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David A. Bagley

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# THE UNITED STATES AND INTERNATIONAL NUCLEAR CIVIL LIABILITY

*David A. Bagley\**

How technologically vulnerable the whole of modern civilization has become.

— Soviet Academician Georgiy Arbatov, in *Pravda*, 9 May 1986 (twelve days after the explosion at Chernobyl, Ukraine)<sup>1</sup>

Our technology has outpaced our understanding, our cleverness has grown faster than our wisdom.

— Dr. Roger Revelle, Chairman of the United States National Committee for International Biological Programs<sup>2</sup>

## I. INTRODUCTION — A NUCLEAR ENERGY WORLD

It is the grist of which mystical lore is made; it surpasses comprehension, and is forbidden and revered. Its talismans are objects of wonderment and apprehension, and its priesthood alone is literate. It transcends temporal power, and yet nations seek to exploit it, while its enormity makes it ubiquitous, necessarily a common heritage. It is placed under yoke, but never completely controlled, because although corporeal it has no limits. The unthinkable is the essence of nuclear energy, the preeminent technological feat of this era.

Yet interest in nuclear energy — and the perils and dilemmas it poses — often wanes. Perhaps this is the ephemerality of the human attention span in a time of instant information indicators about everything, and perhaps it reflects the psychic need not to confront the unthinkable, especially when other predicaments overwhelm us. Perhaps it is simply a feeling of impotence in the face of perceived intractability. And perhaps it will take another disaster to focus the world's attention on the unsolved problems, if only for a while.

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\* A.B. University of Missouri, J.D. University of Oklahoma, LL.M. New York University, Assistant Corporation Counsel, City of New York.

1. NIGEL HAWKES ET AL., *CHERNOBYL: THE END OF THE NUCLEAR DREAM* 133 (1986) [hereinafter HAWKES].

2. *Id.* at 215.

Despite safety fears and recent lackluster economics, there is every reason to believe that the worldwide industry in nuclear power is far from moribund,<sup>3</sup> and that it will continue to play a critical role in the world energy picture far into the future.<sup>4</sup> Nuclear exporting nations expect to continue global sales and promotional activities,<sup>5</sup> and developing nations will look to nuclear

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3. See, e.g., Fleming Meeks & James Drummond, *The Greenest Form of Power*, FORBES, June 11, 1990, at 116 [hereinafter Meeks]; Michael L. Wald, *Fighting the Greenhouse Effect*, N.Y. TIMES, Aug. 28, 1988, at C1 (even environmentalists are reexamining nuclear energy in light of current trends concerning global warming and acid rain, which are universally agreed to be a product of fossil fuel overuse). See also John Urqhart, *Canada Nuclear Industry Expects Orders To Rise, Plans Compact Reactor for U.S.*, WALL ST. J., Jan. 16, 1990, at B4 (expected increase in orders to the Canadian nuclear industry from foreign purchasers, including United States companies).

4. Today 429 reactors are operating worldwide to generate electricity in 25 countries. Peter Miller, *Our Electric Future*, NAT'L GEOGRAPHIC, Aug. 1991, at 60; see also U.S. Council for Energy Awareness, 1989 INTERNATIONAL REACTOR SURVEY [hereinafter USCEA].

There are 111 operating plants in the United States, supplying almost 20% of nuclear power needs; there were only 72 at the time of the Three Mile Island accident. See Matthew L. Wald, *10 Years After Three Mile Island*, N.Y. TIMES, Mar. 23, 1989, at D1 [hereinafter Wald]. Notwithstanding the publicity surrounding Chernobyl, nuclear power electricity generation increased during 1988 by 10% in the United States, 14% in Japan, and 3% (from 35% to 38%) in Western Europe. Yousseff M. Ibrahim, *Key OPEC Problem: The Loss of Control*, N.Y. TIMES, Apr. 8, 1988, at D5. France and Belgium obtain over 70% and 60%, respectively, of their electricity generation from nuclear reactors, and the former U.S.S.R. had hoped to double its percentage to more than 20% by the end of the century. See Stephen Greenhouse, *Safety Issues Test European Faith in Nuclear Power*, N.Y. TIMES, Jan. 31, 1988, § 4, at 28 [hereinafter Greenhouse].

5. Increased opportunities for future sales have played a significant role in the approval by the United States Department of Energy (DOE) of exports to foreign countries. See U.S. GENERAL ACCOUNTING OFFICE REPORT TO CONGRESS, NUCLEAR NON-PROLIFERATION: DOE HAS INSUFFICIENT CONTROL OVER NUCLEAR TECHNOLOGY EXPORTS, GAO/RCED-86-144 at 37 (1986) [hereinafter GAO REPORT].

In 1981, President Reagan instructed governmental departments to act expeditiously on requests for United States nuclear assistance, and stated that the United States would not oppose reprocessing and breeder reactor development abroad where it "does not constitute a proliferation risk." Statement of President Reagan, *Nuclear Nonproliferation*, 17 WEEKLY COMP. PRES. DOC. 768 (July 16, 1981) [hereinafter Statement]. In 1982 he issued a policy directive allowing assistance in sensitive nuclear reprocessing technology to countries so long as statutory criteria were met. GAO REPORT, *supra*, at 48.

U.S. manufacturers are working on advanced reactor designs, with government support in the form of streamlined licensing, in the hope of increasing plant orders by the mid-1990s. Meeks, *supra* note 3, at 16; Matthew L. Wald, *Japanese Now Ahead in Nuclear Power, Too*, N.Y. TIMES, Feb. 27, 1990, at D1. Japanese expenditures for commercial research and development are far greater. *Id.*

However, U.S. entities are far from the majority, or even a significant fraction, of the worldwide suppliers; the USCEA lists only four U.S. manufacturers among 36. Among the newly-emerging suppliers are Argentina, China, and South Africa. USCEA, *supra* note 4. See also *Review of 1985 U.S. Government Nonproliferation Activities: Hearings Before Senate Subcomm. on Energy, Nuclear Proliferation and Government Processes*,

power to fulfill ever-increasing portions of their needs.<sup>6</sup>

The grave challenges of the nuclear present and future are the current archetype of physical science surpassing social science, as it always does. Those who would recast the legal order to fit the era must search for a construct beyond the nation-states-based paradigm. No such legal system is adequate to deal with the consequences of an accidental unleashing of nuclear forces; nevertheless, and notwithstanding the global melange of conflicting ideologies and competing interests, the logic of law and social order demands that a legal regimen be sought.

All of the available data suggest the inexorable need for a legal framework that will compensate victims and justly apportion liability in the event of an accident causing damage from nuclear power. Accordingly, this article discusses the current legal framework in the United States that would be used to compensate victims and apportion liability for a nuclear accident occurring outside the United States.

This Article contains two companion themes. The first, which occupies the majority of the article, is that United States businesses and the government will be sought to be held liable in a United States forum for a portion, or all, of the massive injury from a nuclear disaster in which facilities and/or materials from the United States are involved. Although direct precedent is currently nonexistent, there are situations which offer useful analogies. There are also numerous bases under international law for asserting such claims. By the same analysis, however, there are also bases in law for insuring that the portion of legal responsibility borne by United States entities is no more than what is just. Determining the extent of liability is governed by familiar precepts, in accordance with international law.

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99th Cong., 2d Sess. 10 (1986) (testimony of Richard T. Kennedy, Ambassador at Large). All of these countries can be expected to be aggressive competitors.

6. The GAO estimates that by the year 2000 more than half the countries of the world with nuclear reactors will be developing countries. INTERNATIONAL RESPONSE TO NUCLEAR POWER SAFETY CONCERNS, GAO/NSIAD-85-128 (1985) [hereinafter GAO REPORT 1985].

Present examples abound. India has a stated policy of raising its proportion of power generated from nuclear energy from its current 3% to 10%. See Stephen R. Weisman, *India's Nuclear Energy Policy Raises New Doubts on Arms*, N.Y. TIMES, May 7, 1988, at A1. Taiwan has an established nuclear generation program. See Stephen Engelberg & Michael R. Gordan, *Taipei Halts Work on Secret Plant To Make Nuclear Bomb Ingredient*, N.Y. TIMES, Mar. 23, 1988, at A1. Despite public opposition, Mexico has begun operation of its first nuclear power plant. The plant is United States-built. US-CEA, *supra* note 4.

The issue of liability is always shadowed by the companion truth that justice and the compensation of victims of nuclear disaster require a truly global system of cooperation and allocation of responsibility. The unfortunate lack of such a framework is the second, underlying theme of this Article. The discussion herein illustrates the profound need for a worldwide convention to establish a legal regime to govern the numerous claims that would arise out of a nuclear power accident. The substance of such a worldwide convention is, however, a topic for another effort. What is treated in this Article is how the legal structure might function given the current legal structure. Thus, this Article considers how issues of nuclear disaster liability and loss-spreading might play out within the currently existing legal framework.

## II. NUCLEAR ENERGY SCENARIOS OUTSIDE THE UNITED STATES GIVING RISE TO LITIGATION INSIDE THE UNITED STATES

Currently, several types of events may cause individuals, entities, and governments to seek to hold United States actors liable for injury and losses related to nuclear catastrophe. The scenario is one in which a mishap occurs outside the United States at a power generating facility or research station and is assertedly the responsibility of one or more individuals and/or entities from the United States who did not act affirmatively to cause the harm.<sup>7</sup> The United States, like many other nations, has domestic laws that purport to control civil liability arising from

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7. This Article does not consider warfare, in which overwhelming circumstances displace methodologies normal to international dispute resolution. Also excluded are other special hazards associated with military uses of nuclear energy, such as weapons testing and deployment. See generally ANGELO MIAELLO, *LA RESPONSABILITE INTERNATIONALE ENCOURUE EN RAISON DES ACTIVITES LIEES A L'UTILIZATION DE L'ENERGIE NUCLEAIRE* ch. 5 (1986).

The subject of mishaps at nuclear weapons production plants is also beyond the scope of this undertaking because there are relatively few nations which (avowedly) possess nuclear weapons production capability. Moreover, the responsibility for such a mishap would lie squarely with the producing government. See Keith Schneider, *Energy Dept. Says it Kept Secret Mishaps at Nuclear Weapon Plant*, N.Y. TIMES, Oct. 4, 1988, at A1.

Finally, this Article omits further treatment of the weighty and worsening burden of nuclear waste disposal. It is assumed for present purposes that the liability for damage would devolve upon the entity having custody of and determining to place the materials, under known principles of legal accountability. To the extent that the United States Government or companies might be held partially responsible, however, the principles herein developed could be brought to bear in order to allocate that responsibility.

nuclear disasters within its borders,<sup>8</sup> but no positive law sources exist for claims asserted against United States entities arising from accidents occurring outside the United States.<sup>9</sup> What makes the subject truly compelling is the potentially massive scope of injury and damage.<sup>10</sup>

### A. *Types of Disasters and Injuries*

However numerous the imaginable scenarios, events and studies suggest certain categories of occurrences likely to cause nuclear harm of the type with which this Article is concerned.<sup>11</sup> The most prominent is the unexpected but widely feared catastrophe known as the "nuclear accident,"<sup>12</sup> usually thought of in

8. See *infra* notes 182-209 & 234-46 and accompanying text regarding United States and foreign municipal laws with respect to such liability.

9. See *infra* notes 199-209 and accompanying text.

10. See also *infra* note 13. The sums which European nations have spent for economic losses alone arising from the Chernobyl incident are beyond ready comprehension. See *The Accident at Chernobyl — Economic Damage and its Compensation in Western Europe*, 39 NUCLEAR L. BULL. (partial compendium) 58 (1987). See also Serge Schmemmann, *Chernobyl and the Europeans: Radiation and Doubts Linger*, N.Y. TIMES, June 12, 1988, at A1.

Those scientists who have attempted to quantify the potential for harm seem uniformly to have come to the conclusion that it is for all practical purposes incalculable. See numerous authorities cited in David M. Rocchio, *The Price-Anderson Act: Allocation of the Extraordinary Risk of Nuclear-Generated Electricity: A Model Punitive Damage Provision*, 14 B.C. ENVTL. AFF. L. REV. 521, 523 (1987). See, e.g., Gerald L. Pollack, *Severe Accidents and Terrorist Threats at Nuclear Reactors*, in PREVENTING NUCLEAR TERRORISM 66 (Paul Leventhal & Yonah Alexander eds., 1987) [hereinafter PREVENTING NUCLEAR TERRORISM]. As early as 1957, the National Academy of Science was warning that the "hazard related to radioactive wastes is so great that no element of doubt should be allowed to exist regarding safety." See Keith Schneider, *United States Scales Back Plan for Burial of Atomic Waste*, N.Y. TIMES, Mar. 11, 1988, at A1.

11. See generally NUCLEAR ENERGY AGENCY, ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT (OECD), *THIRD PARTY LIABILITY* (1990).

12. Before Chernobyl, from January 1971 to September 1985, significant or potentially significant safety incidents were estimated to have occurred at 151 nuclear power reactors in other countries, although their extent and seriousness have never been fully disclosed. See GAO REPORT 1985, *supra* note 6, at 6, 35.

In the United States, a study by Worldwatch Institute has estimated that since the 1979 accident at Three Mile Island nuclear plants have experienced more than 30,000 mishaps, some with the potential to be more serious than Three Mile Island. See Wald, *supra* note 4, at D1.

The more serious incidents, of the type commonly conjured by the phrase "nuclear accident," are discussed *infra* note 13. However, additional possibilities are burgeoning. During recent years, a United States F-16 fighter-bomber crashed within seconds' flying time of a German nuclear reactor, and the Soviet Government became sufficiently concerned to request American assistance in evaluating earthquake risks to two reactors in Armenia. James O. Jackson et al., *Hellfire from the Heavens*, TIME, Sept. 12, 1988, at 36; Matthew L. Wald, *For the U.S. and Soviets, a Nuclear Exchange*, N.Y. TIMES, May 28,

connection with generation or experimentation facilities,<sup>13</sup> but also a threat with respect to materials in transit.<sup>14</sup>

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1989, § 4, at 6.

Moreover, there are an estimated 42 nuclear-powered spacecrafts in orbit. Cosmos 1900, a crippled Soviet satellite, was in a decaying earth orbit and would have re-entered the atmosphere and spilled radioactivity over a large portion of the planet from its 50 kilograms of enriched uranium, until a last-ditch booster deployment successfully lifted it back into higher orbit. Proposed United States satellites will carry many times the quantity of radioactive materials. See Steven Aftergood, et al., *Nuclear Power in Space*, SCI. AM., June 1991, at 42; Karl Grossman, *We Don't Need Nuclear Reactors in Space*, N.Y. NEWSDAY, May 31, 1991, at 55; David Whitehouse, *Law in Orbit*, NEW SCIENTIST, July 7, 1988, at 41.

13. The most celebrated overseas accident is, of course, the April 26, 1986 core meltdown, explosion, and attendant massive (50 tons of particles) radioactive gases leak at Chernobyl, Ukraine. For a detailed account, see HAWKES, *supra* note 1, at 97. Initial reports were that more than 135,000 persons suffered exposure, 30,000-50,000 cases of long-term cancer were expected, and the initial direct cost to the Soviet Union would exceed \$3 billion. *Id.* at v. See also Victoria Riess Hartke, Note, *The International Fallout From Chernobyl*, 5 DICK. J. INT'L L. 319 (1986) [hereinafter Hartke, Note]. Sadly, it has recently been revealed that the damage was much greater in scope — it now appears that at least 150,000 people stand in grave risk of cancer, vast areas are turning out to be uninhabitable due to radiation contamination, and the ultimate cost estimate has reached as high as \$415 billion. See Carrol Bogert, *Chernobyl's Legacy*, NEWSWEEK, May 7, 1990, at 30; Felicity Barringer, *Evolution in Europe*, N.Y. TIMES, Apr. 28, 1990, at 1 [hereinafter Barringer, *Evolution*]. It now appears the toll of deaths and illness will be equally great outside the former U.S.S.R., where doses were lower but exposed populations far greater. See Felicity Barringer, *Chernobyl: Five Years Later the Danger Persists*, N.Y. TIMES MAG., Apr. 14, 1991, § 6, at 28 [hereinafter Barringer].

Radioactive leaks are an ever-present risk. After Three Mile Island, it became known that a similar incident had occurred in 1974 at a plant in Switzerland. See GAO REPORT 1985, *supra* note 6, at 22. In addition, a state-of-the-art breeder reactor near the Swiss border in France was closed during the Spring of 1987 due to leaks of highly volatile and corrosive sodium gas. See Greenhouse, *supra* note 4.

Fires at nuclear installations have also given rise to serious peril. The most serious (and longest-concealed) is the 1957 blaze at the British plant at Windscale, the full report of which was never published and the full extent of whose damage and injury was never made known. See, e.g., Thomas J. Connolly, et al., *World Nuclear Energy Paths*, WORLD NUCLEAR ENERGY 216, 252 & 291 (Ian Smart ed. 1982). Interestingly, the British Government has urged United States contractors to invest in nuclear power stations in Britain when it privatizes its industry, offering as incentive less restrictive regulations than here. *Nuclear Plan By Britain*, N.Y. TIMES, Mar. 29, 1988, at D7. In 1982, a serious fire occurred at a nuclear plant in Soviet Armenia. GAO REPORT 1985, *supra* note 6, at 26, and the most recent reported such incident (described by one organization as the most serious since Chernobyl) occurred at the American-built Vandellós I reactor in Spain, *Nuclear Reactor in Spain Catches Fire*, N.Y. TIMES, Oct. 26, 1989, at A3. In addition, it has recently been disclosed that in Germany a single pump was all that prevented a reactor from core meltdown after a 1976 fire. Ferdinand Protzman, *Upheaval in the East*, N.Y. TIMES, Jan. 23, 1990, at A10.

14. Most transportation of nuclear materials is by ordinary commercial carriers, who determine what security and safety measures are indicated. A recent agreement between the United States and Japan allows plutonium to be shipped from Europe to Japan by sea as well as by air, creating an increased risk of hijacking and sabotage. There are also

Another potential peril which has received significant attention is that of terrorist acts leading to widespread nuclear injury.<sup>15</sup> That there are thus far no actual such incidents is miraculous, in view of the past actions of disaffected groups.<sup>16</sup>

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unresolved questions about whether air transport containers can be made crashproof. See John H. Cushman, *Moving Plutonium by Sea Assailed*, N.Y. TIMES, Aug. 6, 1988, § 1, at 4; see also Frank Greve, *Warhead Depots: A Weak Link in NATO's Security*, PHILA. INQUIRER, Mar. 13, 1983, at F2.

