Int'l Legal Materials* 118 (1969). See generally Lillich, *The Gut Dam Claims Agreement with Canada*, 59 *Am. J. Int'l L.* 892 (1965); Schneider, *supra* note 144, 50, 165-66.

a. *The Trail-Smelter Arbitration*

The Trail-Smelter arbitration between the United States and Canada is the leading international case in the field of transboundary pollution. It is the only case decided by an international tribunal to deal directly with this issue.¹⁴⁷

The Trail-Smelter case concerned claims brought by the United States for damage caused to crops in the farming areas around Northport, Washington. The damage was proved to have resulted from the sulphur dioxide fumes emitted by a smelting plant owned by Consolidated Mining and Smelting Company of Canada, Ltd. Further, the damage was due in part to certain characteristics of river and air currents in the valley shared by the two countries. The Tribunal held that Canada was responsible under international law for the crop damage caused by the smelting plant:

Under the principles of international law . . . no state has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties of another therein, when the case is of serious consequence and the injury is established by clear and convincing evidence.¹⁴⁸

Not only did the Tribunal hold Canada directly responsible for the pollution, but it held that the mere fact that the damage arose out of an activity carried on in Canada sufficed for such liability to attach.¹⁴⁹ There is no mention of fault in the Tribunal's opinion. Thus, the Tribunal implicitly based its decision on strict liability.

b. *The Corfu-Channel Case*

In the Corfu-Channel case,¹⁵⁰ which involved the United Kingdom and Albania, the International Court of Justice had to decide the question of Albania's responsibility at international law for damage caused to a British warship by exploding mines in Albanian waters. The Court found Albania responsible by relying on "certain general and well-known principles" including "every State's obligation not to allow its territory to be used for acts con-

147. To the writer's knowledge.

148. 3 U.N.R.I.A.A. at 1965-66.

149. Goldie, *Liability for Damage*, *supra* note 32, at 1230-31.

150. See note 144 *supra*.

trary to the rights of other States.”¹⁵¹

Although the Corfu-Channel case was not concerned with environmental issues, its language, as well as the principle stated above, nonetheless constitute pertinent and persuasive evidence as to the extent of a state's responsibility for damage caused by activities carried on in its territory. Here again the liability was predicated solely upon the fact that Albania had allowed its territory to be used in such a way that damage to the property of another state resulted, and the plaintiff state was not required to prove fault on the part of the defendant state.¹⁵²

c. *The Lac Lanoux Arbitration*

The Lac Lanoux case¹⁵³ involved a dispute between Spain and France as to the legality of a change proposed by France in its part of a river system which was also used by Spain, which change was to be implemented without Spain's consent. The tribunal stated:

It would then have been argued that the works would bring about a defined pollution of the waters of the Carol [the river through which the French Lac Lanoux empties into Spain] or that the returned water would have a chemical composition or temperature or some other characteristics which could injure Spanish interests. Spain could then have claimed that her rights had been injured.¹⁵⁴

The tribunal decided in favor of France, but made clear in dicta that the state responsibility based on a concept of strict liability would have governed in case of a contrary finding for Spain.¹⁵⁵

d. *The Gut Dam Arbitrations*

Gut Dam¹⁵⁶ was another arbitration between the United States and Canada. The facts can be briefly summarized as follows. In 1903 the Canadian government proceeded, after long investigations, to construct a dam for the purpose of improving the navigation

151. [1949] I.C.J. at 22.

152. See Goldie, *supra* note 32, at 1230-31.

153. See note 145 *supra*.

154. 12 U.N.R.I.A.A. 303.

155. See Schneider, *supra* note 144, at 49-50.

156. See note 146 *supra*.

of the St. Lawrence river. In 1904 the height of the dam was increased. Both of these actions were taken with the explicit consent of the United States. As a result of the dam, and also partly as a result of natural causes, Lake Ontario overflowed its banks in 1951-52 and caused damage to property owners in the United States.

Here again, the Tribunal was not interested in proof of fault but only in proof that the damage was caused by the construction of Gut Dam.¹⁵⁷ This evidence sufficed to hold Canada liable.¹⁵⁸ It is therefore clear that the decision in the Gut Dam arbitration was also based upon a concept of strict liability.¹⁵⁹

e. Summary

The survey of the international judicial decisions relevant in the context of this article reveals that there is a common judicial understanding as to the applicability of the concept of strict liability for transboundary or, to use the broader term, transjurisdictional damage. Such common understanding merits consideration as a strong indicator that the concept of strict liability is the generally appropriate regime to govern the occurrence of transjurisdictional damage.¹⁶⁰

5. United States *ex gratia* Payments

I should like to conclude the discussion of the sources of international law as related to the notion of strict liability with a brief mention of the United States *ex gratia* payments to Japan as a consequence of damage suffered by Japanese fishermen as a result of nuclear tests carried out by the United States at the Pacific Proving Grounds in the Marshall Islands during March and April of 1954.¹⁶¹

Following an exchange of notes, the United States agreed to pay \$2 million to the Japanese government on the understanding

157. See Schneider, *supra* note 144, at 50, 165-66.

158. Decision of Jan. 15, 1968, transcript at 589, *reprinted in* 8 Int'l Legal Materials 118 at 136 (1969).

159. See Schneider, *supra* note 144, at 50, 165-66.

160. See Goldie, *supra* note 32, at 1280-81; Goldie, *supra* note 19, at 306-07. Schneider, *supra* note 144, at 49; Kelsen, *supra* note 57, at 225; and Teclaff, *supra* note 144, at 121, arrive at essentially the same conclusion.

161. For an account of the event, see Goldie, *supra* note 32, at notes 152-62 and accompanying text.

that the sum would be distributed in an equitable manner to the injured parties.¹⁶² The United States agreed to do this despite a lack of fault on its part, acting on a feeling of moral obligation that mandated that damage suffered by innocent parties should be compensated.¹⁶³

This payment certainly does not, in itself, point to an acceptance of the doctrine of strict liability in international law, but it can nevertheless be used as a small piece of evidence in this regard.¹⁶⁴

C. Evaluation

Having examined the sources of international law with respect to the principle of strict liability, one is tempted to conclude that there is ample evidence to support the view that the state, itself, is directly responsible for transboundary pollution damage resulting from an abnormally dangerous activity.

Yet such a view is tantamount to imposing an additional international obligation on states' discretion to act freely within the limits of their national jurisdiction. It thus places a further restriction on the exercise of state sovereignty. As states can never be assumed to voluntarily curtail their sovereignty, the premise must always be to the contrary.¹⁶⁵

This "obstacle" will have to be kept in mind if one is to establish a rule of customary international law which both conforms to reality and is acceptable to the international community.

The task, therefore, is to crystallize a rationale for explaining why the concept of strict liability has been applied and agreed upon in certain cases and to find out whether a justifiable argument can be made for the extension of this concept to a new and somewhat analogous situation. This becomes even more crucial where the concept in question appears to be an exception to an established doctrine; *i.e.*, in our case, it is the concept of strict liability which constitutes a departure from the traditional concept of fault based on the proof of either intent or negligence.

The proof of such deviating rule and its application to a situation where states have not yet dealt with on the basis of an overall international agreement would, actually, seem to be justified only

162. *Id.* at 1233.

163. *Id.* at 1232-33; Schneider, *supra* note 144, at 167.

164. *Id.*; Goldie, *supra* note 32, at 1231 n. 153, 1233.

165. Doehring, *Gewohnheitsrecht aus Verträgen*, 36 *Zeitschrift für ausländisches öffentliches Recht und Völkerrecht* 77 at 86 (1976).

if it conformed to the needs and interests of the community of nations.¹⁶⁶

The foregoing has briefly pointed out the background based on which an evaluation of the elements of customary international law must be carried out in order to find a valid response to the problem at stake. It seems to be appropriate to sum up briefly the sources which have been examined so far.

These are: multilateral treaties on civil aviation, the peaceful use of nuclear energy, the exploration and exploitation of outer space, vessel-source pollution and the regional offshore convention; declarations and resolutions; international judicial decisions; and, finally, the United States' *ex gratia* payments.

The opinions of writers will be taken into consideration in the course of evaluating the other three elements of customary international law.

1. Strict Liability for Abnormally Dangerous Activities

All the international conventions which have been cited impose strict liability for the damage which occurs directly from the activity described in the respective convention.