There is no comprehensive transnational positive law regimen that regulates accountability for accidents during transportation. The Convention Relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material, *infra* note 170, shifts liability for damage caused by nuclear incidents occurring in the course of maritime transport to the nuclear operator (and away from the carrier) in accordance with the multilateral conventions discussed *infra* notes 170-81 and accompanying text. The United States is not a party to this Convention. Furthermore, the Convention would have no effect on the responsibility of United States suppliers because the United States is also not party to the multistate treaties. The Brussels 1971 Convention, *infra* note 170. Moreover, the Convention for the Unification of Certain Rules Relating to International Carriage by Air (Warsaw Convention), which limits damage caused by air carrier accidents, contains no exclusion for nuclear damage, 49 Stat. 3000, T.S. No. 876, 137 L.N.T.S. 11, and Montreal Protocol No. 4 thereto (dated Sept. 25, 1975, reprinted in ANDREAS F. LOWENFELD, AVIATION LAW (Docs. Suppl. 991, 996) (2d ed. 1981).

15. This category does not include the much-feared hazard of terrorists actually detonating a nuclear explosive device or weapon. Such an action would, in familiar liability terms, constitute a supervening cause (see *infra* notes 369-80 and accompanying text), and in any case nuclear weapons detonations, at whomever's hands, are beyond the scope of this writing (and, for that matter, the ability of the existing legal system to afford redress). See generally STUDIES IN NUCLEAR TERRORISM (Augustus R. Norton & Martin H. Greenberg eds., 1979) [hereinafter STUDIES IN NUCLEAR TERRORISM]. Cf. J. Carson Mark et al., *Can Terrorists Build Nuclear Weapons?*, in PREVENTING NUCLEAR TERRORISM, *supra* note 10, at 55; Robert K. Mullen, *Mass Destruction and Terrorism*, in INTERNATIONAL TERRORISM: CURRENT RESEARCH AND FUTURE DIRECTIONS (Alan Buckley & Daniel Olson, eds., 1979) at 57 [hereinafter INTERNATIONAL TERRORISM]. A chilling twist on the subject is recalled by a reported incident in Sinkiang province during the Chinese Cultural Revolution in 1967 in which a military commander threatened to seize and use weapons at a nuclear base if Maoists tried to usurp a local provisional government. See William Epstein, *Nuclear Terrorism and Nuclear War*, in THE DANGERS OF NUCLEAR WAR (Franklyn Griffiths & John C. Palyani eds., 1980).

16. There have been numerous attacks on nuclear facilities, but thus far none has caused the release of significantly damaging radiation. See Michael Flood, *Nuclear Sabotage*, in STUDIES IN NUCLEAR TERRORISM, *supra* note 15, at 128. For example, political extremists in Western Europe (in particular, Breton and Basque separatists, in France and Spain respectively) have launched raids against nuclear reactors. Brian M. Jenkins, *International Terrorism: Trends and Potentialities*, in INTERNATIONAL TERRORISM, *supra* note 15, at 101. In a political demonstration, a dissident member of the Bundestag in West Germany successfully carried a bazooka onto a nuclear site. See STUDIES IN NUCLEAR TERRORISM, *supra* note 15, at 125.

Then-Prime Minister Gandhi registered a complaint in 1985 with the United States Federal Bureau of Investigation for failing to inform him that arrested Sikh extremists had been planning to blow up a nuclear power plant in India. Stephen R. Weisman, *His Visit Nearing, Gandhi Faults U.S.*, N.Y. TIMES, June 5, 1985, at A3. The beleaguered reactor begun in the Philippines, *infra* note 23, was never placed in operation, due in



The enormous harm resulting from a nuclear mishap will land most heavily upon masses of individuals. For most, from a personal injury standpoint, the greatest hazard is radiation poisoning and contamination.<sup>17</sup> In addition, there will be economic losses and substantial destruction of real and personal property that provide for a decent quality of life.<sup>18</sup> Within the range of foreseeable causality, other injury may also be posited whose variety and extent can only be imagined.<sup>19</sup>

The other significant class that will seek redress for losses suffered is governments. Apart from damage to the environment and public property normally constituting the bases of national rights of action,<sup>20</sup> there will be emergency assistance costs of a magnitude hitherto unknown.<sup>21</sup>

part to terrorist concerns; the New Peoples' Army had succeeded in demolishing towers which would have carried power from it before it was completed. Fox Butterfield, *Philippines Expected to File Suit Against Westinghouse*, N.Y. TIMES, Dec. 1, 1988, at D1.

For a fuller discussion, plus an appendix of nuclear-related terrorist acts including attacks on installations, see Konrad Kellen, *The Potential for Nuclear Terrorism*, in PREVENTING NUCLEAR TERRORISM, *supra* note 10, at 104; see also LOUIS RENE BERES, *TERRORISM AND GLOBAL SECURITY: THE NUCLEAR THREAT* (1979). Some even have suggested that nuclear terrorism is a more likely cause of catastrophe than accident. See Thomas D. Davies, *What Nuclear Means and Targets Might Terrorists Find Attractive?*, in NUCLEAR TERRORISM: DEFINING THE THREAT (Paul Leventhal & Yonah Alexander eds., 1986) [hereinafter Davies]; Dumas, *Human Fallibility and Weapons*, 36 BULL. ATOMIC SCIENTIST 15 (1980). This is made more forceful by the recognition that light water power plants, which are the great majority of those operating, are inherently susceptible to sabotage, especially when aided by an insider. See Davies, *supra*, at 62.

17. See GAO REPORT 1985, *supra* note 6, at 2; see also THE MERCK MANUAL OF DIAGNOSIS AND THERAPY 2364-65 (Robert Berkow ed., 15th ed. 1987) [hereinafter MERCK MANUAL]. The United States National Institute of Health has begun a study of cancer deaths which appear to be concentrated near nuclear power plants in this country. See *Cancer Clusters Prompt U.S. Study*, N.Y. TIMES, Feb. 5, 1988, at A11.

18. See Study by OECD Nuclear Energy Agency, *The Accident at Chernobyl — Economic Damage and its Compensation in Western Europe*, 39 NUCLEAR L. BULL. 58 (1987) [hereinafter OECD Nuclear Energy Agency], in which governmental compensation to injured persons for economic loss in the former Soviet Union and twelve other neighboring countries is recounted.

The pecuniary aftermath of Chernobyl has continued to be measured throughout Europe, especially in terms of impaired crops and agricultural production capacity. See Schmemmann, *supra* note 10, at 1; Francis X. Clives, *Once Again, Chernobyl Takes a Toll*, N.Y. TIMES, Sept. 30, 1989, § 1, at 4 [hereinafter Clives].

19. Emotional distress is a recognized after-effect. See MERCK MANUAL, *supra* note 17, at 2367. Other injury could include such "obvious remote" consequences as auto accidents, heart attacks and the like, and other property damage.

20. See *infra* notes 46-47 and accompanying text regarding suits by governments as *parens patriae*.

21. For a listing of the mind-boggling sums expended by other European countries in the wake of the 1986 accident at Chernobyl, see OECD Nuclear Energy Agency, *supra*

## B. United States Involvement

It is the participation of United States persons and entities,<sup>22</sup> both private and public, which forms the foundation for the presence of litigation in its courts.<sup>23</sup> Several varieties of such involvement may be identified. First are the design, manufacture and/or export of nuclear facilities, components, and technology by United States suppliers.<sup>24</sup> The attendant governmental affili-

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note 18.

Even the minor leak at Three Mile Island required "substantial technical support and major commitments of resources" to deal with the immediate operational problems, which is beyond the capabilities of many countries. *See* GAO REPORT, *supra* note 5, at 29.

The Chernobyl disaster caused 200,000 persons to be evacuated at once from the area; by 1989, the total cost of relocation was estimated at \$16 billion. Barringer, *supra* note 13, at 1; Clives, *supra* note 18, at 4. In 1990, the Soviet Parliament voted an additional \$26 billion to aid victims. Bogert, *supra* note 13, at 30.

22. There is a striking paucity of comprehensive data sources concerning the United States nuclear industry; indeed, there are no central governmental clearinghouses of information. The best private source is the trade association, United States Council of Energy Awareness (USCEA, formerly Atomic Industrial Forum), Suite 400, 1776 I Street N.W., Washington, D.C. 20006. Historically, the industry has been composed of private companies who resisted standardization and information-sharing. Governmental agencies have also suffered from a lack of direction and mission definition.

23. *See supra* note 22 and *infra* notes 24-30, 48, 72 and accompanying text.

There is already evidence that problems with American reactors abroad lead to litigation in United States courts. In 1971, after the Philippines expressed an interest, the State Department instructed the United States embassy to "give all possible encouragement" to the purchase of a reactor, and the Export-Import Bank underwrote the project through loans and guarantees exceeding \$600 million. The proposed site was 14 miles from a potentially active volcano and would not have met United States standards. *See* Nicholas C. Yost, *American Governmental Responsibility for the Environmental Effects of Actions Abroad*, 43 ALB. L. REV. 528 (1979). Construction was begun in 1976, and completed in 1985, but the reactor was never activated due to sabotage, political, and safety concerns. In late 1988, the Philippine Government announced that it would file suit in federal court against Westinghouse Electric Corporation, alleging the plant was defective and sold as part of a conspiracy involving former President Marcos (overruns led to a cost of \$2.2 billion, and the interest exceeded \$350,000 per day). *See* Fox Butterfield, *Philippines Expected to File Suit Against Westinghouse*, N.Y. TIMES, Dec. 1, 1988, at D1. The litigation thus far is reported in *Republic of the Philippines v. Westinghouse Elec. Corp.*, 774 F. Supp. 1438 (D.N.J. 1991); *see also* *Republic of the Philippines v. Westinghouse Elec. Corp.*, 714 F. Supp. 1362 (D.N.J. 1989), *aff'd* 951 F.2d 1414 (3d Cir. 1991).

It has also been charged that an American-made reactor in Spain experienced design difficulties similar to those at a plant in the United States, leading to a 1982 rupture and radiation leak with population evacuation. EL PAIS (Madrid), Aug. 2, 1985, at 37.

24. United States companies were principal constructors and/or designers of 54 generating reactors in 17 foreign countries; it is impossible to determine how many of the remaining reactors contain United States-furnished or designed components. USCEA, *supra* note 4. However, the United States GAO asserts that United States-designed reactors comprise the majority of power plants worldwide. *See* INTERNATIONAL RESPONSE TO

ation is found in the licensing process.<sup>25</sup> These are coupled with continuing technical training and support from companies and government.<sup>26</sup>

Additional varieties of official involvement may readily be divined. There are direct sales and special licensing of materials<sup>27</sup> and other technology trans-

NUCLEAR POWER REACTOR SAFETY CONCERNS 33 (Sept. 30, 1985).

During the halcyon days of nuclear expansion prior to the 1980's, four major United States firms were reported to have 250 reactors completed or due for completion worldwide through 1995. See Mans Lönnroth & William Walker, *The Viability of the Civil Nuclear Industry*, in WORLD NUCLEAR ENERGY 206 (Ian Smart ed., 1982).

During the same period, the United States was responsible for nearly 85% of nuclear exports among free-market countries. See Bertrand Barre, *France's Pragmatic Approach to Nonproliferation*, in THE NUCLEAR SUPPLIERS AND NONPROLIFERATION 63, 67 (Rodney W. Jones, et al. eds., 1985).

The former U.S.S.R.'s State Committee for Supervision on Nuclear Power Safety visited San Francisco to request the help of Bechtel Power, Inc. in designing reactors. See Matthew L. Wald, *Russians Talk of Nuclear Aid by U.S.*, N.Y. TIMES, May 23, 1989, at D5.

25. There is a complex scheme of federal control over nuclear exports, divided among two departments (the Nuclear Regulatory Commission [hereinafter NRC] and the DOE and one cabinet-level agency (the Commerce Department). See GAO REPORT, *supra* note 5, at 14, and Regulations at 10 C.F.R. 110 (1988). For a synthesized explanation, see Jeffrey S. Linder, Note, *Discretion and the Nuclear Regulatory Commission: The Need to Assess Foreign Effects of American Nuclear Exports*, 19 STAN. J. INT'L L. 477 (1983) [hereinafter Linder, Note]; see also *Hearings before the House Subcommittee on Energy Conservation and Power, Committee on Energy and Commerce*, 99th Cong. (May 15, 1986, No. 99-140). However, many exports of nuclear materials and technology are done under "general licenses" and therefore itemized records of them are not kept. Telephone interview with Marv Peterson, Nuclear Regulatory Commission (Feb. 29, 1988).

In 1987, 36 nuclear export license applications were submitted to the NRC and referred for executive review; another 84 were approved by it without such review, pursuant to established procedures. These included reactors, components and materials. See State Department, *Report to Congress Pursuant to Section 601 of the Nuclear Non-Proliferation Act of 1978* (1988) at 78 [hereinafter State Dep't].

26. The Nuclear Regulatory Commission and other agencies offer training programs in technology use and nuclear safety to United States trading partners. See GAO REPORT 1985, *supra* note 6, at 19; State Dep't, *supra* note 25, at 67. In addition, since its founding in 1957, the United States has utilized the United Nations' International Atomic Energy Agency [hereinafter IAEA] as a means for providing technical assistance and cooperation through grants and in-kind programs. State Dep't, *supra* note 25, at 38. Such endeavors are also part of the "Agreements for Cooperation" (see *infra* note 253 and accompanying text) the United States has with 27 nations and organizations. State Dep't, *supra* note 25, at 41.

27. In 1987, DOE received \$400 million from sales of enriched uranium to 13 nations. See State Dep't, *supra* note 25, at 10. The United States is a leading member of a 19-nation body known as the "Zangger Committee" which attempts to arrive at agreed-upon procedures concerning the export of fissionable and other nuclear materials. Regarding national exports of nuclear material generally, see *Report of the International Task Force on Prevention of Nuclear Terrorism*, Nuclear Control Institute, in PREVENT-

fers<sup>28</sup> by the United States Government, historically the world's premier purveyor.<sup>29</sup> In addition, the United States Government has provided long-standing encouragement and support to the nuclear industry and its export endeavors.<sup>30</sup>

These activities will be the foundation of asserted private and public United States accountability<sup>31</sup> in cases brought to redress the mammoth losses suffered when the primal force of nuclear energy bolts from the grasp of stricken handlers. It is then that the international system of dispute resolution, as it exists, and the jurists who apply it, will find themselves facing their greatest trial.

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ing NUCLEAR TERRORISM at 7 (Paul Leventhal & Yonah Alexander eds., 1987) [hereinafter *Task Force Report*].

In 1988, the Senate ratified a 30-year agreement to sell American uranium and enrichment apparatus to Japan, notwithstanding strongly-expressed reservations on the part of some legislators. See discussion in 83 AM. J. INT'L L., 63 (1989).

28. The GAO REPORT, *supra* note 5, at 74, says that during the years 1980-85 the Secretary of Energy authorized 47 "non-sensitive" technology transfer deals with "restricted" countries and 19 "sensitive" instances of "assistance" to developed nations.

As buyer countries strive to become more self-sufficient in the nuclear sphere, a pattern has emerged in which exporters have fewer turnkey nuclear plant contracts, and instead have had to increase technology transfer sales. See Erwin Häckel, *The Politics of Nuclear Exports in West Germany*, in NUCLEAR EXPORTS AND WORLD POLITICS 62, 67 (Robert Boardman & James Keely eds., 1983) [hereinafter BOARDMAN & KEELY].

29. See GAO REPORT, *supra* note 5, at 12.

The enriched uranium in the approximately 140 research reactors in the world has primarily come from the United States. See *Task Force Report*, *supra* note 27, at 49.

30. It has been considered that domestic employment and energy security, the nation's balance of trade, and nonproliferation efforts are all served by a healthy nuclear export industry. See State Dep't, *supra* note 25, at 10. During the 1970's, while the United States was the supplier of 70% of all power reactors in operation or on order worldwide, 80% of foreign purchases were financed by the United States Export-Import Bank. I. Herbert Scheinberg, Letter, N.Y. TIMES, Aug. 17, 1975, at 36. See also George D. Applebaum, Comment, *Controlling the Environmental Hazards of International Development*, 5 ECOLOGY L.Q. 321 (1975-76).

The United States is no longer the single premier exporting nation. As domestic markets in other countries have become saturated, there has been pressure to penetrate more export markets, even at the cost of reduced restrictions. There is now intensive export competition from France, West Germany, Canada, the United Kingdom, and Switzerland, and other "second-tier" suppliers, such as Argentina, Brazil, and India, who are now rapidly entering the fray. See generally Robert Boardman & James Keely, *Nuclear Export Policies and the Non-Proliferation Regime*, in BOARDMAN & KEELY, *supra* note 28, at 1.

In Germany, as an example, nuclear exports have been seen as a key ingredient of the economy, owing to slackening domestic demand and idle production facilities. See Häckel, *supra* note 28, at 65.

31. See *infra* notes 48-54, 72-80 and accompanying text.

### III. SUITS IN UNITED STATES COURTS

A central premise underlying this writing is that there is no comprehensive system to which the United States is a party that specially governs the recompense of loss and injury arising from a nuclear accident outside the United States.<sup>32</sup> Compensation for loss or injury in such situations therefore reverts to ordinary private law solutions and procedures. In the wake of a nuclear power disaster at a facility where there has been substantial United States involvement,<sup>33</sup> many claimants will consider the United States the optimal forum.<sup>34</sup> This may be due to the quality of justice, but numerous other factors operate as well to insure that suits will be initially commenced in United States courts.<sup>35</sup>

#### A. Parties

##### 1. Plaintiffs

Under the traditional private law model, the plaintiffs most likely first in time (and right, as indicated below) are injured individuals. In the United States, foreign individuals may institute suits in state court,<sup>36</sup> although federal

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32. See *infra* notes 176, 199-209 and accompanying text.