None of these activities is considered unlawful. To the contrary, they are not only lawful, but also benefit society and are therefore desired. The imposition of strict liability, the exonerations which can be made and the limitations on the amount of liability (with the exception of the Outer Space Convention, which does not allow a limitation on liability for damage caused on the earth's surface) vary in degree but contain essentially the same pattern.

Where does this pattern derive from, and how can the concept of strict liability be explained and reasonably upheld? The concept of strict liability or liability without fault¹⁶⁷ was introduced more than a century ago in the famous English case *Rylands v. Fletcher*.¹⁶⁸

In that case, the defendants, who were owners of a mill, had built a large water reservoir on their property for their own business purposes. It was perfectly lawful for them to do so. They had the construction of the reservoir carried out with all reasonable and

166. *Id.*

167. Both expressions are and may be used interchangeably.

168. 3 H & C 774, 159 Eng. Rep. 737 (Ex. 1865), *rev'd*, L.R. 1 Ex. 265 (1866), *rev'd* L.R. 3 H.L. 330 (1868).

due care under the supervision of an engineer and other competent contractors. Unfortunately, due to the unknown and unexpected presence of an old mine shaft, the water leaked out of the reservoir and flooded the tunnels in the plaintiff's mine, located on the adjacent property.

The plaintiff sued to recover damages caused by the flooding of the mine, and the case was eventually decided in his favor by the English House of Lords. The mill owners were held liable without fault¹⁶⁹ for the damage caused to the neighbor's property by the accidentally escaped water.¹⁷⁰

The underlying principle for that decision was that the mill owners had put their land to a "non-natural use" by collecting an unusual amount of water, and that they, therefore, created an extraordinary risk of harm in the conduct of their business. This rendered them liable merely because damage was caused to the neighbor's property.

It is worthwhile to note the similarity between this case and the occurrence of oil spillage resulting from the lawful and careful conduct of an offshore activity. The notions of "non-natural use" of the land and the extraordinary risk of harm inherent in such use were later absorbed in the notion of an "abnormally dangerous activity" involving strict liability as applied in *Rylands v. Fletcher*. The notion of an "abnormally dangerous activity" has also been adopted by various American states.¹⁷¹ In the Restatement (Second) of Torts an attempt was undertaken to outline the criteria and enumerate the factors to be considered in the determination of whether an activity is "abnormally dangerous":

- (a) Whether the activity involves a high degree of risk of harm to the person, land or chattels of others;
- (b) Whether the gravity of the harm which may result from it is likely to be great;
- (c) Whether the risk cannot be eliminated by the exercise of reasonable care;
- (d) Whether the activity is not a matter of common usage;
- (e) Whether the activity is inappropriate to the place where it is carried on; and

169. L.R. 1 Ex. 265, 278 (1866).

170. See also Katz, *The Function of Tort Liability in Technology Assessment*, 38 U. Cin. L. Rev. 587, at 642-43 (1969); Goldie, *supra* note 30, at 1208.

171. See W. Prosser, *The Law of Torts*, 505-10, especially at 509 (4th ed. 1971).

(f) The value of the activity to the community.¹⁷²

These factors give a reasonable idea of what conditions will render an activity "abnormally dangerous."¹⁷³ Most of these activities are products of new industrial and technological development and are, albeit their high degree of risk, generally both desired by society and beneficial to it. They often increase the standard of living and also enable a society to keep pace with international economic competition. The further development of peaceful uses of nuclear energy, for instance, may render a society independent from foreign sources of energy. Who should, therefore, bear the burden of risk: the people who are exposed to the risks inherent in such an activity but also benefit from it, or rather the one who introduces the abnormally dangerous activity? The question is thus reduced to one of risk and loss distribution.

If, for instance, damage resulted from such an activity although the activity was carried out with all reasonable and possible care, the application of the traditional fault doctrine would be tantamount to a denial of recovery for damages. The burden of risk would then be borne by third parties because no fault could be proven. Even if there were fault involved, it is possible that the injured party would not be able to prove fault.

Such a result would be inadequate and inequitable; it should be borne in mind that the one who introduces the risks, normally the industry, is financially more capable of absorbing the burden of liability since it also gets the profit out of the activity.

Strict liability, then, is necessary to avoid these inadequate and inequitable results. Furthermore, the imposition of strict liability will help ensure that the activity is carried out with the greatest of care.

Strict liability is justified only if it is applied to abnormally dangerous activities,¹⁷⁴ which by their very nature carry an extraordinary risk. And, in fact, this approach, the imposition of strict liability on abnormally dangerous activities, has been generally adopted in the domestic law of the world community.¹⁷⁵ Thus,

172. Restatement (Second) of Torts §520 (Tent. Draft No. 10, 1964).

173. For a discussion of activities which have been considered abnormally dangerous and therefore subjected to strict liability, see Katz, *supra* note 170, at 641.

174. *Id.*

175. A comparative study of the application of the concept of strict liability for abnormally dangerous activities goes beyond the framework of

the standard of strict liability as applied to abnormally dangerous activities seems to have brought about a new "common law of nations."

The technological advances and modern processes involving exceptional risks do not stop at national frontiers but transcend them, and this has led to an international concern with transnational damage.¹⁷⁶

In fact, the increasing amount of abnormally dangerous activities of international scale and the likelihood of transjurisdictional damage have clearly heightened the international concern with this problem.¹⁷⁷ These activities have been defined as acts which result in

a substantial change in the natural environment of the earth or another State, significant pollution of the air or water, the release of nuclear or other sources of energy liable to escape from human control, disturbance of the equilibrium of geophysical forces and pressures, the modification of biological processes, the creation of automata, a major error of which may be irreparable, and impact damage from such sources as aircraft in flight and spacecraft.¹⁷⁸

Since it has become obvious that the only appropriate standard of liability for abnormally dangerous activities is a standard of strict liability, states have tended to approach the subject matter on the international scale the same way as in their domestic laws. Thus, as a response to the threat of transnational damage, the international community has, on the international scale, abandoned the traditional concept of fault liability with respect to various abnormally dangerous activities and has introduced the concept of strict liability instead.

This has been done expressly in the fields of civil aviation

this paper. For such a study, see Kelson, *supra* note 47, at 201-11; see also Mosler, *The International Society as a Legal Community*, 140 *Recueils des Cours* 1, at 180 (1974-IV); and Jiménez de Aréchaga, *supra* note 33, at 538.

176. See Jenks, *supra* note 49, at 195.

177. Fortunately, mankind has not yet experienced a disastrous nuclear accident. Yet the Three Mile Island incident, an officially unreported incident in the Urals (U.S.S.R.) and a series of minor incidents serve as indicators of the enormous danger inherent in such activities.

178. See Jenks, *supra* note 49, at 195.

(third party damage on the surface), the peaceful use of nuclear energy, vessel-source pollution, and, on a regional basis, in the field of exploration and exploitation of oil and gas on the Continental Shelf.

Such responses were necessary to avoid serious injustice and hardship to third parties who are exposed to the risk inherent in abnormally dangerous activities.¹⁷⁹ The categories of strict liability as applied in the conventions vary with respect to the exonerations which can be made and to the amount to which the liability may be restricted corresponding to the degree of risk of the abnormally dangerous activities.

The same understanding of the imposition of strict liability appears to have been adopted by Principle 21 of the Declaration on the Human Environment of the United Nations Conference in Stockholm and reaffirmed by the United Nations General Assembly Resolutions 2995 and 2996, which impose responsibility for the causation of transnational damage rather than for a wrongful act or omission. It is also reflected in the United States *ex gratia* payments to Japan.

As far as the opinion of writers and scholars is concerned, the theory of risk as opposed to the concept of fault received early attention.¹⁸⁰ Today the necessity of strict liability for abnormally dangerous activities is generally acknowledged and accepted.¹⁸¹

It can also be considered that the necessity for the application of strict liability for certain activities has been accepted in the work of the International Law Commission.¹⁸²

179. *Id.*, at 107.

180. *See, e.g.*, the report by the Institut de Droit International in *Annuaire de l'Institut de Droit International* 103-06 (1927 III).