33. See *supra* notes 24-30 and accompanying text.

34. It would be useless to attempt to summarize, let alone synopsise or synthesize, the plethora of suits in which persons have sought the succor of United States justice in claims all over the globe. Perhaps the most striking recent example is the *In re Union Carbide Corp. Gas Plant Disaster*, 634 F. Supp. 842 (S.D.N.Y. 1986) *rev'd in part* 809 F.2d 195 (2d Cir. 1987) litigation arising out of the Bhopal disaster, *infra* notes 110, 116-19, 132, 136 & 141 and accompanying text.

For a discussion of some factors favoring the choice of a United States forum, see WARREN FREEDMAN, *PRODUCTS LIABILITY ACTIONS BY FOREIGN PLAINTIFFS IN THE UNITED STATES* 11-13 (1987). Furthermore, in the *RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW OF THE UNITED STATES* § 601 (1987), a duty is stated on the part of a country causing environmental injury to another aggrieved nation, which is said to include giving access to its tribunals to private citizens. *Cf.* The Superfund Act, 42 U.S.C. § 9611 (1988 & Supp. I 1989), granting foreign claimants the same remedies as domestic ones if reciprocal rights are afforded.

35. This would be so, if for no other reason, by virtue of the ancient maxim *actor forum rei sequitur* (the plaintiff follows the domicile of the defendant, being the *forum generale*). ARTHUR NUSSBAUM, *PRIVATE INTERNATIONAL LAW* § 20 (1943). This would, of course, erase jurisdictional difficulties as to the principal defendant. See also *infra* note 95 and accompanying text for a discussion of choice of forum and the manifold related considerations.

36. Ordinarily, nonresident aliens are permitted to enter state courts as a matter of comity. *Islamic Republic of Iran v. Pahlavi*, 467 N.E.2d 245 (N.Y. 1984) (*dictum*) (affirming dismissal, however, on *forum non conveniens* grounds). The Texas Supreme

court<sup>37</sup> action will be far more probable.<sup>38</sup>

A disaster such as a major nuclear power accident also inevitably entails the central involvement of the government (or governments) in whose territory injury occurs. In asserting the resulting claims, such governments are likely to proceed in United States courts. A suit in its own courts is unsatisfactory since the foreign state would be hard pressed to enforce a judgment beyond its own borders.<sup>39</sup> It is also likely that the foreign state will not resort to an international forum.<sup>40</sup> United States federal

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Court has ruled that Texas courts *must* entertain suits arising from incidents in foreign countries against any companies having a principal place of business in the state. *Dow Chem. Co. v. Alfaro*, 786 S.W.2d 674 (Tex. 1990).

37. Article III, Section 2 (whose enabling "diversity" statute is 28 U.S.C. §§ 1332 (1988 & Supp. II 1990)), provides for jurisdiction over controversies "between a State, or the Citizens thereof, and foreign States, Citizens or Subjects," as well as those to which the United States is party, *see infra* text accompanying notes 73-79. U.S. CONST. art. III, § 2. *See also* 13B CHARLES WRIGHT ET AL., *FEDERAL PRACTICE AND PROCEDURE* (JURIS. 2D) § 3521 (1984) [hereinafter WRIGHT]. If a non-United States person or entity is impleaded, the suit is likely to remain in federal court if the claim between aliens is ancillary to one over which the court has subject matter jurisdiction. *Republic of China v. American Express Co.*, 195 F.2d 230 (2d Cir. 1952); 13 WRIGHT, § 3523.

Moreover, pursuant to 28 U.S.C. § 1441 (1988 & Supp. II 1990), a private defendant may be, and a foreign governmental defendant (*see infra* text accompanying notes 81-93) will be, entitled to remove to federal court. *See also* 14A WRIGHT, *supra*, §§ 3721, 3723.

These sections explain why virtually all substantial cases involving foreign parties and complex issues are litigated in federal courts.

38. The principal points regarding actions by individuals relate to causation and suits in multiple fora, which await treatment below. *See infra* text accompanying notes 152-68 regarding problems of suits in multiple fora, and text accompanying notes 339-51 concerning the difficulties associated with indeterminate plaintiffs and causation in fact.

39. *See infra* text accompanying notes 415-25 for a discussion of recognition and enforcement of judgments.

40. The subject of suits before the International Court of Justice (ICJ) is well beyond the scope of this essay. Suffice it to say that such suits must be state against state, be based upon international law, and are usually thought of as means whereby states can assert rights as *parens patriae* or on behalf of individual citizens where a remedy in the offending state's courts would be unavailing. There are at least three reasons a state might not be likely to choose the ICJ: first, liability lies in part with private entities; second, the limits on the tribunal's compulsory jurisdiction; third, the questionable enforceability of any judgment rendered. For a terse and useful discussion, see THOMAS M. FRANCK, *JUDGING THE WORLD COURT* (1986); *see also* SHABTAI ROSENNE, *THE LAW AND PRACTICE OF THE INTERNATIONAL COURT* 161, 528 (1985).

The use of an arbitral tribunal is also a possibility. This would alleviate jurisdictional problems (assuming a proper *compromis* could be drawn), and could ease (although by no means solve) difficulties of liability apportionment and compensation assessment. Also, arbitration has a worthy tradition in disputes concerning damage of one state due to activities in another — The Trail Smelter Case (U.S. v. Can.), 3 R.I.A.A. 1905 (1949) being the paradigmatic case in point. For a suggestion of how arbitration might work in the context of transnational radiation pollution, see Ann Voorhees Billingsley, *Private Party Protection Against Transnational Pollution Through Comput-*

courts, on the other hand, are expressly granted jurisdiction<sup>41</sup> in actions in which foreign states are plaintiffs.<sup>42</sup>

A threshold inquiry in a suit in a United States court is what interests a foreign state may and may not assert. Those it may not assert include two broad categories: those of the state in its own right, and those held by its citizens in their individual capacities. As to the former, it is difficult to conceptualize losses of a nation apart from its citizens in the context of a mass tort.<sup>43</sup> Moreover, there may also be legal obstacles to a state's "own" rights being enforced in the courts of other nations.<sup>44</sup> As to the

sory Arbitration: A Proposal, 14 CASE W. RES. J. INT'L LAW 339 (1982).

41. In addition, supplemental jurisdiction is available in a suit by a private plaintiff. See *supra* text accompanying notes 36-38.

42. The Foreign Sovereign Immunities Act of 1976, 28 U.S.C. §§ 1330, 1332, 1391, 1441 & 1601-1611 (1988 & Supp. II 1990) [hereinafter FSIA], discussed *infra* notes 84-91 and accompanying text, provides diversity of citizenship jurisdiction where a foreign state is plaintiff and citizens, including resident aliens, of a United States state or different states, are defendants.

Foreign states have long been held entitled to prosecute civil actions in courts of the United States upon the same basis as domestic corporations or individuals. See *Banco Nacional de Cuba v. Sabbatino*, 376 U.S. 398 (1964) for the best-known discussion. See also RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW OF THE UNITED STATES, § 721 cmt. 1 (1987).

In order to bring suit, the foreign state must be one that is recognized by our executive branch. *Sabbatino*, 376 U.S. at 419; *Federal Republic of Germany v. Ellicofon*, 478 F.2d 231 (2d Cir. 1973). In view of the objectives sought to be achieved by the United States Government in furnishing and licensing materials and equipment to foreign countries pursuant to agreement, see *infra* text accompanying notes 249-55, it is to be hoped that a situation will never arise where a United States-supplied nuclear facility is located in a country the United States does not recognize. However, it may happen (for example, the United States had an agreement to supply nuclear materials to Iran, Agreement on Atomic Energy: Application of Safeguards Pursuant to the Non-proliferation Treaty, June 19, 1973, U.S.-Iran, 25 U.S.T. 853, T.I.A.S. No. 7829 (entered into force May 15, 1974), for two reactors, construction of which was suspended following the 1979 Iranian Revolution); if it does, the courts of the United States will be faced with what can only be described as an extremely difficult situation.

43. Compare the situation in antitrust cases, where it has been noted that a state may be considered an injured party if it has been damaged in its purchases. *Pfizer, Inc. v. Lord*, 522 F.2d 612 (8th Cir. 1975), *cert. denied*, 424 U.S. 950 (1976), see also *infra* note 45 and accompanying text.

44. This refers to the venerable principle (whose origins are not precisely known but whose most famous articulations are in *Holman v. Johnson*, 1 Cowp. 341 (K.B. 1775) and *Government of India v. Taylor*, 1955 A.C. 491 (H.L.)) that no action could be maintained in the courts of a nation on a right created by the revenue law of a foreign state (sometimes called the "revenue rule"). Although apparently carried forward into United States law, see RESTATEMENT (FIRST) OF CONFLICTS OF LAWS § 610 (1934), this principle would appear inapplicable to an action for redress of injury from a mass tort, which only involves sovereign rights as a necessary incident. In any case, leading scholars now that maintain that the concept should be strictly confined to the limits of legislative jurisdiction, and that transnational activities have rendered unworkable the traditional distinc-

latter category, courts of the United States will not entertain suits in which foreign governments seek to assert the individual interests of their citizens.<sup>45</sup> However, the foreign state will be allowed to participate as plaintiff in the capacity of *parens patriae*.<sup>46</sup> In this way, the foreign state can press claims for injuries to its environment, property and infrastructure, and its emergency assistance and clean-up costs.<sup>47</sup> This augurs that, in addition to multiple actions by individuals, those parties liable may face exposure to massive damages in favor of a determined and substantial litigant.

## 2. Private Defendants

The United States-based company determined by plaintiffs to be principally responsible for a nuclear disaster will be an obvious principal private defendant.<sup>48</sup> Depending on the facts and

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tions sought to be preserved by the rule. See ANDREAS F. LOWENFELD, PUBLIC LAW IN THE INTERNATIONAL ARENA: CONFLICT OF LAWS, INTERNATIONAL LAW, AND SOME SUGGESTIONS FOR THEIR INTERACTION 321 (1979); see generally F.A. Mann, *The International Enforcement of Public Rights*, 19 N.Y.U. J. INT'L L. & POL. 608 (1987).

45. *Pfizer*, 522 F.2d at 618 (citing, *inter alia*, the well-established preference for class actions under FED. R. Civ. P. 23, for multiple plaintiffs' causes of action); *Republic of Iraq v. First Nat'l Bank of Chicago*, 350 F.2d 645 (7th Cir. 1965).

The mere fact that it may be difficult for individual citizens to sue by virtue of distance or foreign residence will not justify *parens patriae* standing; they will not be given rights greater than United States plaintiffs by allowing their government to bring suit upon their behalf. *Pfizer*, 522 F.2d at 617-19.

In *Union Carbide*, the Government of India had passed a statute purporting to grant it the exclusive right to represent the victims of the gas leak in all fora; although this was apparently one of the grounds of the motions to dismiss (the Court refers to "standing." *Union Carbide*, 809 F.2d at 199), the case was dismissed on the basis of forum non conveniens without the issue having been reached.

46. *Parens patriae* refers to a concept of protection of "quasi-sovereign" interests, such as health, comfort and welfare of the people, water rights, environmental damage and the like. *Alfred L. Snapp & Son v. Puerto Rico*, 458 U.S. 592, 601 (1982); BLACK'S LAW DICTIONARY 1003 (5th ed. 1979); see generally Comment, *State Protection of its Economy and Environment: Parens Patriae Suits for Damages*, 6 COLUM. J.L. & Soc. PROBS. 411 (1970), but see also *Hawaii v. Standard Oil Co.*, 405 U.S. 251 (1972). In *Pfizer*, 522 F.2d at 616, the Court distinguished quasi-sovereign rights which a state might assert and individual rights which a state may not assert. The distinction appears to be both settled and widely recognized.

47. See also *supra* notes 10 & 13.

48. No discussion of parties defendant will be complete without mention of insurance. For exceptional risks such as those of a nuclear incident, insurance is available to operators and suppliers on an international pooling basis. It is required by law to be maintained in most countries (including some Cold War Eastern European states and the People's Republic of China), and insurance representatives were consulted when multilateral conventions were drawn up concerning nuclear liability. In the United States, before a license for export is obtained, the NRC requires the applicant to furnish



the bases of liability asserted,<sup>49</sup> there may be more than one such domestic party who may be haled into United States courts without impediment.<sup>50</sup>

The more problematic issues concern whether and how United States defendants may require others to share the colossal burdens of defense and damage awards that will accompany litigation in the wake of a nuclear power disaster.<sup>51</sup> The most likely scenario is of United States defendants seeking to have various additional parties held liable.<sup>52</sup> This is due to the fact

proof of "financial protection" (usually in the form of insurance). 42 U.S.C. § 2210(a) (1988). Most companies presumably maintain substantial coverage, both for liability to third parties and on-site damage. However, the rather complex governmental "indemnity" system under United States law, as discussed *infra* text accompanying notes 183-86, has only limited applicability to overseas facilities. The Proceedings of the Munich Symposium of the Organization of Economic Cooperation and Development and the International Atomic Energy Agency, September 10-14, 1984, NUCLEAR THIRD PARTY LIABILITY AND INSURANCE, (OECD ed., 1985) contain useful discussions of insurance coverage and availability.

However, ordinary insurance protection would *not* be available. Most casualty and liability policies contain standard "Nuclear Liability Exclusion" clauses.

Whether insurers may be made actual parties defendant may be seen as a choice of law matter. In suits based upon diversity jurisdiction, the question seems to be uniformly governed by state law. *See generally* WRIGHT, *supra* note 37, § 3629. Some states consider the question "procedural" and hence controlled by *lex fori*, while others apply choice of law and public policy analyses. *See* ROBERT A. LEFLAR ET AL., AMERICAN CONFLICTS LAW 45, 122, 133, 134 (1986) [hereinafter LEFLAR]; *see also* RESTATEMENT (SECOND) OF CONFLICT OF LAWS § 162, cmt. d (1971), and *infra* notes 212-15 and accompanying text.

49. Under traditional civil law concepts and modern legislative reforms in common law jurisdictions, there do not appear to be significant inconsistencies in the law of joint and several liability among tortfeasors. *See generally* FREDERICK H. LAWSON, NEGLIGENCE IN THE CIVIL LAW 76 (1950); FREDERICK H. LAWSON & B.S. MARKESINIS, TORTIOUS LIABILITY FOR UNINTENTIONAL HARM IN THE COMMON LAW AND THE CIVIL LAW 126 (1982); JOHN G. FLEMING, THE LAW OF TORTS 228-32 (6th ed. 1983); WARREN FREEDMAN, JOINT AND SEVERAL LIABILITY: ALLOCATION OF RISKS AND APPORTIONMENT OF DAMAGES 43 (1987).

50. Naturally, in any suit, whether in state or federal court, traditional *in personam* jurisdiction requirements, under the rule in *International Shoe Co. v. Washington*, 326 U.S. 310 (1945) and its progeny, must be satisfied.

*See also infra* notes 55-63 and accompanying text regarding impleader and supplemental jurisdiction.

51. *See infra* notes 55-71, 81-93 and accompanying text.

52. A United States court might also entertain a nuclear accident suit involving strictly foreign plaintiffs and defendants. In *Verlinden B.V. v. Central Bank of Nigeria*, 461 U.S. 480 (1983), the Supreme Court upheld a portion of the FSIA, 28 U.S.C. § 1330(a) (1988), allowing suit by an alien against a foreign instrumentality. In addition, under the well-known rule in *Filartiga v. Pena-Irala*, 630 F.2d 876 (2d Cir. 1980), a state may be sued by an alien in the United States for violations of international law under the Alien Tort Claims Act, 28 U.S.C. § 1350 (1988). However, *Filartiga* was narrowed in *Argentine Republic v. Amerasia Shipping Corp.*, 488 U.S. 428 (1989), where the Supreme Court held that the FSIA (*see infra* text accompanying notes 81-91) provided

that multiple entities participated<sup>53</sup> in the design, construction, and operation of the nuclear facility, the furnishing of nuclear materials and supplying of components, and may share the duty to guard against the occurrence.<sup>54</sup>

If a foreign private defendant who supplied components or performed services in connection with the reactor is to be held liable by a United States co-defendant, its amenability to suit will depend on procedural rules governing impleader in United States courts<sup>55</sup> and the meeting of due process standards.<sup>56</sup> Impleader of third parties is governed by an adaptable discretionary regimen allowing any party who is, or may be, liable to a defendant to be brought into a suit<sup>57</sup> to facilitate judicial economy and prevent multiple and circuitous actions where interrelated claims are present.

The ability to implead additional parties, whether foreign or domestic, is qualified by numerous variables.<sup>58</sup> In all cases, it de-

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the sole basis for jurisdiction over a foreign state, and its limited exceptions were to be strictly observed. Such a direct claim would be unlikely in any case where the nuclear facility was of substantial United States origin.

*See also infra* notes 303-10 regarding international law norms and national law remedies.

53. *See supra* notes 24-30 and accompanying text.

54. Under United States law, it is not necessary for defendants to have acted concurrently to be jointly and severally liable. The rule would not likely differ in most other jurisdictions. *See generally* materials cited *supra* note 49; *see also infra* note 320 regarding law applicable to contribution and indemnity.

55. The bulk of discussion here is with reference to United States federal courts; a suit would likely be removed to federal court if initially commenced in state court. In any event, the procedures and requisites for impleader in most states of the United States would not differ sharply from those in federal courts. *See supra* notes 36-37 and accompanying text.

56. *See infra* notes 61-65 and accompanying text.

57. FED. R. Civ. P. 14, which governs interpleader, has a generous jurisprudence interpreting it. The allowance of impleader is a matter of the court's discretion. *See Farmers and Merchants Mutual Fire Ins. Co. v. Pulliam*, 481 F.2d 670, 673 (10th Cir. 1973); *Somportex Ltd. v. Philadelphia Chewing Gum Corp.*, 453 F.2d 435, 439-40 (3d Cir. 1971), *cert. denied*, 405 U.S. 1017 (1972); WRIGHT, *supra* note 37, § 1443.

In the event it is determined that suit is seriously complicated or otherwise confounded by interpleader, the power of the court to order separate trials of separate issues, as allowed by FED. R. Civ. P. 42(b), is an important means to meet whatever difficulty might exist. *See Schwab v. Erie Lackawanna R.R. Co.*, 438 F.2d 62, 71-72 (3d Cir. 1971); *Lankford v. Ryder Truck Sys., Inc.*, 41 F.R.D. 430 (D.S.C. 1967).

58. For instance, in determining whether to allow impleader, the court may consider the inconvenience to a third party, which may be a significant factor when foreign parties are involved. However, a great showing of inconvenience will be required. *United States v. Acord*, 209 F.2d 709 (10th Cir.), *cert. denied*, 347 U.S. 975 (1954); *Lone Star Package Car Co. v. Baltimore & O. R.R. Co.*, 212 F.2d 147 (5th Cir. 1954); *F & D, Inc. v. O'Hara & Kendall Aviation, Inc.*, 547 F. Supp. 44 (S.D. Tex. 1982). A court should apply

depends on the ability of the named defendant to make a *prima facie* showing<sup>59</sup> of its own right of recovery against the third party defendant.<sup>60</sup> Moreover, it is well established that foreign parties may be brought in only when the requisite minimum contacts exist to support personal jurisdiction.<sup>61</sup> This presents a hindrance where the third party defendants neither transact business in the United States<sup>62</sup> nor are otherwise legally present.<sup>63</sup>

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the impleader rules in accordance with their purpose and avoid defeating them by narrow or technical interpretations. *E.F. Hutton & Co. v. Jupiter Dev.*, 91 F.R.D. 110 (S.D.N.Y. 1981).

59. Recall that the liberal provisions of Rule 14 allow impleader if the third party "is, or may be" liable. *FED. R. Civ. P.* 14, *See supra* note 57 and accompanying text.

60. Thus, it would not be possible to implead another defendant who is liable to plaintiffs only, without a substantive right in favor of the impleading defendant. *See Parr v. Great Lakes Express Co.*, 484 F.2d 767 (7th Cir. 1973); *Millard v. Municipal Sewer Auth.*, 442 F.2d 539, 541 (3d Cir. 1971). *See also Kenrose Mfg. Co. v. Fred Whitaker Co.*, 512 F.2d 890 (4th Cir. 1972) (prevents collusion to reach defendant who could not be sued otherwise; no ancillary jurisdiction to hear claim against third party in such case).

However, as long as the claim arises out of the same aggregate set of facts, the third party claimant can assert a different basis of liability. *See American Fidelity & Casualty Co. v. Greyhound Corp.*, 232 F.2d 89, 92 (5th Cir. 1956); *Pitcavage v. Mastercraft Boat Co.*, 632 F. Supp. 842 (M.D. Pa. 1985).

The question of the existence of such right of relief against the third party is a substantive matter, to be resolved under choice of law rules generally governing liability in the case. *See Colton v. Swain*, 527 F.2d 296 (7th Cir. 1975); *General Dynamics Corp. v. Adams*, 340 F.2d 271 (5th Cir. 1965); *Ragusa v. City of Streator*, 95 F.R.D. 527 (N.D. Ill. 1982). *See also infra* notes 211-30 and accompanying text regarding choice of applicable law.

61. *See Asahi Metal Indus. Co., Ltd. v. Superior Court*, 480 U.S. 102 (1987); *James Talcott, Inc. v. Allahabad Bank, Ltd.*, 444 F.2d 451 (5th Cir. 1971); *Doebler v. Stadium Prod., Ltd.*, 91 F.R.D. 211 (W.D. Mich. 1981); *WRIGHT, supra* note 37, § 1445.

In a diversity action, questions of personal jurisdiction are determined in accordance with the law of the state where the court sits. *See Arrowsmith v. United Press Int'l*, 320 F.2d 219 (2d Cir. 1963); *WRIGHT, supra* note 37, § 1075. However, the jurisprudence of the United States concerning sufficiency of minimum contacts has evolved into a *de facto* federal standard, because it is seen as a matter of due process under the Fifth Amendment to the Constitution. *See, e.g., Insurance Corp. of Ireland, Ltd. v. Compagnie des Bauxites de Guinee*, 456 U.S. 694, 702 (1982).

*See also infra* text accompanying notes 81-93 regarding *in personam* jurisdiction in the context of foreign governments and instrumentalities.

If the liability allocation techniques argued for in this article are implemented or are likely to be, then foreign defendants will wish to intervene in order to ensure their interests are duly guarded.

62. *See, e.g., Helicopteros Nacionales de Colombia v. Hall*, 466 U.S. 408, 412 (1984); *Humble v. Toyota Motor Co., Ltd.*, 727 F.2d 709, 710 (8th Cir. 1984). *But see also infra* notes 81-93, 288-91 and accompanying text.

63. *See also infra* notes 81-93, 288-91 and accompanying text.

The conduct of business by a foreign corporation through a subsidiary is not sufficient in itself to subject the parent to the jurisdiction of a state. *Cannon Mfg. Co. v.*

The United States defendant(s) might, of course, bring separate suits elsewhere seeking indemnity from others considered liable. But consider the difficulties that appear even at first blush: Any lawsuit based upon nuclear injury is certain to be unequalled in factual complexity;<sup>64</sup> even if another forum promises satisfactory resolution of the intricacies involved, the spectre of inconsistent results looms, as well as the giant task of re-establishing the case in a distant and perhaps inhospitable situs.<sup>65</sup> Thus, for United States parties who may be liable for nuclear-related damages, a serious quandary is posed — they could be held accountable for injuries suffered by a multitude of victims, while other responsible participants remain beyond reach.<sup>66</sup>

If a court determines that the United States is the proper forum,<sup>67</sup> then it is in the interests of all United States parties, and of judicial economy and coherence of result, that impleader of third parties be allowed to the limits of due process.<sup>68</sup> The

Cudahy Packing Co., 267 U.S. 333 (1925). But see later decisions distinguishing *Cannon*, e.g., *Roorda v. Volkswagenwerk, A.G.*, 481 F. Supp. 868 (D.S.C. 1979).

Attempts to assert *quasi in rem* jurisdiction must now apparently comply with due process standards of minimum contacts. See *Shaffer v. Heitner*, 433 U.S. 186 (1977). But no sooner was *Shaffer* handed down than distinctions began to emerge. See, e.g., *Intermeat, Inc. v. American Poultry, Inc.*, 575 F.2d 1017 (2d Cir. 1978) (attachment of property can supply substantial part of necessary contacts).

64. See also *infra* text accompanying notes 340-48.

65. The barrier preventing a foreign defendant from being brought into the initial action in the United States, lack of personal jurisdiction, will preclude issues litigated in that action from being accorded *res judicata* effect in a foreign court.

66. For suggested solutions, see *infra* notes 381-410, 431-39 and accompanying text.

67. See *infra* notes 95-144 and accompanying text regarding forum selection and forum non conveniens.

If the lawsuit is referred to a foreign court, and the United States defendant(s) wish to avoid multiple suits and conflicting results, they must implead additional parties liable under the procedure of that forum. That foreign forum will probably not allow as much flexibility as a United States forum. Moreover, not even all United States parties may be amenable to suit in a given overseas court system.

If a party is not brought into the foreign court, then a separate suit against it will be the only remaining option. But impleader will not be allowed in the United States in an action to enforce a foreign judgment where the proposed third party was not present and involved in the foreign proceedings. See *Somportex Ltd. v. Philadelphia Chewing Gum Corp.*, 453 F.2d 435 (3d Cir. 1971).

68. In this connection, the distinction between "general" jurisdiction, which allows a cause of action not related to contacts in the forum, and "specific" or "limited" jurisdiction, involving only suits arising therefrom, should be borne in mind. See *Helicopteros Nacionales de Colombia v. Hall*, 466 U.S. 408, 413 (1984); *Perkins v. Benguet Consol. Mining Co.*, 342 U.S. 437 (1952).

If a foreign defendant's activities are not so pervasive as to subject him or her to general jurisdiction, a court may still assert specific jurisdiction for actions related

court should examine very carefully the involvement of foreign parties — taking into account the processes whereby agreements were made<sup>69</sup> and how United States assistance in nuclear development was obtained<sup>70</sup> — to determine whether sufficient contacts or availments have occurred to render these parties amenable to suit in the United States.<sup>71</sup> Only thus is it possible to achieve a just and definitive resolution in one proceeding.

### 3. Governmental Defendants

The development of technology has historically been conducive to governmental participation, welcomed as a necessary and proper expedient; this is true of nuclear energy. Accordingly, it is expected that governments will be sought to be held responsible for loss compensation.<sup>72</sup> In the context of civil damages pro-

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thereto. See *Helicopteros*, 466 U.S. at 413; *Haisten v. Grass Valley Medical Reimbursement Fund*, 784 F.2d 1392 (9th Cir. 1985). The controlling test for such jurisdiction seems to be whether a defendant could reasonably anticipate being haled into court on the basis of its operations in the forum state. *Worldwide Volkswagen Corp. v. Woodson*, 444 U.S. 286, 295 (1980).

69. In the contractual context, where a relationship is established that continues beyond an isolated transaction, the foreign party receives notice from the contract and the course of dealing that it might be subject to suit in an alien forum. If the party is unable to demonstrate that the exercise of jurisdiction will be fundamentally unfair, due process standards will be met. *Burger King v. Rudzewicz*, 471 U.S. 462, 487 (1985).

70. See *supra* notes 24-30.

71. Limited or specific jurisdiction over a nonresident defendant requires an act or some transaction by which it purposefully avails itself of the privilege of conducting activities in the forum, invoking the benefits and protections of that forum's laws. In such a case, the cause of action must arise out of the activity, and the exercise of jurisdiction must be reasonable. *Hanson v. Denckla*, 357 U.S. 235, 253 (1958); *Haisten*, 784 F.2d at 1395. However, the act need not physically take place within the forum to be a sufficient contact. *Id.* at 1397.

A program as large and multifaceted as the design, location and construction of a nuclear facility should be considered by definition more than merely occasional or casual association. The sheer size and complexity of the undertaking, and the necessary involvement of central governments at both ends make it virtually certain that both continuous contacts and extensive availment will be present in most, if not all, instances.

See *supra* notes 24-30 and accompanying text concerning United States nuclear exports and assistance.

72. See *infra* notes 247-310 and accompanying text regarding governmental bases of liability.

It should be noted that to varying degrees, depending on their resources and governing philosophies, governments may be expected to provide aid and victim compensation through the political processes. Indeed, in the United States, the Price-Anderson Act, [hereinafter *Price-Anderson*] discussed *infra* notes 183-209 and accompanying text, appears to obligate Congress to take action with respect to a domestic nuclear power accident causing damages in excess of the liability limitation. See 42 U.S.C. § 2210(e) (1988).

ceedings, government liability will be asserted when other defendants attempt to shift liability, as well as when direct suits are commenced against government authorities. The principal issue in this connection is government amenability to suit.

The United States Government may be sued only in actions involving both a specific grant of jurisdiction and (with limited exceptions inapplicable here) a corresponding waiver of sovereign immunity.<sup>73</sup> Although there are differing procedural circumstances in which the United States might be a party defendant,<sup>74</sup> in each case the court will be called upon *a priori* to determine substantively whether a claim may be asserted against it.<sup>75</sup> Because there are no statutes specifically creating jurisdiction over suits against the United States in the context of an accident at a nuclear facility<sup>76</sup> — and the grants of jurisdiction against private

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However, there are at least three reasons why this expectation is problematic. First, the sheer complexity of attempting to quantify and allocate compensation portends incomplete legislative decision-making and unacceptable delay. Second, injured parties may be unwilling to rely solely on fickle government largesse, especially absent an established responsible regimen. Third, the government itself will require a means *in any event* to allocate a share to other parties in order to defray the enormous resource burden.

In addition, non-governmental or international relief organizations seem to distinguish disasters of the type considered here from act-of-God catastrophes such as earthquakes and hurricanes. In the wake of the Bhopal tragedy, there was virtually *no* aid furnished by any such organization, the expectation apparently being that the Indian Government and the legal system would afford relief to the victims. Anyway, such organizations often find their resource pools drained by natural disasters.

73. The judicial power of the United States extends to all controversies to which the United States is a party. U.S. CONST. art. III, § 2. But sovereign immunity, unless waived, operates as a limitation on subject matter jurisdiction even if jurisdiction is otherwise created. *Sheehan v. Army & Air Force Exch. Serv.*, 619 F.2d 1132 (5th Cir. 1980), *rev'd on other grounds* 456 U.S. 728 (1982).

74. As, for instance, in a suit based upon diversity of citizenship, *see supra* note 37, in which the United States is joined as a third-party defendant; such joinder will not defeat diversity if the United States is not an indispensable party defendant. *TM Systems, Inc. v. United States*, 473 F. Supp. 481, 485 (D. Conn. 1979).

A suit brought in state court, if not removed by another defendant, *see supra* note 37, would be removable to federal court by the United States pursuant to 28 U.S.C. § 1441 (1988 & Supp. II 1990).

75. *Feres v. United States*, 340 U.S. 135 (1950). Depending upon how the complaint is crafted, issues regarding claims against the United States may be raised early on by motion to dismiss pursuant to FED. R. CIV. P. 12. However, lack of subject matter jurisdiction may be raised at any time.

If the immunity of the United States from suit is considered "jurisdictional" it may be raised in like manner. However, because of the extensive fact-finding which may be needed with regard to such immunity (*see infra* text accompanying notes 265-71), it will in many cases operate for practical purposes an affirmative defense. *See Blessing v. United States*, 447 F. Supp. 1160 (E.D. Pa. 1978).

76. *Cf.* The Department of Energy National Security and Military Applications of

defendants appear unsuitable<sup>77</sup> —suit must be maintained on the basis of the Federal Tort Claims Act.<sup>78</sup> The difficulties that exist regarding the immunity of the United States from liability will arise in that setting.<sup>79</sup>

Related to suits against the United States Government is the possibility that suit could be brought seeking damages against the government's employees in their individual capacity for violation of the protected rights of plaintiffs under applicable United States law.<sup>80</sup> Absent indemnity obligations, the difficulties of satisfying any judgment obtained are obvious.

Foreign governmental defendants, as will be seen,<sup>81</sup> may

Nuclear Energy Authorization Act of 1985, 42 U.S.C. § 2212 (1988), which makes the Federal Tort Claims Act, 28 U.S.C. § 1346 (1988 & Supp. II 1990), applicable to suits arising out of nuclear weapons testing. The United States Government is the only permissible defendant in such suits.

The Atomic Energy Act of 1954, 42 U.S.C. § 2239 (1988), which allows for judicial review of orders of the Nuclear Regulatory Commission, cannot be read to provide a private right of action for damages.

77. The United States is not a citizen of any state for purposes of diversity of citizenship under 28 U.S.C. § 1332 (1988 & Supp. II 1990). See *Koppers Co. v. Garling & Langlais*, 594 F.2d 1094, 1097 n.1 (6th Cir. 1979). And even if federal question jurisdiction under 28 U.S.C. § 1331 (1988 & Supp. II 1990) applied, it does not avoid immunity in suits for damages, and a separate ground for action would need to be set forth. *Garcia v. United States*, 666 F.2d 960, 966 (5th Cir. 1982).

78. The Federal Tort Claims Act (FTCA) provides that United States district courts shall have

exclusive jurisdiction of civil actions on claims against the United States, for money damages . . . for injury or loss of property, or personal injury or death caused by the negligent or wrongful act or omission of any employee of the Government while acting within the scope of his office or employment, under circumstances where the United States, if a private person, would be liable to the claimant in accordance with the law of the place where the act or omission occurred.

28 U.S.C. § 1346(b) (1988 & Supp. II 1990). See also 28 U.S.C. §§ 2671-2680 (1988 & Supp. II 1990).

79. See *infra* text accompanying notes 265-71.

80. Such suits, sometimes known as "constitutional tort" suits, seek redress for violations of the Constitution or United States laws. This was first expressly validated in the landmark *Bivens v. Six Unknown Named Agents of the Fed. Bureau of Narcotics*, 403 U.S. 388 (1971), and is a parallel and contemporary cause of action to that allowed against the federal government under the Federal Tort Claims Act, 28 U.S.C. 1346(6) (1988 & Supp. II 1990), but without the often insuperable obstacle of sovereign immunity. See *Carlson v. Green*, 446 U.S. 14 (1980). Jurisdiction exists by virtue of the federal question statute, 28 U.S.C. § 1331 (1988 & Supp. II 1990), *Bell v. Hood*, 327 U.S. 678 (1946), or civil rights legislation such as 42 U.S.C. § 1983 (1988).

These bases of liability and related questions of immunity are further discussed *infra* text accompanying notes 248-87.

81. See *infra* text accompanying notes 288-302. See also *supra* text accompanying notes 4-6, 30.

also be considered legally responsible in part or in whole for the damage resulting from a nuclear power disaster. If so, whether they or their instrumentalities<sup>82</sup> can be made parties to suits in United States courts<sup>83</sup> will depend on the requirements and allowances of the Foreign Sovereign Immunities Act of the United States (FSIA).<sup>84</sup> The FSIA bewilderingly collapses immunity

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82. In addition to jurisdictional and immunity problems discussed in the ensuing notes and accompanying text, suits against (or counterclaims by) a foreign government present a problem where separate state-ordained instrumentalities are concerned. Examples of these difficulties may be found in, *inter alia*, *C. Czarnikow Ltd. v. Centrala Handlu Zagraniczengao "Rolimpex"* [1978] 2 All E.R. 1043 (H.L.). See also HARRY STREET, *GOVERNMENT LIABILITY: A COMPARATIVE STUDY* 28-36 (1953).

A court should not allow a state to assert a claim while evading its own responsibility on the basis that a separate entity (such as a utility company or authority) is the operator of the facility, particularly where an activity such as nuclear power utilization, which is so closely a governmental function, is concerned. On the other hand, comity and sound legal and international relations principles counsel against too readily disregarding entity separateness under the laws of a sister nation. A suggestion for addressing this problem is found in Ronald D. Lee, Note, *Jurisdiction Over Foreign States for Acts of their Instrumentalities: A Model for Attributing Liability*, 94 YALE L.J. 394 (1984). Under the RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW OF THE UNITED STATES § 452 (1987), claims may be asserted against a state in a United States court on the basis of the acts of an instrumentality under "special circumstances"; cf. the Supreme Court's particularized approach in *First Nat'l City Bank v. Banco Para el Comercio Exterior de Cuba*, 462 U.S. 11 (1983).