181. *See, e.g.*, Goldie, *supra* note 19, at 306; Goldie, *supra* note 32, at 1196, 1224; Jimenez de Aréchaga, *supra* note 33, at 538-40; Hardy, *Nuclear Liability: The General Principles of Law and Further Proposals*, 36 *Brit. Y.B. Int'l L.* 223 at 227 (1960); Jenks, *supra* note 49, at 105; Randelzhofer & Simma, *supra* note 46, at 429-31; Mosler, *supra* note 175, at 180-82; Schneider, *supra* note 144, at 163.

182. *See* Summary Records of the 1011th Meeting, [1969] I *Y.B. Int'l L. Comm'n* 107, ¶10, U.N. Doc. A/CN. 4/SER. A/1969; Summary Records of the 1012th Meeting, *id.* at 110, ¶¶10, 17; Summary Records of the 1013th Meeting, *id.* at 114, ¶8; Summary Records of the 1075th Meeting, [1970] I *Y.B. Int'l L. Comm'n* 185, 40, U.N. Doc. A/CN. 4/SER. A/1970; Summary Records of the 1076th Meeting, *id.* at 190, ¶31; Second Report on State Responsibility, U.N. GAOR A/CN. 4/233, [1970] II *Y.B. Int'l L. Comm'n* 177 at 186, ¶28, U.N. Doc. A/CN. 4/SER. A/1970/Add. 1; Report of the International Law Commission to the General Assembly, U.N. GAOR A/8010/Rev. 1, [1970] II *Y.B. Int'l L. Comm'n* 221 at 306, ¶66(b), 307-08, ¶74, U.N.

This is of enormous weight since the work of the I.L.C. enjoys a considerably higher authority and persuasiveness than the ordinary writings of publicists in that it not only represents states' opinion but also reflects the collective effort of an official body of the United Nations.¹⁸³

Giving due respect to this overwhelming evidence of the acceptance of the concept of strict liability in municipal laws and in the sources of international law alike, we must conclude that the concept of strict liability for abnormally dangerous activity is now firmly established in customary international law.

2. The Question of Limitation of Liability

The conventions, except for the Outer Space Convention, have made it possible for the operator to limit his liability. A prime reason is that the activities described in these conventions are normally introduced and carried out by private initiative which would be deterred if the amount of liability were unlimited.¹⁸⁴ The limitations served as a *quid pro quo* for the imposition of liability. Second, the maximum amount of liability was made dependent on the insurability of the risk.

The maximum amount, however, seems to vary corresponding to the degree of risk and to the time of agreement¹⁸⁵ and is, therefore, particularly suited to a convention.¹⁸⁶ In general international law, a standardized limit can hardly be established.¹⁸⁷ The amount to which an operator will be held liable, therefore, has to be limited by means of reasonableness in the light of the particular circumstances,¹⁸⁸ as is the case in any dispute regarding the amount of compensation where a limit on liability has not been previously established by statute, precedent or the parties themselves.

Doc. A/CN.4/SER.A/1970/Add.1.

183. See Amerasinghe, *supra* note 141, at 32.

184. See Brown, *supra* note 72, at 420-21. This, however, is not necessarily true, as one study reveals; see Fleischer, *Liability for Oil Pollution Damage Resulting from Offshore Operations*, 20 Scand. Studies in Law 105 at 116-17 (1976).

185. See Kelson, *supra* note 47, notes 214-16 and accompanying text; see also Jenks, *supra* note 49, at 185-86.

186. See Kelson, *supra* note 47, notes 214-16 and accompanying text.

187. *Id.*

188. See Jenks, *supra* note 49, at 186; Fleischer, *supra* note 184, at 124.

3. Strict Liability as Applied to Offshore Activities

Having thus examined the standards governing the liability for abnormally dangerous activities and having established the concept of strict liability as a well-founded principle of customary international law, the fundamental question arises as to whether it can be applied to the exploration and exploitation of oil on the continental shelf as well.

The recent developments in this area have been pointed out in the introduction to this paper. The introduction has also undertaken to outline the enormous amount of oil pollution of the oceans and the probability and risk of well blowouts, as well as the scope of harm resulting from such oil pollution. The facts are crushing. They have also been outlined by the President's Panel on Oil Spills.¹⁸⁹

This must necessarily lead to the conclusion that oil and gas exploration and exploitation on the continental shelf bear all the characteristics and factors justifying their being regarded as abnormally dangerous activities. Consequently, all damages resulting from these activities should be governed by the concept of strict liability as established in international law.