83. Under the traditional international law view, immunity is required to be afforded a foreign state in the courts of a state, and whether to do so is not discretionary. 2 D.P. O'CONNELL, *INTERNATIONAL LAW* 843 (2d ed. 1970); Francis Deák, *Organs of States in their External Relations: Immunities and Privileges of State and Organs of the State*, in *MANUAL OF PUBLIC INTERNATIONAL LAW* 425 (Sorensen ed. 1968).

During the twentieth century, states have by and large come to recognize a theory of "restrictive sovereign immunity," holding that states are not immune with respect to activities of the type that might be carried on by private persons. GAMAL MOURSİ BADR, *STATE IMMUNITY: AN ANALYTICAL AND PROGNOSTIC VIEW* 61 (1984); CHRISTOPH H. SCHREUER, *STATE IMMUNITY: SOME RECENT DEVELOPMENTS* 44 (1988); Stefan A. Riesenfeld, *Sovereign Immunity in Perspective*, 19 VAND. J. TRANSNAT'L L. 1 (1986).

This is also the law of the United States, as codified in the FSIA, and the RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW OF THE UNITED STATES § 451 (1987). It may be said that the Restatement serves as a reference point for resolving issues of substantive immunity clouded by the FSIA.

84. The FSIA was passed in 1976, as portions of 28 U.S.C. §§ 1330, 1332, 1391, 1441, 1602-11 (1988 & Supp. II 1990). It creates, in effect, federal question-based jurisdiction where a foreign state is the defendant and diversity of citizenship jurisdiction, where the foreign state is the plaintiff. See also *supra* note 37. It is "a comprehensive set of legal standards governing claims of immunity in every civil action against a foreign state." *Verlinden B.V. v. Central Bank of Nigeria*, 461 U.S. 480, 488 (1983). See also *infra* note 86 and accompanying text.

For explanations of the workings of the FSIA, see Mary K. Kane, *Suing Foreign Sovereigns: A Procedural Compass*, 34 STAN. L. REV. 385 (1982); Mark B. Feldman, *Foreign Sovereign Immunity in the United States Courts 1976-1986*, 19 VAND. J. TRANSNAT'L L. 19 (1986); Melissa L. Werthan et al., Note, *Jurisdiction over Foreign Govern-*



into jurisdiction at initial inquiry; however, it is clear that even if jurisdiction exists, substantive immunity still must be overcome.<sup>85</sup> With general immunity from suit as its point of departure,<sup>86</sup> the FSIA sets forth transactional exceptions,<sup>87</sup> none of which likely applies to cases of the type herein considered.<sup>88</sup> However, if a foreign government were a plaintiff, a situation which may arise in the context of a massive nuclear accident,<sup>89</sup> or otherwise was allowed to intervene, that government would be amenable to counterclaim.<sup>90</sup> Indeed, counterclaims may be the sole jurisdictional basis.<sup>91</sup>

In addition, if a foreign state can be held amenable to suit in the United States, *in personam* jurisdiction requirements must again be met, as in the case of a private defendant.<sup>92</sup> Where the ground is counterclaim, the nation would *ipso facto* have sufficiently availed itself of the laws of the United States to meet jurisdictional standards and the matter is expressly provided for by the FSIA in any event. But whether sufficient contacts otherwise exist in the setting of a foreign nuclear facility cannot be predicted, there being no cases nor positive law provi-

*ments: A Comprehensive Review of the Foreign Sovereign Immunities Act*, 19 VAND. J. TRANSNAT'L L. 119 (1986).

An exhaustive discussion of the FSIA, and the jurisprudence that has evolved since its enactment, may be found in JOSEPH W. DELLAPENNA, *SUING FOREIGN GOVERNMENTS AND THEIR CORPORATIONS* (1988).

85. See *infra* notes 293-309 and accompanying text regarding substantive immunity under municipal laws and the act of state doctrine.

86. 28 U.S.C. § 1604 (1988) provides immunity from suit for a foreign state by the courts of the United States, subject to international agreement and certain statutory exceptions.

87. 28 U.S.C. § 1605 (1988 & Supp. II 1990).

88. 28 U.S.C. § 1605(a) (1988 & Supp. II 1990) offers a possible exception in cases in which the foreign government has executed an "Agreement for Cooperation" concerning nuclear energy (pursuant to 42 U.S.C. § 2151 (1988)) with the United States containing an express waiver of immunity.

In addition, of course, the foreign government could otherwise explicitly waive immunity in order to participate in the suit.

89. See *supra* text accompanying notes 39-47.

90. 28 U.S.C. § 1607 (1988), applicable in any suit brought by a foreign state or in which it intervenes.

See, however, *infra* notes 293-309 regarding substantive immunity under national laws and act of state doctrine.

91. See *supra* note 52 regarding the Supreme Court's recent explication in *Argentine Republic v. Amerasia Shipping Corp.*, 488 U.S. 428 (1989).

92. See *Texas Trading & Milling Corp. v. Fed. Republic of Nigeria*, 647 F.2d 300 (2d Cir. 1981), and authorities discussed therein; 28 U.S.C. § 1605(a)(2) (1988 & Supp. II 1990). Cf. *supra* text accompanying notes 61-63.

sions applicable.<sup>93</sup>

Thus, governmental susceptibility to suit for its role in events leading to nuclear disaster may turn upon the grounds of the claims asserted. In the case of the United States, at the jurisdictional stage a cause of action must fit within its statutory waiver of sovereign immunity; a claim against a foreign state may be brought if an exception under the FSIA can be shown to apply. The presence of governmental defendants may also have a significant impact on the ultimate liability of other parties.<sup>94</sup>

## B. *Forum and Jurisdiction*

### 1. Considerations for Litigants

Without an effective international legal regimen to allocate adjudicatory authority with respect to nuclear accident claims, litigants may choose whichever court offers the greatest hope of adequate redress.<sup>95</sup> Due to the gravity of injuries and far-reaching consequences thereof, victims of nuclear power accidents will be especially intent upon achieving the optimal situs.<sup>96</sup> Where the United States or its citizens are implicated, the optimal situs will likely be the United States.

Divergent popular attitudes, both with respect to nuclear energy in general and to the particular case, will play a part in the forum to be selected. It is a fair supposition that a certain

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93. A government seeking United States commercial or governmental assistance in the development of nuclear power will in all probability have negotiated extensively with both United States authorities and one or more companies. Moreover, it will likely have signed an "Agreement for Cooperation" with the United States in order to obtain nuclear material, may have received financial aid and almost certainly will get technical aid from the United States. See *supra* note 26 and *infra* note 253.

This pattern of activity ought to be at least as appropriate to render the government susceptible to personal jurisdiction in the United States as that in *Texas Trading*, 647 F.2d at 311 (in which the banking and commercial activities of the Nigerian Government were adequate). Of course, substantive immunity must still be met and overcome.

94. See *infra* text accompanying notes 311-37.

95. Some plaintiffs may be bound by forum selection clauses in applicable agreements. See *infra* text accompanying notes 145-51 for special problems this may present.

96. The limits of judicial jurisdiction will vary with the municipal laws of nations and international conflicts of laws principles. As regards the United States, the parameters are included, where appropriate, in the next section regarding parties.

Of course, a defendant, or group of defendants, cannot be sued just anywhere. This writing has as one of its foundational assumptions that there exists a sufficient connection that the United States is among the fora the plaintiff may select.

Discussion of the array of views among other nations regarding such jurisdiction, except as noted specifically herein, is beyond the scope of this essay. See also *infra* notes 303-10 regarding international law norms and municipal law remedies.

generalized public disapprobation of the nuclear industry as well as the people's generosity, fairness, and sense of justice may be regarded as auspicious for suits in the United States.<sup>97</sup> Where the assessment of damages awards is concerned, differing traditions and standards of living are known to have a marked effect;<sup>98</sup> injured parties may expect to fare as well in this respect in United States courts as any others. In addition, since no overriding unified regimen otherwise applies, United States procedure offers the greatest hope that a damage award may be justly allocated among plaintiffs.<sup>99</sup>

An additional influence upon advisors to injured persons will be the selection of a forum to influence the choice of law.<sup>100</sup> This may be of use in regard to substantive as well as procedural matters.<sup>101</sup> In the latter category are factors that, although tactical, may be determinative of the result. The first and most obvious is the availability of jury trials in civil actions in the United States.<sup>102</sup> Almost as important in a case involving mass injury is

97. For instance, pressure from anti-nuclear groups caused the canceling of 100 projects in the United States alone since the mid-1970s. Meeks, *supra* note 3, at 116.

98. See Norbert Pelzer, *Current Problems of Nuclear Liability Law in the Post-Chernobyl Period*, ENERGIEWIRTSCHAFTLICHE TAGESFRAGEN (January 1987), translated in 39 NUCLEAR L. BULL. 66, 71 (June 1987) [hereinafter Pelzer]; Harvard Law School and Atomic Industrial Forum, Inc., INTERNATIONAL PROBLEMS OF FINANCIAL PROTECTION AGAINST NUCLEAR RISK 6 (1959) [hereinafter HARVARD STUDY].

99. The concern here is how to spread the monetary award. Would the first to sue receive all the funds available and others go uncompensated? This could be especially troublesome if punitive damages were obtained, even if the court is careful to limit them based upon the defendant's available assets. The best solution for all concerned may be the class action under FED. R. CIV. P. 23, in which the court would have the discretionary power to distribute the funds (together, it may be imagined, with a United States bankruptcy court). The class action model does not address the question of compensating latent injury which may be undiscovered until long after other issues in the case are resolved. See *infra* notes 341-42 and accompanying text.

Where the Price-Anderson Act, which governs injuries caused within the United States or pursuant to contract, is applicable, the foregoing problem is greatly simplified; there is a finite fund due to liability limitations, and the court has the power to hold and apportion it among injured parties. 42 U.S.C. § 2210(o) (1988). See *infra* notes 191-96 and accompanying text.

100. See *infra* text accompanying notes 222-27.

101. See *infra* text accompanying notes 222-27. Under the traditional view, "substantive" law is the subject of choice of law analysis, while "procedural" matters are always supposed to be governed by the law of the forum. See also *infra* notes 210-15 and accompanying text.

102. In general, the Seventh Amendment to the Constitution preserves the right to jury trial in "suits at common law," U.S. CONST. amend. VII, and this right has traditionally been given a broad reading in United States courts. However, under the FTCA, trial by jury is not allowed in suits against the United States. 28 U.S.C. § 2402 (1988). In a suit in which the United States is one of several defendants, the court apparently may

the availability of contingent fee arrangements with counsel.<sup>103</sup>

The plaintiffs will also be influenced by factors such as the recognition and enforceability of a judgment once obtained,<sup>104</sup> the perception that United States courts possess greater expertise and better procedural devices for dealing with cases involving mass injury,<sup>105</sup> enhanced ability to implead additional parties defendant,<sup>106</sup> and suit in the locale where jurisdiction may be most readily asserted over a governmental defendant.<sup>107</sup> Finally, it bears noting that injured parties may wish to commence action in the United States for another quite important strategic reason: In the event United States courts are ultimately not deemed the proper forum, important advantages *vis à vis* one or more defendants may nevertheless be achieved if a suit is conditionally dismissed.<sup>108</sup>

## 2. Forum Non Conveniens

Nearly every suit in which foreign events or persons are involved will necessitate consideration of the doctrine of forum non conveniens.<sup>109</sup> In the case of an international nuclear acci-

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divide the issues of liability to be tried and allow jury trial on those not concerned with the United States. *See Barron v. United States*, 654 F.2d 644 (9th Cir. 1981); *Collins v. General Motors Corp.*, 101 F.R.D. 4 (W.D. Pa. 1983).

*See also infra* notes 212-16 and accompanying text regarding choice of law.

103. Jury trials in civil actions and contingency fee arrangements are generally not available in most foreign jurisdictions. *See Piper Aircraft Co. v. Reyno*, 454 U.S. 235, 262 n.18 (1981).

104. *See infra* text accompanying notes 411-30.

105. Examples of this include the class action, pursuant to FED. R. Civ. P. 23 (and corresponding state court procedures), devices for consolidation like the federal Judicial Panel on Multidistrict Litigation, and broad-ranging discovery procedures under the Federal Rules.

106. *See supra* notes 55-60 and accompanying text.

107. *See supra* note 35 and accompanying text.

108. *See infra* text accompanying notes 133-44 concerning conditions to dismissal based on forum non conveniens.

109. There is no established rule or framework for the use of forum non conveniens in international litigation in general, except as it may be applied by courts in the United States.

In this passage, reference is to forum non conveniens as it applies to the choice between a United States and foreign tribunal, and not between courts within the United States. Domestically, the doctrine has been in large part codified in 28 U.S.C. § 1404(a) (1988). In diversity suits by alien plaintiffs in federal court, the defendant's residence would be the proper venue, and if domestic and alien defendants are present, venue would be proper in any district in which it is correct as to the non-alien. *See generally* 28 U.S.C. § 1391 (1988 & Supp. II 1990); *Brunette Mach. Works v. Kockum Indus.*, 406 U.S. 706 (1972); *R.C.A. Records v. Hanks*, 548 F. Supp. 979 (S.D.N.Y. 1982).

The FSIA, *supra* note 84, contains no applicable venue provision, except that suits

dent, a defendant might choose to attempt transfer of the litigation outside the United States.<sup>110</sup>

The parameters of forum non conveniens in the jurisprudence of the United States figure significantly in its application here.<sup>111</sup> Thus, it is established that where plaintiffs are foreign, their choice of the forum is not entitled to the same analytic weight as if they were United States citizens or residents.<sup>112</sup> Similarly, less favorable law or laws affecting recovery of damages will not prevent dismissal if a foreign court is clearly more appropriate.<sup>113</sup>

The threshold determinant of forum non conveniens is the adequacy of the alternative forum.<sup>114</sup> Preliminarily, the defend-

against a foreign state or political subdivision may be brought in the District of Columbia. 28 U.S.C. § 1391(f) (1988). There is no express indication as yet where venue may lie against a foreign governmental instrumentality other than the state itself.

110. This was the disposition of the lawsuits in *In re Union Carbide Corp. Gas Plant Disaster at Bhopal, India* in Dec. 1984, 634 F. Supp. 842 (S.D.N.Y. 1986), *rev'd in part*, 809 F.2d 195 (2d Cir. 1987). See also *infra* notes 116-19, 132-44 and accompanying text.

The most likely transfer would be to courts where the incident occurred, although in certain cases a country where harm was suffered could be more suitable (as in the event of significant transfrontier injury); in either case, it would have to be established that sufficient grounds existed for the exercise of adjudicatory jurisdiction. United States defendants would need to consider this and a host of other legal and extra-legal variables in preparing to urge forum non conveniens and determine not only which outside forum, if any, is advantageous, but also which meets the criteria considered below.

In *Piper Aircraft v. Reyno*, it was recognized that use of the doctrine amounted to "reverse forum-shopping." Nonetheless, the Court held that if dismissal was otherwise appropriate, it is immaterial that it may have been motivated by a desire for a more favorable forum. *Piper Aircraft v. Reyno*, 454 U.S. 235, 252 n.19 (1981).

111. The application of the doctrine to dismiss in favor of another court system is optional, and rests upon the court's synthesis of a great number of competing considerations. The leading recent Supreme Court case, *Piper Aircraft*, held:

The forum non conveniens determination is committed to the sound discretion of the trial court. It may be reversed only when there has been a clear abuse of discretion; where the court has considered all relevant public and private interest factors, and where its balancing of these factors is reasonable, its decision deserves substantial deference.

*Id.* at 257.

112. *Id.* at 256; *In re Richardson-Merrell, Inc.*, 545 F. Supp. 1130 (S.D. Ohio 1982), *aff'd sub nom.* Dowling v. Richardson-Merrell, Inc., 727 F.2d 608 (6th Cir. 1984). The presence of a small number of domestic plaintiffs would not vary the application of this principle. See *Nai-Chao v. Boeing Co.*, 555 F. Supp. 9, 21 (N.D. Cal. 1982), *aff'd sub nom.* Cheng v. Boeing Co., 701 F.2d 1406 (9th Cir. 1983).

113. *Piper Aircraft*, 454 U.S. at 250.

114. *Id.* at 254; *Gulf Oil Corp. v. Gilbert*, 330 U.S. 501, 506 (1947).

The existence of an alternative forum is a foundational element of the *prima facie* showing required of the moving defendant. *Gates Learjet Corp. v. Jensen*, 743 F.2d 1325 (9th Cir. 1984).

ant must, of course, be amenable to suit there.<sup>115</sup> In addition, where transfer outside the United States is sought, courts have conducted particularized inquiries into the ability of the foreign tribunal to afford adequate redress, weighing such variables as systemic procedural capacities,<sup>116</sup> the sophistication of pertinent tort laws,<sup>117</sup> the availability of juries and contingent fee arrangements,<sup>118</sup> possible non-enforcement of judgments by the courts of one or the other countries,<sup>119</sup> the existence of a cognizable cause of action not otherwise barred by law,<sup>120</sup> and the ability to implead potential third-party defendants.<sup>121</sup> Another factor which should be taken into account is the capacity of the courts to afford redress against the government of the forum.<sup>122</sup>

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115. *Piper Aircraft*, 454 U.S. at 254 n.22. This requirement is sometimes met by the defendant's offer to consent to the jurisdiction of the foreign court when it moves for dismissal on forum non conveniens grounds. See *infra* text accompanying notes 136-37.

116. *In re Union Carbide Corp. Gas Plant Disaster at Bhopal, India* in Dec. 1984, 634 F. Supp. 842, 848 (S.D.N.Y. 1986), *rev'd in part* 809 F.2d 195 (2d Cir. 1987) (dictum). In that case, the argument was raised that the United States District Court should retain the case because of the expertise of United States tribunals in dealing with complex matters arising out of mass disasters. *Id.* at 847-52.

Whether and how this "experience level" will henceforth rank remains yet to be seen. However, it is undeniable that in the current era, the United States system is rapidly approaching veteran status. See, e.g., *In re School Asbestos Litig.*, 789 F.2d 996 (3d Cir. 1986); *Michigan Chem. Corp. v. American Home Assurance Co.*, 728 F.2d 374 (6th Cir. 1984); *Allen v. United States*, 588 F. Supp. 247 (D. Utah 1984), *rev'd*, 816 F.2d 1417 (10th Cir. 1987) (radiation fallout from weapons testing programs); *Wehner v. Syntex Corp.*, 107 F.R.D. 248 (E.D. Mo. 1985); *In re Three Mile Island Litig.*, 87 F.R.D. 433 (M.D. Pa. 1980) (nuclear accident). See also Note, *Class Certification in Mass Accident Cases Under Rule 23(b)(1)*, 96 HARV. L. REV. 1143 (1983); Patrick D. McTernan, Comment, *Use of Class Actions for Mass Accident Litigation*, 23 LOY. L. REV. 383 (1977).

117. *Union Carbide*, 634 F. Supp. at 849; *In re Richardson-Merrell, Inc.*, 545 F. Supp. 1130 (S.D. Ohio 1982), *aff'd sub nom.* *Dowling v. Richardson-Merrell, Inc.*, 727 F.2d 608 (6th Cir. 1984).

118. *Union Carbide*, 634 F. Supp. at 851.

119. *Id.* at 852; *In re Union Carbide Corp. Gas Plant Disaster at Bhopal, India* in Dec. 1984, 809 F.2d 195, 202 (2d Cir. 1987).

120. *In re Richardson-Merrell, Inc.*, 545 F. Supp. at 1133.

121. *Piper Aircraft Co. v. Reyno*, 454 U.S. 235, 259 (1981); *Fitzgerald v. Texaco, Inc.*, 521 F.2d 448, 453 (2d Cir. 1975), *cert. denied*, 423 U.S. 1052 (1976); *Whyham v. Piper Aircraft Corp.*, 96 F.R.D. 557 (M.D. Pa. 1982).

See also *supra* notes 55-63 and accompanying text regarding impleader of third party defendants.

122. Thus, if a defendant were seeking third party recovery from the government of the country in which the nuclear accident occurred, the workings of sovereign immunity and independence of the courts and judiciary would be pivotal as regards the adequacy of that forum. In a suit in which one United States party claimed such a right and another did not, the latter might be the forum non conveniens movant, and the former would presumably oppose the motion.

It has been held that, notwithstanding Congressional intent to subject foreign states

Beyond the initial inquiry as to the adequacy of an alternative forum, the traditional tools of comparison in *forum non conveniens* cases are generally cast in terms of "interest" analysis, and are quite suitable to cases concerning mass injury from nuclear disaster. "Private" interests are generally those which are of aid to the parties in the litigation,<sup>123</sup> while "public interest" factors are those which concern the forum state in having, or not having, the dispute tried in its courts.<sup>124</sup> The latter highlight the court's exacting deliberative task, beneath the magnifying glass of world observance.<sup>125</sup>

Both private and public interest factors will vary according

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and instrumentalities to suit under the FSIA to the outer limits of due process, the same standards for *forum non conveniens* are to be applied as in actions against private persons. *Proyecfin de Venezuela, S.A. v. Banco Indus. de Venezuela, S.A.*, 760 F.2d 390 (2d Cir. 1985); *Gibbons v. Udaras na Gaeltachta*, 549 F. Supp. 1094 (S.D.N.Y. 1982).

However, in a circumstance such as in the first preceding paragraph, the motion should be denied if the effect would be to leave remediless the party with rights against the foreign government.

123. In the watershed opinion in the forward movement of the doctrine, the Supreme Court summarized "private interest" factors as follows: (1) access to sources of proof; (2) availability of compulsory process for the attendance of witnesses; (3) costs of obtaining attendance of witnesses; (4) the possibility of a view of the *locus delicti*, if appropriate; (5) enforceability of a judgment once obtained; (6) "all other practical problems that make trial of a case easy, expeditious, and inexpensive." *Gulf Oil Corp. v. Gilbert*, 330 U.S. 501, 508 (1947).

These factors converge with the elements considered above as to adequacy of the foreign tribunal.

124. In *Gulf Oil*, the Court identified the following "public interest" factors: (1) administrative difficulties from congested litigation; (2) jury duty being imposed upon a community with no relation to the lawsuit; (3) interest in having localized controversies decided at home; (4) conflicts of laws problems; and (5) application of foreign law. *Id.* at 508-09.

However, it is clear that the analysis is in reality quite particularized. As the Court stated in *Piper Aircraft*: "[E]ach case turns on its facts." If central emphasis were placed on any one factor, the *forum non conveniens* doctrine would lose much of the flexibility that makes it so valuable." *Piper Aircraft*, 454 U.S. at 249-50. For instance, in *In re Richardson-Merrell, Inc.*, the dispositive factor was the public interest in avoiding a spate of products liability suits in United States courts where the only connection to the United States was initial product development and testing. 545 F. Supp. at 1145.

125. There are numerous "extra-legal" reasons that may be urged in favor of allowing suit to proceed in a United States forum. These include, *inter alia*, a perceived double standard (*i.e.*, that defendants undoubtedly expect a lesser damage exposure outside the United States), the notion that, in fairness, United States companies who profit from overseas should afford injured persons the benefits of United States justice, and the damage which may occur to the United States and its businesspeople if it is felt that a different measure of care is being observed abroad with impunity from United States judicial scrutiny.

These considerations will remain unarticulated to a great extent under traditional judicial analysis; however, they will no doubt be extraordinarily influential in a case of the type being considered here.

to the gravamen of the wrong asserted against United States parties. If faulty construction or supervision in operation is allegedly involved, then private factors such as access to sources of proof and availability of witnesses point toward the place of occurrence; on the other hand, an avowedly faulty design may have its closest such connections to the United States. Or, the case might involve combinations that are not so easily differentiated. Moreover, any number of additional ingredients may be present.<sup>126</sup> In all events, a complex weighing and balancing will be demanded at a very early stage of the litigation.<sup>127</sup>

Public interest factors will be no less complex in such a case and may indeed emerge paramount.<sup>128</sup> In a nuclear accident suit in which the gravamen involves matters such as design defects, construction flaws, or errors in supervising operations, there will be a strong public interest in determining the design and operational safety of reactors of United States origin, and whether known safety standards, if observed, would avert a similar catastrophe at home. That interest militates toward having these questions determined in the forum best capable of adjudicating mass claims, in which the expertise of scientific, public interest, and regulatory groups is most readily available. The information that is revealed during a trial might have an important bearing

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126. For example, if a defendant against whom substantial liability is asserted has most of its assets within the United States, and there is significant doubt as to whether a judgment in a foreign court will meet United States standards for enforcement, a forum outside the United States would obviously be less suitable.

In addition, the amenability of necessary defendants, both private and governmental, to suit in one forum or another, and the substantive law of immunity, may influence the positions taken on the subject of forum non conveniens by any or all parties.

See *supra* note 115 and accompanying text.

127. Note that a substantial amount of discovery may be required before it is possible to determine the court in which the matter is to proceed.

128. An overriding motif is that the level of governmental involvement, in the United States and elsewhere, in the production and utilization of nuclear energy is higher than in any other industrial activity. This fits the idea that public sector participation is called for in any field in which the potential for massive injury is present. Witness the testimony of the Chairman of Union Carbide, Warren Anderson, before Congress in the wake of Bhopal:

I think Bhopal has changed the world, never mind the United States or an industry. Whatever your position was with regard to fail-safe catastrophic . . . control or whatever it might be, all of this has to be reevaluated, not only from the standpoint of the industry and the industry associations, but from the government itself.

*Hazardous Air Pollutants: Hearings Before the Subcomm. on Health and Env't of the House Comm. on Energy and Commerce*, 98th Cong., 2d Sess. 34 (1984).

The same could certainly be said of a nuclear disaster.



on the development of domestic laws and standards regarding nuclear power, and indeed the future of the industry.<sup>129</sup> At the same time, the interest of the nation, or nations, in which damage and injury were suffered in having victims adequately compensated<sup>130</sup> is as compelling, in that whatever is left undone must be accomplished by an already shock-ridden and overburdened public sector.<sup>131</sup> Thus the dividing line between public and private interests is blurred in the nuclear accident lawsuit setting. The foregoing considerations must be carefully drawn and applied by a party in determining whether to seek dismissal and transfer to a foreign forum, and by the court in resolving this potentially critical issue.<sup>132</sup>

United States courts that have granted dismissal on the basis of *forum non conveniens* have imposed conditions on such grant to help insure the adequacy of the overseas forum to afford relief to plaintiffs.<sup>133</sup> Although the conditions may be of more than one variety,<sup>134</sup> the most common is agreement by the moving defendant to submit to the jurisdiction of the foreign court.<sup>135</sup> Thus plaintiffs may achieve a significant advantage by

129. Of course, at this writing no new nuclear plants are being built in the United States, but there are 111 operational facilities in the United States. *See supra* notes 3, 4. New ones may be built as the gap widens between energy needs and alternate available sources, especially in light of global warming. *See supra* note 3.

130. This public interest is well recognized in United States jurisprudence. *See McGee v. International Life Ins. Co.*, 355 U.S. 220, 223 (1957); *Fiacco v. United Technologies Corp.*, 524 F. Supp. 858, 861 (S.D.N.Y. 1981).

131. This is in addition to the safety-related public interests outlined above in regard to the United States.

132. In the wake of the Bhopal tragedy, the United States defendant was successful in having the suit transferred to Indian courts. *See discussion of Union Carbide case, supra* note 110. This strategic decision and the court's analysis, are understandable, but different considerations regarding bases of liability and the desire to implead additional parties might well lead to a different approach by the defendant.

In Louise Weinberg, *Insights and Ironies: The American Bhopal Cases*, 20 TEX. INT'L L.J. 307, 313-16 (1985), the author argues that although United States courts have become increasingly inhospitable to foreign claimants, both public and private interests support maintaining actions arising out of mass disasters involving United States defendants in United States courts.

133. *Piper Aircraft Co. v. Reyno*, 454 U.S. 235, 256 (1981).

134. One example is the defendant's agreement to produce certain records in the foreign court. *Ali v. Offshore Co.*, 753 F.2d 1327 (5th Cir. 1985).

In *In re Disaster at Riyadh Airport*, 540 F. Supp. 1141 (D.D.C. 1982), a case involving foreign plaintiffs against an American manufacturer and others, defendants agreed, *inter alia*, to concede liability, waive any limitations defense, waive any limitation of liability under treaties relating to civilian aviation, guarantee payment of judgment, and thereby obtain a dismissal "without prejudice" in favor of a Saudi Arabian court.

135. *See, e.g., Bailey v. Dolphin Int'l Inc.*, 697 F.2d 1268 (5th Cir. 1983);

commencing a suit in the United States, since personal jurisdiction over a defendant may be guaranteed (and other concessions exacted as well) even if the matter is left ultimately to a foreign court. However, conditions to forum non conveniens dismissal must be limited in fairness to the parties litigant.<sup>136</sup> In a case such as a multi-party transnational nuclear disaster suit, a United States court may be called upon to exercise considerable creativity in crafting such conditions to justly maximize judicial economy and efficiency, and avoid multiple actions and conflicting adjudicative results. Thus, moving parties, including those impleaded, should be required to forego objections to jurisdiction in the foreign court. A foreign<sup>137</sup> governmental entity or instrumentality urging forum non conveniens dismissal ought to be willing to waive immunity in the alternative forum, as should any private defendant that might derivatively enjoy such immunity.<sup>138</sup> It may also be suitable to require consent to discovery or production of certain evidence, procedural concessions, agreement to the application of substantive laws, or a combination of these. Additionally, although it would appear to be improper to condition dismissal upon a blanket agreement to honor any judgment rendered,<sup>139</sup> the court might exercise its discretion to require a defendant to not resist enforcement of an award on specified grounds,<sup>140</sup> including: the fact that a foreign govern-

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Schertenleib v. Traum, 589 F.2d 1156 (2d Cir. 1978).

136. In *Union Carbide*, the United States District Court conditioned dismissal upon: (1) the defendant's agreement to submit to the jurisdiction of the Indian court and waiver of defenses based upon limitations; (2) defendant's agreement to satisfy a judgment rendered against it so long as minimum due process requirements were met; (3) defendant's being subject to discovery under the Federal Rules of Civil Procedure. *In re Union Carbide Corp. Gas Plant Disaster at Bhopal, India* in Dec. 1984, 634 F. Supp. 842, 867 (S.D.N.Y. 1986) *rev'd in part* 809 F.2d 195 (2d Cir.), *cert. denied*, Executive Committee Members v. Union of India, 484 U.S. 871 (1987).

On appeal, however, the Court of Appeals reversed as to the latter two conditions, on the basis that (2) above was misleading and less useful than existing laws regarding enforcement of foreign judgments, and (3) would place the defendant in an unequal position regarding its duty to comply with discovery. *In re Union Carbide Corp. Gas Plant Disaster*, 809 F.2d 195, 203-04 (2d Cir. 1987).

137. The United States Government, if a defendant, is unlikely to urge transfer of the action to a court system beyond its borders, or to submit to the jurisdiction of any such tribunal. *See supra* notes 73-79 and accompanying text. If liability is asserted against the United States, a transfer outside the United States would inevitably mean at least one additional suit.

138. *See infra* notes 313-19 and accompanying text.

139. *See supra* note 136 and accompanying text.

140. Because such a situation will most likely come into play when enforcement of a judgment is attempted in the United States, many of these grounds are taken from the

ment is among the plaintiffs in its own courts;<sup>141</sup> the alleged failure to join indispensable parties;<sup>142</sup> asserted repugnancy of a cause of action to public policy; procedures claimed to be inadequate or prejudicial;<sup>143</sup> and protestations otherwise inconsistent with a forum non conveniens motion.<sup>144</sup>

### 3. Forum Selection in Agreements

In the course of arranging for participation by a United States company in the building of a nuclear facility in a foreign country, the parties may have included in their agreement a clause stipulating to confer jurisdiction on a given court.<sup>145</sup> Such clauses have come to be regarded favorably by United States<sup>146</sup>

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UNIF. FOREIGN COUNTRY MONEY JUDGMENTS RECOGNITION ACT, 13 U.L.A. 263 (1962) in force in numerous states. *See, e.g.*, N.Y. CIV. PRAC. L. & R. §§ 5301-5309 (McKinney 1978), and are exemplary of the grounds that are often recognized.

141. As in *Union Carbide*, in which the defendant was undeterred by that fact from seeking forum non conveniens transfer. *In re Union Carbide Corp. Gas Plant Disaster at Bhopal, India* in Dec., 1984, 634 F. Supp. 842 (S.D.N.Y. 1986), *rev'd in part*, 809 F.2d 195 (2d Cir. 1987).

142. Such indispensable parties would, presumably, be beyond reach in the foreign forum. *See also infra* notes 329-37 and accompanying text regarding compulsory joinder in United States courts.

143. An example of this might be a "representative suit" by the government on behalf of its citizens, which is not recognized in United States practice. *See supra* note 45 and accompanying text.

144. These would include inconvenience or inadequacy of legal process in the foreign forum and the like. Agreements concerning choice of forum might also be taken into account. *See infra* note 151 and accompanying text.

145. Such a forum selection clause may even prorogate jurisdiction in favor of a court otherwise unconnected with the transaction concerned, as was the case in the leading Supreme Court decision, *The Bremen v. Zapata Off-Shore Co.*, 407 U.S. 1 (1972). In such an instance, the forum selection clause would be the sole jurisdictional ground.

It is well established that contractual clauses may also bind the parties to arbitral tribunals in the event of dispute. *Scherk v. Alberto-Culver Co.*, 417 U.S. 506 (1974). The same considerations would apply as to a forum selection clause.

146. *The Bremen*, 407 U.S. at 12. Although *The Bremen* was an admiralty case, forum selection clauses have come to be applied in a wide variety of cases. *See In re Firemen's Fund Ins. Co.*, 588 F.2d 93 (5th Cir. 1979); *see also* RESTATEMENT (SECOND) OF CONFLICT OF LAWS § 80 (1971); RESTATEMENT (THIRD) OF THE FOREIGN RELATIONS LAW OF THE UNITED STATES § 482 cmt. 5 (1987); James T. Gilbert, *Choice of Forum Clauses in International and Interstate Contracts*, 65 Ky. L.J. 1 (1977).

*Cf.* N.Y. GEN. OBLIG. LAW §§ 5-1401 to 5-1402 (McKinney 1984); Model Choice of Forum Act (adopted in a few states), *reprinted in* 17 AM. J. COMP. L. 292 (1969).

The effect to be given forum selection clauses is a matter for the discretion of the court. *Polar Shipping Ltd. v. Oriental Shipping Corp.*, 680 F.2d 627 (9th Cir. 1982) (involving the laws of the United States and Great Britain); *Hospah Coal Co. v. Chaco Energy Co.*, 673 F.2d 1161 (10th Cir. 1982).

It seems that an interest analysis will be required to determine whether the enforceability of such clauses will be determined according to the law of the forum (*i.e.*, United

and foreign<sup>147</sup> courts and authorities, usually in the context of commercial disputes. They will not, however, be given effect if there exists a compelling reason to refuse to do so.<sup>148</sup> In the setting of a lawsuit following a transnational nuclear disaster, there will be many different kinds and classes of parties seeking redress, few of whom will have been parties to forum selection clauses; accordingly, their rights will in no way be affected.<sup>149</sup> Thus, the clauses may possibly be invoked if there is a dispute involving the exercise of jurisdiction over third party suppliers or actors sought to be impleaded,<sup>150</sup> or as an additional factor to be weighed, in making a forum non conveniens determination.<sup>151</sup> However, at the same time, where resolution of third party

States federal law in United States courts) or the applicable law, where different. *See* Farmland Indus. v. Frazier-Parrot Commodities, 806 F.2d 848 (8th Cir. 1986); General Eng'g Corp. v. Martin Marietta Alumina, Inc., 783 F.2d 352 (3d Cir. 1986); AVC Nederland v. Atrium Inv. Partnership, 740 F.2d 148 (2d Cir. 1984).

147. *See generally* DETLEV F. VAGTS, TRANSNATIONAL BUSINESS PROBLEMS 189-91 (1986).

148. *See The Bremen*, 407 U.S. at 12, 15 (fraud or overreaching, or other effective deprivation of day in court); *id.* at 15 (unreasonable or against strong public policy); Rockwell Int'l Sys. v. Citibank, N.A., 719 F.2d 583 (2d Cir. 1983) (effective alternate forum unavailable in Iranian courts); Pelleport Investors, Inc. v. Budco Quality Theatres, 741 F.2d 273 (9th Cir. 1984); Union Ins. Soc'y of Canton, Ltd. v. S.S. Elikon, 642 F.2d 721 (4th Cir. 1981) (contract of adhesion).