A state might find its own way of apportioning the risk arising from such activity among its citizens. But on the international scale it is impossible to allow such activity to be carried out at the expense of other states. Thus, the application of strict liability to these activities is no longer questioned, as recent developments indicate, *e.g.*, the Regional Offshore Convention of the North Sea Coastal States. The IMCO Convention on vessel-source pollution has also shown clearly enough that the community of nations is ready to impose strict liability on activities which are likely to result in marine oil pollution.

Hence, the imposition of strict liability on the oil exploration and exploitation of the continental shelf has also been strongly postulated and overwhelmingly supported by scholars.¹⁹⁰

189. See note 22 and accompanying text, *supra*.

190. See Jenks, *supra* note 49, at 158-59; Kelson, *supra* note 47, at 229-30; Schneider, *supra* note 144, at 170; Fleischer, *supra* note 184, at 108 *et passim*; Katz, *supra* note 170, at 642-43 *et passim*; Goldie, *supra* note 32, at 1218; Goldie, *Liability for Oil Pollution Disasters: International Law and the Delimitation of Competences in a Federal Policy*, 6 J. Mar. L. & Com. 303 at 310 (1975). B. A. Dubois maintains the view that the risk of marine oil pollution due to a well blowout is less than the risk of pollution caused by tanker accidents. See Dubois, *supra* note 129, at 76. This view cannot be maintained

4. State Responsibility and Strict Liability

The last topic to be considered is how the concept of strict liability for abnormally dangerous activities can be related to the responsibility of states.

a. *Civil and International Liability*

The only convention to impose strict liability on the state itself is the Space Liability Convention. According to Article II, the state is internationally and strictly liable for any damage caused by a space object on the surface regardless of the public or private nature of the enterprise which launched it.

The state is responsible in the first instance. The traditional concept of state responsibility is abandoned in that responsibility is imposed on a lawful activity regardless of fault. The traditional requirements of the law of state responsibility, *i.e.*, fault and the existence of a wrongful act or omission, need no longer be met. Also, even if the activity is carried out by a private individual, the state will be automatically and directly rendered liable.

Unlike the Space Liability Convention, the other conventions focus on the civil liability of the private operator. However, the responsibility of the state is unquestioned if the activity is carried out by the state itself, *i.e.*, if the state itself is the operator. It is also plain that the state will be internationally liable if it does not—according to its obligation *vis-à-vis* the other contracting parties—implement the provisions of the conventions domestically.¹⁹¹ Yet this does not solve our problem.

It should be borne in mind that the states which agree on the implementation of the concept of strict civil liability in an international convention do so by “putting themselves ‘in the shoes’ of a national legislator.”¹⁹² A convention thus agreed upon is, therefore, no more, but also no less, than a unification of municipal

and is disproved by recent events: the Gulf of Mexico has just experienced the worst oil spill in world history, a spill caused by a blowout. Other such incidents have already been discussed, and statistics reveal a high probability of well blowouts. The view espoused by Dubois, who obviously appears to support a less stringent standard for offshore activities on the continental shelf, must, therefore, be rejected.

191. See Kelson, *supra* note 47, at 237.

192. Arangio-Ruiz, *Some International Legal Problems of the Civil Uses of Nuclear Energy*, 107 *Recueils des Cours* 503 at 629 (1962 III).

laws with regard to a certain subject-matter. As such, states have in these instances created a uniform common law¹⁹³ as a legal response to abnormally dangerous activities resulting from the advancement of technology, industry, and science.

Since states wanted the respective subject-matters to be governed by civil liability, it indicates that the states, albeit feeling the need for a regime of strict liability, did not intend to become involved themselves, *i.e.*, to assume direct responsibility.

Yet it can be contemplated that there is a shift toward the international liability of states corresponding to the increase in the degree of risk of abnormally dangerous activities.

In aviation hazards, the liability is primarily that of the operator. Nuclear hazards are an intermediate case. Space hazards clearly become the responsibility of states.¹⁹⁴

In this context, the unification of rules regarding strict liability along with corresponding provisions in the various municipal laws clearly constitutes a general principle of law as defined in Article 381(c) of the ICJ Statute.¹⁹⁵

As such, they do not lead directly to the international liability of states, but they do, indeed, formulate the concept of strict civil liability, the application and imposition of which is the duty of any state which allows abnormally dangerous activities to be carried out within its jurisdiction.