149. *See* Republic Int'l Corp. v. Amco Eng'rs., Inc., 516 F.2d 161 (9th Cir. 1975); Volkswagenwerk, A.G. v. Klippan, GmbH, 611 P.2d 498 (Alaska 1980).

150. Forum selection clauses have been enforced in the context of complaints for liability. *See* Gordonsville Indus. v. American Artos Corp., 549 F. Supp. 200 (W.D. Va. 1982); Staco Energy Prods. Co. v. Driver-Harris Co., 509 F. Supp. 1226 (S.D. Ohio 1981); Roach v. Hapag-Lloyd, 358 F. Supp. 481 (N.D. Cal. 1973) (subject to reasonableness); Pascalides v. Irwin Yacht Sales N., Inc., 118 F.R.D. 298 (D.R.I. 1988). This has been so even where the defendant would have difficulty getting jurisdiction over a foreign defendant in the alternate forum, or the third-party defendant would be forced to litigate in multiple fora. *Ronar, Inc. v. Wallace*, 649 F. Supp. 310 (S.D.N.Y. 1986); *Clinton v. Janger*, 583 F. Supp. 284 (N.D. Ill. 1984). *But see* *Gates Learjet Corp. v. Jensen*, 743 F.2d 1325 (10th Cir. 1984) (holding that a clause was not applicable to all disputes which might arise, even between the contracting parties).

*See also supra* notes 55-63 regarding impleader of third parties.

151. Forum selection clauses will probably be given effect only as to parties to agreements or closely related persons and entities; accordingly, this use has an obvious overlap with that discussed in the preceding note and accompanying text.

Such clauses have often been considered together with forum non conveniens principles generally. *See, e.g.,* Carbon Black Export Inc. v. The S.S. *Monrosa*, 254 F.2d 297 (5th Cir. 1958), *cert. dismissed sub nom., The Monrosa v. Carbon Black Export, Inc.*, 359 U.S. 180 (1959) (the case whose view of forum selection clauses was rejected later in *The Bremen*); *Diatronics, Inc. v. Elbit Computers, Ltd.*, 649 F. Supp. 122 (S.D.N.Y. 1986); *Clinton v. Janger*, 583 F. Supp. 284 (N.D. Ill. 1984).

*See also supra* notes 109-44 and accompanying text regarding forum non conveniens generally.

claims by United States defendants would be facilitated, and the interests of justice and economy served, a court should decline to enforce a clause that would arbitrarily remove a portion of claims in a nuclear accident suit to a distant forum and require duplicative and conflicting proceedings.

#### 4. Suits and Judgments in Multiple Fora

There is no international regimen that operates to require consolidation of nuclear third party liability suits into a single forum.<sup>152</sup> Even if an incident occurred in a country whose laws restrict suit to a single forum,<sup>153</sup> if responsibility is asserted against a United States concern, multiple suits would be likely.<sup>154</sup> Therefore, in the wake of a massive nuclear accident having international implications in which one or more United States entities are sought to be held liable,<sup>155</sup> suits may be commenced concurrently in courts both within and outside the United States.<sup>156</sup> Quite apart from the burdens associated with

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152. Although there are some treaties that would limit the commencement of litigation to a specified location, they are, for reasons of limited reach or limited applicability, or both, not pertinent to occurrences in many parts of the world. The United States is not party to any of these treaties. See *infra* notes 174-81 and accompanying text.

153. See *infra* notes 169-81, 234-37 and accompanying text regarding multinational conventions and national law systems which implement or reflect them.

154. An example would be if liability were based upon negligent facility construction or design. In such case, suit might be commenced properly in the courts of the country of occurrence. See *infra* notes 288-91. However, as discussed *supra* notes 126-29 and accompanying text, some or all plaintiffs could also bring actions in the United States under United States law, on the theory that a wrongful act occurred here. The application of United States law would mean that no restriction of forum to the country of occurrence would be effective anyway. See *infra* notes 174-76 and accompanying text. This problem was recognized early on in HARVARD STUDY, *supra* note 98, at 11, and cannot be forestalled without a worldwide liability system.

155. See *supra* notes 7-31 and accompanying text.

156. Various courts might assert jurisdiction, based on the domicile of the defendant, the commission of a tortious act within the forum, the place for performance where a contractual claim is involved, nationality, or perhaps even service of summons within the jurisdiction. See generally ROBERT A. LEFLAR ET AL., AMERICAN CONFLICTS LAW § 3 (4th ed. 1986) [hereinafter LEFLAR]; ALBERT A. EHRENWEIG & ERIK JAYME, PRIVATE INTERNATIONAL LAW §§ 163, 179 (1973); ARTHUR NUSSBAUM, *supra* note 35, § 20; P.M. NORTH & J.J. FAWCETT, CHESHIRE & NORTH'S PRIVATE INTERNATIONAL LAW 183-91 (11th ed. 1987). The extent to which international judgment enforcement standards are met will obviously vary with the basis for jurisdiction.

It is also important to note that multiples of the foregoing may be involved, as, for example, where damage is caused in more than one country, or persons responsible for the design, construction, and operation of the facility have different places of residence, or some claims are based upon contract and others in tort. See *supra* notes 7-31, 55-57, 81 and accompanying text.

defending in several separate actions,<sup>157</sup> it is all but certain that the end result would be conflicting adjudications<sup>158</sup> and multiple judgment awards.<sup>159</sup>

There are two means whereby problems of multiple suits and judgments may be met. The first is a rule of "international *lis pendens*,"<sup>160</sup> whereby a United States court might dismiss a suit if there is another suit pending in another jurisdiction concerning the same subject matter.<sup>161</sup> Before doing so, the court

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An interesting special problem would arise if a French plaintiff or defendant were involved. According to Article 15, French Civil Code, a French national has the prerogative to be sued in France, and under Article 14 to sue anyone in a French court, regardless of the cause of action. C. civ. art. 15 (Fr.); C. civ. art. 14 (Fr.). And this "exorbitant" jurisdiction is by no means limited to France. British courts have jurisdiction over jointly liable defendants who would not otherwise be reachable if sued alone, as in an action for a tort committed abroad, and service of summons outside the jurisdiction is allowed under Order 11.1(1)(c) of the United Kingdom *Rules of the Supreme Court*. See PETER KAYE, CIVIL JURISDICTION AND ENFORCEMENT OF FOREIGN JURISDICTION 636, 1233 (1987).

157. See *supra* notes 154-56 and accompanying text and *infra* notes 158-59 and accompanying text.

158. The basic principles of common law *res judicata* are the same whether judgment is rendered in the United States or a foreign court, so long as the court is part of an actually functioning government observing civilized norms. LEFLAR, *supra* note 156, § 84. As a matter of international comity, United States courts owe deference to the decisions of foreign courts, so long as they have competent jurisdiction, and the laws and policy of the United States and the rights of its citizens are not being violated. See *Clarkson Co. Ltd. v. Shaheen*, 544 F.2d 624, 629-30 (2d Cir. 1976); RESTATEMENT (SECOND) OF CONFLICT OF LAWS § 98 cmt. c (1971).

*Res judicata* may prevent the raising of issues not litigated in the foreign court, where a proceeding has been stayed during its pendency by a United States court. See *Ingersoll Milling Mach. Co. v. Granger*, 833 F.2d 680, 685-86 (7th Cir. 1987).

159. For example, plaintiffs in separate countries' courts may not understand the notion that they must be turned away from asserting their claims because other plaintiffs have obtained and enforced another judgment and there can be no "multiple recovery." A court may be loath, or at least at a loss, to apply the principle when recognition and enforcement of a judgment is sought.

Moreover, if judgment awards are inconsistent, as they may well be given the complexities and uncertainties inherent in the subject, such inconsistency raises a number of questions regarding which is to be enforced and to what extent.

See also *infra* notes 415-30 and accompanying text regarding enforcement of foreign judgments in the United States.

160. The use of international *lis pendens* has recently been urged, following a series of suits in which seven judgments were rendered, four in the United States and three in Japan, arising out of a single relatively simple set of occurrences. See Sawaki, *Battle of Lawsuits: Lis Pendens in International Relations*, 23 JAPANESE ANN. INT'L L. 17 (1979-80).

161. Courts in the United States have inherent discretionary power to stay or dismiss actions pending resolution of suits in foreign tribunals concerning the same subject matter. *Landis v. North Am. Co.*, 299 U.S. 248, 254 (1936); *Ingersoll Milling Mach. Co. v. Granger*, 833 F.2d 680 (7th Cir. 1987); *Hunt v. Liberty Lobby, Inc.*, 707 F.2d 1493, 1498 (D.C. Cir. 1983). The factors bearing on the propriety of doing so include a United States interest in determining the matter in a United States court, judicial efficiency, fairness

should ascertain whether jurisdictional and other requisites for judgment enforcement in the United States are met.<sup>162</sup> Additionally, such dismissal should not be taken too easily in a suit involving a great number of parties, complex issues, and enormous losses and liabilities.<sup>163</sup> Nevertheless, when the alternatives are considered, the concept may be a way to avoid the worst of the dilemmas presented.<sup>164</sup>

The second means to address problems of multiple suits and judgments is more narrow in application, but may be quite useful where it can be brought to bear. If the accident occurs in a

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and prejudice, and international cooperation. See *Ingersoll Milling Mach.*, 833 F.2d at 685-86; *I.J.A., Inc. v. Marine Holdings, Ltd.*, 524 F. Supp. 197, 198 (E.D. Pa. 1981); *Cornfeld v. Investors Overseas Servs., Ltd.*, 471 F. Supp. 1255, 1262 (S.D.N.Y. 1979). Considerations of international comity also play an important role. See *Cunard Steamship Co. Ltd. v. Salen Reefer Servs. A.B.*, 773 F.2d 452, 456-60 (2d Cir. 1985); *Cornfeld*, 471 F. Supp. at 1262; *Ronar, Inc. v. Michael Wallace*, 649 F. Supp. 310, 318-19 (S.D.N.Y. 1986).

Whether to apply the principle is a matter of United States federal law in a United States court. *Ingersoll Milling Mach.*, 833 F.2d at 697; *Faherty v. Fender*, 572 F. Supp. 142, 144 (S.D.N.Y. 1983).

There is some reference to "concurrent jurisdiction" between the United States and a foreign tribunal, as in *Laker Airways v. Sabena, Belgian World Airlines*, 731 F.2d 909, 926 (D.C. Cir. 1984) (dictum). This "concurrent jurisdiction" is limited in that a dismissal or stay in favor of a pending foreign action is without prejudice, may be conditional, and will not prevent a court from hearing the case if certain conditions are not met. See *Ingersoll Milling Mach.*, 833 F.2d at 685; *Koke v. Phillips Petroleum Co.*, 730 F.2d 211, 218-20 (5th Cir. 1984).

162. Otherwise, there really would be no conflict of judgments insofar as the United States is concerned, and it would only be just to allow plaintiffs to proceed to obtain an award which can be enforced in this country. See *Ingersoll Milling Mach.*, 833 F.2d at 691-92.

163. Merely to dismiss in favor of another court that has the power to render a judgment which would be recognized in the United States would not address the issues of personal jurisdiction, ability to implead third parties, and possible immunity which would face United States defendants. In addition, such a dismissal would not resolve the private or public interests involved in determining whether the suit should be heard in the United States. See *supra* notes 126-32 and accompanying text. In *Landis*, 299 U.S. at 255, the Court stated: "Only in rare circumstances will a litigant in one cause be compelled to stand aside while a litigant in another settles the rule of law that will define the rights of both." The pendency of an action in another court, and the ability of the court to resolve as many outstanding ingredients of controversy as possible, would be another factor the court may wish to consider in connection with a *forum non conveniens* motion. See *supra* notes 109-22 and accompanying text.

164. It has also been held that United States courts have the power to enjoin parties from pursuing litigation elsewhere, so long as the threshold requirements, that the same parties be involved and the United States lawsuit will be dispositive of the matter, are met. *Laker Airways*, 731 F.2d at 927; *Seattle Totems Hockey Club Inc. v. National Hockey League*, 652 F.2d 852, 856 (9th Cir. 1981), *cert. denied*, 457 U.S. 1105 (1982). These requirements are sufficiently stringent to restrict this device to an extremely limited sphere of applicability.

nation possessing a liability system restricting suits to a single forum,<sup>165</sup> a United States court could simply utilize choice of law principles to avoid the difficulties presented.<sup>166</sup> Under this approach, even if the operative event were alleged to occur in the United States, the court might determine that the law of the country of occurrence ought to apply; thereunder, suit could only be commenced in its courts. As will be discussed herein,<sup>167</sup> this may be done consistently with the principled application of choice of law tenets.<sup>168</sup>

### C. *Applicable Law*

As preceding passages have repeated, there is no integrated legal regimen that will govern international liability for a massive nuclear accident abroad in which United States persons or entities are defendants. Choosing the correct law to adjust the rights of the parties will be a crucial ingredient of the process.

#### 1. International Liability Systems

In recognition of the anticipated strains upon the private international law system were it ever applied to a multinational nuclear disaster, systematic and worthy efforts were made to deal with the third party liability problem during the era of the upstart of "atomic" energy.<sup>169</sup> These endeavors took the form of carefully-drawn multilateral treaties that attempted to confront the most serious issues perceived present.<sup>170</sup> The legal structures

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165. See *infra* notes 234-37 and accompanying text regarding such systems.

166. See *infra* notes 210-30 and accompanying text regarding the various considerations applicable to choice of law.

167. See *infra* notes 210-30 and accompanying text regarding the various considerations applicable to choice of law.

168. If foreign law is applied, however, the ability to assert liability against the United States Government would be seriously in doubt. See *infra* notes 266-67 and accompanying text.

169. There were two groups assuming parallel responsibilities in the area of international nuclear energy development: The Nuclear Energy Agency of the Organization for Economic Cooperation and Development (OECD/NEA), consisting mostly of industrialized nations in Europe, and the International Atomic Energy Agency (IAEA), established through sub-organs of the United Nations that sought to serve the needs of developing countries.

Although no single comprehensive analytic study has apparently been published, overview and general information can be obtained from the following sources: OECD/NEA, *NUCLEAR LEGISLATIONS: THIRD PARTY LIABILITY* (1990); IAEA, *INTERNATIONAL CONVENTIONS ON CIVIL LIABILITY FOR NUCLEAR DAMAGE* (1976).

170. The treaties of general application are: The Paris Convention on Third Party



established thereby have certain essential characteristics in common,<sup>171</sup> and when given effect by national implementing legislation<sup>172</sup> might represent very useful steps toward resolving the bulk of the issues raised herein: for a number of reasons they unfortunately do not.

Principal among the explanations why the international treaty regimens will not resolve the difficulties<sup>173</sup> is the simple

Liability in the Field of Nuclear Energy, July 29, 1960, 956 U.N.T.S. 251 (as amended by 1964 Protocol), (entered into force Apr. 1, 1968), *reprinted in* 55 AM. J. INT'L L. 1082 (1961) [hereinafter Paris Convention], *amended by* the Brussels Supplementary Convention, Jan. 31, 1963, 1041 U.N.T.S. 358 (as amended by 1964 Protocol) (entered into force Dec. 4, 1974) [hereinafter Brussels 1963 Convention]; and the Vienna Convention on Civil Liability for Nuclear Damage, May 21, 1963, 1063 U.N.T.S. 265 (entered into force Nov. 12, 1977), *reprinted in* 2 I.L.M. 727 (1963) [hereinafter Vienna Convention].

There are also several international agreements of particularized application concerning liability to third parties, such as the Brussels Convention on Liability of Operators of Nuclear Ships, May 25, 1962, *reprinted in* 57 AM. J. INT'L L. 268 (1963) [hereinafter Brussels 1962 Convention]; the Brussels Convention Relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material, Dec. 17, 1971, *reprinted in* 6 BENEDICT ON ADMIRALTY Doc. No. 1-5 (7th ed. 1990) (entered into force July 15, 1975) [hereinafter Brussels 1971 Convention]; and two recent pacts drawn in the wake of the Chernobyl accident — the Vienna Convention on Early Notification of Nuclear Accident, Sept. 26, 1986, and the Vienna Convention on Assistance in Case of Nuclear Accident or Radiological Emergency, Sept. 26, 1986, IAEA Doc. GC (SPL.1)/2, Annex III (entered into force Feb. 26, 1987), *reprinted in* 25 I.L.M. 1377 (1986). *See generally* IAEA, *International Treaties Relating to Nuclear Controls and Disarmament* (1975); and OECD, NUCLEAR LAW BULL., which began publication in 1967 and is printed quarterly.

In addition, there are numerous bilateral agreements between various nations (usually OECD members) providing for mutual assistance and adjustment of rights and liabilities, and, of course, the large number of agreements relating to the non-proliferation of nuclear weapons and materials.

171. Basically, all liability is "channeled" to a single entity, called the "operator," who is required to maintain a certain level of financial security. The operator is strictly liable, with virtually no defenses; however, such liability is limited both as to time and amount. A single court, normally located in the jurisdiction where the incident causing damage occurred, is competent to hear and adjudicate all claims, with obligatory enforcement of its judgment. As regards those who might be liable over to the operator, called "suppliers," the operator has recourse against them only for willful acts or omissions, or to the extent expressly so provided by contract.

172. The nations that are parties to the Paris Convention and the Vienna Convention have adopted various laws to implement the treaties, and in some instances provide liability coverage greater in amount or broader in scope than the terms of the agreements would require. An example is the statute of the Federal Republic of Germany, Act on the Peaceful Uses of Atomic Energy and Protection against its Hazards (Atomic Energy Act) *as amended* Aug. 1, 1985, BGBI. I, 781, *reprinted in* 36 NUCLEAR L. BULL. 3 (Supp. 1985) [hereinafter Act on Peaceful Uses of Atomic Energy].

There may well be increased pressure toward uniformity of implementing legislation among parties to the Paris Convention following economic unification of the European Economic Community beginning in 1992.