In light of this, the state cannot be held responsible in the first instance—unless the activities are carried out by itself—for transnational or transjurisdictional damage resulting from abnormally dangerous activities carried out by private individuals or juridical persons. It is, however, its duty to ensure that, should such an event occur, the injured parties are allowed redress on the basis of strict liability.¹⁹⁶

If the state, therefore, falls short of this obligation, it will be responsible itself for the activities carried out within its jurisdiction which cause damage beyond national jurisdiction. This seems appropriate when one takes into consideration the strong share of states in such activities.¹⁹⁷ They are licensed and heavily con-

193. See Jenks, *supra* note 49, at 178-79.

194. *Id.*

195. See Randelzhofer & Simma, *supra* note 56, at 428.

196. See art. 7 of the Vienna Convention; art. 3(a) of the Brussels Convention; the OEEC Convention, Explanatory Memorandum, *supra* note 90 and accompanying text; art. III(2) of the Nuclear Ship Convention.

197. See Jenks, *supra* note 49, at 191.

trolled by the states, and carried out for their benefit.

Thus, a state is no longer capable of exonerating itself from the ultimate duty to compensate by proving that there was no fault involved in a given transnational or transjurisdictional damage-causing incident, and no state, therefore, is allowed to benefit at the expense of other societies.¹⁹⁸

b. *State Responsibility and UNCLOS III*

What is the impact of the work of UNCLOS III if we are to deal with the transjurisdictional oil pollution damage resulting from the exploration and exploitation of the continental shelf?

The work of UNCLOS III has not yet come to a vote. The outcomes of the various issues in the respective committees are compiled in the Draft Convention.¹⁹⁹ As such, the Draft Convention represents the consent to date of the participating countries on the various issues.

Even if the provisions of the Draft Convention are not binding, they nonetheless constitute a strong evidence of *opinio juris*. Article 235 Draft Convention deals with the responsibility and liability of states. Article 235(1) reads as follows: "States are responsible for the fulfillment of their international obligations concerning the protection and preservation of the marine environment. They shall be liable in accordance with international law."

Article 194(2) provides that:

States shall take all measures necessary to ensure that activities under their jurisdiction and control are so conducted that they do not cause damage by pollution to other States and their environment, and that pollution arising from incidents or activities under their jurisdiction or control does not spread beyond the areas where they exercise sovereign rights in accordance with this Convention.

Article 194(2) makes it clear that such activity means, *inter alia*, the exploration and exploitation of the natural resources of the sea bed and subsoil, and therefore also the continental shelf. This part of the Draft Convention apparently imposes a strong obligation on the prospective member states with regard to precautionary measures for the prevention of marine pollution.

198. See Kelson, *supra* note 47, at 237.

199. See note 20, *supra*.

If one were to interpret the meaning of Article 194(2) in isolation, it could be taken to mean that the occurrence of trans-jurisdictional marine pollution damage from the described activity implies a state's failure to comply with the requirement of the Article, in that such an event evidences that the state could not have taken all necessary measures to prevent the damage. Such an interpretation would imply that states have agreed to assume absolute responsibility with respect to the prevention of marine pollution.

While, in the writer's opinion, such an interpretation would produce desirable results, this reading of Article 194(2) is unwarranted. Any treaty or convention should be interpreted so that its provisions do not contradict each other, and Article 235(2) provides that: "states shall ensure that recourse is available in accordance with their legal system for prompt and adequate compensation or other relief in respect of damage by pollution of the marine environment by natural or juridical persons under their jurisdiction."

The first interpretation of Article 235(1) in connection with Article 194(2) would render Article 235(2) superfluous because the state would be liable in the first instance. If that were the case, national legislation in accordance with Article 235(2) would be irrelevant. This can be neither the intent of the draftsmen nor the result of a reasonable interpretation. Article 194(2) can, therefore, only be interpreted to mean that states must take all *reasonable* measures to prevent pollution from the described activity. If trans-jurisdictional damage is nevertheless done, the natural or juridical person who carried out the activity will be responsible in the first instance. [Article 235(2).] Such responsibility, nonetheless, does not preclude the state's ultimate responsibility if it fails to guarantee that prompt and adequate compensation be paid. [Articles 235(1), 194(2), in connection with Article 235(2).] As has been concluded above, such compensation would have to be based, in the event of transjurisdictional pollution, on the concept of strict liability. Such an interpretation avoids contradictions, does not render Article 235(2) futile and must therefore be given preference. This interpretation also conforms to what was found in the other sources of international law.

Part III

Conclusion

The response of international law to the question of liability for transjurisdictional oil pollution damage resulting from the exploration and exploitation of the continental shelf and the categories of liability, which shall be applied will be summarized briefly.

First, one who undertakes oil exploration and exploitation activities is strictly liable for the transjurisdictional oil-pollution damage resulting from such activity.

Second, "strictly liable" means, in this context, liable without proof of fault, regardless of the lawfulness of the activity in question.

Third, unless otherwise agreed to by the parties involved, the liability is limited only by a standard of reasonableness.

Fourth, the state will be held indirectly liable under the above standards if it fails to ensure that adequate and prompt compensation or other relief will be given to the injured parties.

Fifth, the state will be directly responsible if it carries out the activity itself.

The advantage of this solution is that it is realistic in that it corresponds to the needs and interests of society. It is acceptable to and accepted by the states as has been noted. And it is appropriate that the ultimate responsibility rests on the states because these activities are carried out under the states' jurisdiction. The states license, promulgate standards of safety, and control the activities as well as reap the benefits.

Further, since coastal states have promoted and emphasized their own interests in the UNCLOS III negotiations, it is only fair that they should bear the burden of ultimate responsibility for abnormally dangerous activities which are carried out under their jurisdiction over the continental shelf. Some writers are even of the opinion that the state is always responsible for transnational or transjurisdictional damage resulting from any sort of abnormally dangerous activities.²⁰⁰ This approach is certainly highly desirable: the alternatives of requiring plaintiffs to exhaust local remedies is burdensome and may be inappropriate in many cases of trans-

200. See, e.g., Kelson, *supra* note 29, at 229-33.

boundary pollution, especially when large numbers of people have suffered damage.²⁰¹ These people are clearly better protected if they are represented in such a case by the state.²⁰² Class actions, which are available in the United States, may not be provided for in other legal systems. In the absence of such a provision, a single litigant may be *de facto* denied justice because of the prohibitive cost of legal representation in a foreign jurisdiction. Unfortunately, no universal legal framework provides for the recognition and enforcement of a foreign judgment. Further, the operator of the damaging activity might not have assets in the country of the complainant's residence. It might therefore not be practical to sue the operator in that country. It has been said that:

[T]he normal rule of international law that local remedies must be exhausted before recourse to an international remedy is not inherently inapplicable in cases of ultra-hazardous liability, especially where the liability is in the first instance a civil liability of an operator rather than an international liability of a State. But when the hazard is of such a nature and importance, and the government is so directly involved in the operation, that the civil liability of the operator is virtually merged in the international liability of the State, the rule loses its practical justification. A theoretical case for it can still be maintained on the grounds of principle, but it ceases to be a useful practical rule.²⁰³

There is truth in this, but the view that states are *eo ipso* directly responsible can only be maintained as an argument *de lege ferenda*. States generally are not yet prepared to ratify such an approach. The Draft Convention provisions are the best example of modern judicial opinion regarding state responsibility for pollution damage.

Applying the principles discussed above to the Mexican Oil Spill, it is clear that Pemex, as both a government-owned national oil company and the actual operator, is strictly liable for the damage done to United States territories as a result of the Ixtoc I well blow-

201. See Hoffman, *supra* note 143, at 513.

202. *Id.*

203. Jenks, *supra* note 49, at 191.

out. Because of the well-established principle of international law that states cannot claim sovereign rights in cases of *acta jure gestionis*,²⁰⁴ Pemex could also be sued in the United States. Regardless of where jurisdiction is bound, however, Pemex's liability is clear.

204. "*Acta jure gestionis*" is to mean cases where a state embarks upon commercial activities which could also be carried out by private natural or juridical persons. See Verdross & Simma, *supra* note 33, at 565, for a discussion of this concept.