173. There are particulars which might be developed regarding lacunae and inconsistencies in coverage of the treaties and laws under discussion. But it is again unneces-

fact that they are nowhere near universal, or even widespread, in application.<sup>174</sup> The number of nations that are parties and have such laws is a fraction of the number of those nations possessing and operating nuclear facilities,<sup>175</sup> and does not include the United States.<sup>176</sup> Moreover, the treaties, while not identically so,<sup>177</sup> are both territorial and reciprocal in application,<sup>178</sup> as are the respective national laws.<sup>179</sup> In addition, the treaties and laws exclude from coverage the important subject of damage to the nuclear facility itself,<sup>180</sup> as well as incidents arising from hostile

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sary for the purpose of this writing to go beyond the broad overview. A useful beginning critical discussion, however, is found in Pelzer, *supra* note 98, at 66; see also *Symposium on Nuclear Third Party Liability*, 34 NUCLEAR L. BULL. 34 (1984).

174. Although these treaties are indisputably impressive in intellectual achievement and praiseworthy in effort, it can readily be seen that the treaties will only be truly effective if applicable everywhere, or nearly everywhere, on a largely unconditional basis. Thus, for example, because the former U.S.S.R. is not a party, claims arising from Chernobyl must be asserted under private law, and would be subject to all the vagaries of litigation, not the least of which is the dubious enforceability of a judgment rendered in a court outside the Soviet Union. See 38 NUCLEAR L. BULL. 21 (1986); see also Pelzer, *supra* note 98, at 66.

175. Fourteen nations (all European, plus Turkey) are party to the Paris Convention, and ten to the Brussels Supplementary Convention, which amended the Paris Convention.

There are ten parties to the Vienna Convention, the most recent of which, Peru, ratified it in 1980. Although Argentina, an important nuclear power, is among them, the remaining nations have either no facilities or nascent programs of nuclear energy development. See *supra* note 170.

There are a handful of nations who have signed one or the other of the Conventions without ratification (including some original parties), and two, Spain and the United Kingdom, who have ratified the Paris Convention but also signed the Vienna.

176. Ironically, the United States (and the former U.S.S.R., also not a party) played important roles in the development of the Vienna Convention. See Edward J. Cavers, *Nuclear Energy, Tort Liability and Financial Protection*, in NUCLEAR ENERGY, PUBLIC POLICY AND THE LAW 72 (Bloustein ed., 1964).

The United States, as an associate member of the OECD, also participated in the initial drafting of the Paris Convention. HARVARD STUDY, *supra* note 98, at 81.

177. The Vienna Convention, unlike the Paris Convention, contains no comprehensive statement on the question or issue of its territorial scope.

178. Not only does this stand to reason, but the explicit terms of the Paris Convention, *supra* note 170, expressly so provide.

179. Here again there are variations among the member states' legislation. Germany appears to stand alone in covering damages outside the territory of a contracting state on other than a fully reciprocal basis. Act on Peaceful Uses of Atomic Energy, *supra* note 172, at 25, 32.

180. This "site damage," while perhaps a less dramatic harm than that to innocent third parties, will be at least an equally substantial ingredient in the litigation following a nuclear accident. Indeed, insurance coverage being maintained with respect to it far exceeds the limitations on liability under national laws for injury to third persons. NRC/DOE Reports to Congress on Price-Anderson Act Provisions of the Atomic Energy Act, 33 NUCLEAR L. BULL. 21 (1984) [hereinafter NRC/DOE Reports].

acts or *force majeure*.<sup>181</sup>

The United States, like some other nations not party to the multilateral treaties,<sup>182</sup> has its own legislative scheme governing third party liability for nuclear accident damages — The Price-Anderson Act (Price-Anderson).<sup>183</sup> In general, it provides for an overall comprehensive indemnification and liability system, designed to adjust the tension between the desire for development of a nuclear industry and the need to insure availability of sufficient resources to compensate injured persons in the event of a nuclear power accident.<sup>184</sup> Thereunder, operators of nuclear

181. These exclusions appear to be holdovers from traditional fault-based notions of liability, and are not consistent with the logic of victim compensation or procedural simplification; indeed, they are only facially congruent with the notion of liability allocation. These problems also suggest the need for additional efforts to improve the international liability system.

Of course, it might be argued that no United States concern would be liable in events such as these. However, this too facile response glosses over issues of foreseeability and causation; see *infra* notes 339-80 and accompanying text.

182. An example is Japan, a quite significant user of nuclear energy whose movement in the field is outstripping that of the United States. Since 1978, while orders for 65 plants were cancelled in the United States, 23 reactors have been started there; Japan also outspends the United States by five times on research and development for advanced reactors, and is said to be building a lead in construction and operating techniques. See Matthew L. Wald, *Japan Now Ahead in Nuclear Power, Too*, N.Y. TIMES, Feb. 27, 1990, at D1.

Japan has national liability legislation similar to that of the United States. See the explanation of Japanese law contained in 9 NUCLEAR L. BULL. 2 (Supp. 1972).

183. Atomic Energy Act of 1954, Pub. L. No. 85-256, 71 Stat. 576 (codified as amended at 42 U.S.C. §§ 2011-2284 (1988 & Supp. I 1989)).

Price-Anderson's arrangement makes for a baffling initial reading, due no doubt to its desultory history. It would therefore be useful to consult one or more of the writings that synthesize the Act in order to gain an overview. They include NRC/DOE Reports, *supra* note 180; Marc R. Staenberg, *Financial and Legal Implications of the Three Mile Island Accident*, 24 NUCLEAR L. BULL. 65, 65-67 (1980); John V. Buffington, *The Price-Anderson Act: Underwriting the Ultimate Tort*, 87 DICK. L. REV. 679 (1983); John F. McNett, *Nuclear Indemnity for Government Contractors Under the Price-Anderson Act*, 14 PUB. CONT. L.J. 40 (1983); Vincent F. Chiappetta, *United States Nuclear Energy Policy After Pacific Gas and Silkwood*, 1985 ARIZ. ST. L.J. 79, 80-85; David M. Rocchio, Note, *The Price-Anderson Act: Allocation of the Extraordinary Risk of Nuclear Generated Electricity: A Model Punitive Damage Provision*, 14 B.C. ENVTL. AFF. L. REV. 521 (1987).

Also useful are discussions in *Duke Power Co. v. Carolina Env'tl. Study Group*, 438 U.S. 59 (1978); *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238 (1984); and *In re Three Mile Island Litig.*, 605 F. Supp. 778 (M.D. Pa. 1985).

184. The constitutionality of the limitation of liability was upheld in *Duke Power*, 438 U.S. at 83. Therein, the Court summarized the motivation behind Price-Anderson: "As we read the Act and its legislative history, it is clear that Congress' purpose was to remove the economic impediments in order to stimulate the private development of electric energy by nuclear power while simultaneously providing the public compensation in the event of a catastrophic nuclear incident." *Id.* Both of these purposes may be ques-

facilities are required to maintain "financial protection" for potential injured third parties,<sup>185</sup> beyond which the government is authorized to indemnify those operators from further exposure.<sup>186</sup> The foregoing measures apply to a "nuclear incident," which is rather broadly defined to include any happening leading to injury.<sup>187</sup> In deference to our federal system, state law remedies are to be utilized,<sup>188</sup> except in the event of an "extraordinary nuclear occurrence," which would include most catastrophic mishaps;<sup>189</sup> in such an event, the application of state law is substantially modified in an effort to achieve some uniformity of treatment for injured plaintiffs.<sup>190</sup> Under Price-Anderson, the liability of an operator is limited to a set sum or the

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tioned on different levels. Many have contended that the nuclear industry should not be subsidized. Others have argued that it should be discouraged, or entirely dismantled. It has also been argued that the amounts of liability limitation contemplated by Price-Anderson are inadequate. *See supra* notes 10-13 and accompanying text and *infra* note 191; *see also* summary of contentions of opposing groups in *NRC/DOE Reports, supra* note 180, at 421.

185. 42 U.S.C. § 2210(a), (b) (1988). This may take the form of self-insurance, with appropriate guaranty, or private insurance. The original minimum required was \$60 million, but much greater amounts are now actually commercially available.

In addition, by a 1966 amendment, a secondary layer of "retrospective premium" insurance of up to \$5 million was authorized to be required of an operator. *Id.* at § 2210(b). This amount is secured by pledge or surety, is payable by each and every nuclear operator upon demand in the event of an accident, and is in its way a revolutionary development in tort, in that it assesses damages for participation in an industry without any causal connection to the operator.

186. 42 U.S.C. § 2210(c) (1988). Because the amount of primary and secondary "insurance" available has, since 1982, exceeded the limit of liability under the Act, no public funds are, in theory, presently committed. *In re Three Mile Island*, 605 F. Supp. at 784 n.6.

187. The exact definition, including certain qualifiers, is found at 42 U.S.C. § 2014(q) (1988).

188. *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 251-52; *see also* S. REP. No. 296, 85th Cong., 1st Sess., 9, 22 (1957), *reprinted in* 1957 U.S.C.C.A.N. 1803, 1803-29.

189. *See* definition at 42 U.S.C. § 2014(j) (1988).

190. This was added to Price-Anderson by amendment in 1966, out of concern that the variables of legal liability among the states would lead to unacceptably inconsistent treatment depending on where suit was brought, and to multiple actions. *See generally* S. REP. No. 1605, 89th Cong., 2d Sess. 6 (1966), *reprinted in* 1966 U.S.C.C.A.N. 3201, 3201-29.

The amendment requires a waiver of most state law defenses in each indemnity agreement, so that usually all an injured plaintiff must prove in the event of an extraordinary nuclear occurrence (ENO) would be damage and causation. *See also infra* notes 339-51 and accompanying text. 42 U.S.C. § 2210(n) (1988). Among the defenses are those based upon statutes of limitation, with a new limitation of three years from discovery, or 20 years from occurrence. *Id.* In addition, actions are to be consolidated in a single United States District Court. *Id.*

financial protection required,<sup>191</sup> whichever is greater, and the court is directed to establish priorities among classes of claims and claimants if the damages exceed that limit.<sup>192</sup> Congressional action is contemplated in the latter event.<sup>193</sup> Price-Anderson provides indemnity coverage and protection to all persons who may be liable<sup>194</sup> in the event of a nuclear incident in the United States,<sup>195</sup> and in general is not limited to certain causes of damage.<sup>196</sup> The authority of the Nuclear Regulatory Commission (NRC) to enter into indemnity agreements expired on 1 August 1987<sup>197</sup> and has not yet been renewed, but the operation of the Act with respect to existing nuclear facilities should not be affected.<sup>198</sup> Thus it may be seen that Price-Anderson, if inade-

191. 42 U.S.C. § 2210(e) (1988). The maximum, \$560 million, is the same as when Price-Anderson was enacted in 1957, and is now exceeded by the required financial protection, although the upper limit of the latter is only \$635 million. *See supra* note 185.

In evaluating these limitations upon liability, the estimated costs of cleanup of Chernobyl should be borne in mind (*see supra* note 13). It is also noteworthy for comparison purposes that following the wreck of the supertanker *Exxon Valdez*, the Exxon Corporation agreed in settlement to pay over \$500 million to the state of Alaska for environmental damage.

192. 42 U.S.C. § 2210(o) (1988).

193. 42 U.S.C. § 2210(e)(2) (1988) provides that "[i]n the event of a nuclear incident involving damages in excess of the [aggregate limit] of public liability . . . the Congress will thoroughly review the particular incident . . . and will . . . take whatever action is determined to be necessary . . . to provide full and prompt compensation to the public for all public liability claims resulting from a disaster of such magnitude."

By comparison, the Brussels 1962 Convention mandates government intervention and payment of additional funds in excess of operators' liability limits. *See supra* note 170.

194. This is provided by the definition of "person indemnified" at 42 U.S.C. § 2014(t) (1988). A benefit, without real additional cost, is thereby conferred upon manufacturers, suppliers and contractors, foreign and domestic.

Compare the limitation and channeling of liability to operators under the multilateral conventions, *supra* notes 170-81 and accompanying text.

195. *See infra* notes 199-209 and accompanying text regarding the limited applicability of Price-Anderson to accidents outside the United States.

196. Thus, Price-Anderson contains no exclusion for damage willfully caused, or as part of a conflict or insurrection. However, it does not appear to deal with a situation involving stolen nuclear materials. *See* Nuclear Reg. Commission, Staff Study Concerning Financial Protection Against Potential Harm Caused by Sabotage or Theft of Nuclear Materials, *reprinted in Hearings on H.R. 8631, Joint Comm. on Atomic Energy*, 94th Cong., 1st Sess. 455-524 (1975).

197. 42 U.S.C. § 2210(d)(1)(A) (1988).

198. It is intended that the indemnity agreements in existence will remain in place for the duration of the licenses issued to the operators concerned. S. REP. NO. 454, 94th Cong., 1st Sess. (1975), *reprinted in* 1975 U.S.C.A.N. 2251, 2256. Because there are no construction permits pending at the present time, this will not have immediate impact; whether future plant proposals may be afforded Price-Anderson protection remains to be seen.

quate in coverage and tortuous in expression, represents a means whereby the complexities herein discussed might be addressed. However, it is even less likely to apply to a nuclear power accident outside the United States than the multinational conventions.

Price-Anderson's coverage with regard to overseas nuclear accidents is severely circumscribed,<sup>199</sup> and probably not germane to an accident in a foreign country in which one or more United States suppliers, or the United States itself, are implicated. Although an export license requires insurance or other financial protection in amounts specified by the NRC,<sup>200</sup> the indemnity of the United States Government, and all the provisions of Price-Anderson that depend upon an indemnity agreement,<sup>201</sup> are limited by the definition of "nuclear incident."<sup>202</sup> This definition excludes nearly all happenings outside the United States.<sup>203</sup> And

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The other provisions of the act are not affected, and insofar as they refer to indemnity agreements, would continue to apply to existing ones.

199. As initially enacted, Price-Anderson contained no such limitations upon coverage for transboundary incidents; they were added in the Amendments of 1961. For illuminating information regarding the rationale, see S. REP. NO. 454, 94th Cong., 1st Sess. (1975), reprinted in 1975 U.S.C.C.A.N. 2251, 2258; see also legislative history of the 1961 Amendments, Atomic Energy Act, Pub. L. 87-206, § 15, 75 Stat. 475, reprinted in 1961 U.S.C.C.A.N. 2591, 2591-2604 [hereinafter 1961 Amendments].

Although not expressly stated, the change was seemingly due in large part to fear of encouraging suits against suppliers in the United States with an effective government guarantee of recovery in excess of \$500 million, as well as the risk of reducing incentives for foreign governments to participate or negotiate in the event of disaster. In other words, it was better to leave the matter unaddressed than to open American courts in the absence of a worldwide liability system.

Additional explanatory and background data may be obtained from McNett, *supra* note 183, at 55.

200. See 42 U.S.C. §§ 2210(a) and (b), 2133 (1988).

201. These includes, by their terms, virtually all other provisions of Price-Anderson, including, *inter alia*, limitation of liability provisions.

202. 42 U.S.C. § 2014(q) (1988). Therein, it is recognized that such an incident might cause damage in more than one country, but apart from the exceptional circumstances mentioned in the following note, the section specifies the situs must be within the United States.

One interesting possibility which might be explored by a United States party sought to be held liable is the following: If the asserted basis of liability is a design or manufacturing defect, it might be argued that the "occurrence" occurred within the United States, and caused injury outside the United States, which the statute could be read to contemplate. *Id.* However, in view of the legislative history, it does not seem that design or manufacture is included within the class of "occurrence" intended to be covered. See also *infra* note 209 and accompanying text regarding the ability of United States legislation to limit rights of recovery for incidents occurring in other nations.

203. The only exceptions are for very limited purposes not involved here, namely, events concerning the nuclear ship *U.S.S. Savannah* and those involving materials

for incidents to which it does apply, the amount of indemnity and corresponding limits of liability are greatly reduced.<sup>204</sup> In addition, a smaller class of persons is covered by Price-Anderson,<sup>205</sup> and there is to be no provision in any indemnity agreement for waiver of defenses.<sup>206</sup> The overseas coverage of Price-Anderson is limited to an extremely narrow range of licensed activities,<sup>207</sup> and to operations pursuant to contracts with the United States itself;<sup>208</sup> it does not reach exports of facilities or materials by private companies, even if licensed by the government, nor activities within the territory of another nation.<sup>209</sup>

The preceding paragraphs demonstrate that — because of the limited applicability of *ratione materiae* and of *ratione personae* of international systems, and because the laws of the United States are equally restrictive — there is no structured liability regimen applicable to a mass nuclear disaster occurring outside the United States, in which United States actors are involved. Thus parties are left to the uncertainties and difficulties of private adjudicative remedies and the conflict of laws rules.<sup>210</sup>

## 2. Choice of Law

The determination of the law to be applied in a nuclear disaster suit will be no less complex, and no less momentous, a task than choice of forum.<sup>211</sup> The court must perform a careful analy-

owned by, or used under, contract with the United States.

204. 42 U.S.C. §§ 2210(d)(5) and (e)(4) (1988) provide a maximum of \$100 million, instead of the \$500 million with respect to domestic occurrences.

205. Only contractors, subcontractors, suppliers and other persons connected with United States Government contracts are covered, unlike the broad coverage for domestic accidents which extends to anyone who might be liable. See 42 U.S.C. § 2014(t) (1988).

206. 10 C.F.R. § 140.91 (1991). Compare waiver of defenses for domestic occurrences, *supra* note 190.

207. These include ocean shipments outside United States territorial limits, and activities outside the United States but specially licensed by the NRC. 42 U.S.C. § 2014(q) (1988). See also *supra* note 202.

208. See *supra* note 205.

209. There is in addition, of course, the serious doubt whether laws of the United States could be a barrier to or limit upon enforcement of rights arising out of a disaster in a foreign land. In addition to ordinary choice of law principles which might point toward the law of the place of the occurrence, the fact that persons not citizens or residents could thus have their rights impaired would be an overwhelming policy argument in favor of the law of the place.

210. Outside the United States, conflicts of laws rules are sometimes called "private international law," and the terms may generally be used interchangeably insofar as they deal with international matters. See HERBERT F. GOODRICH & EUGENE F. SCOLES, *CONFLICT OF LAWS* 5 (1964).

211. See *supra* notes 95-108 and accompanying text regarding choice of forum.

sis leading to a choice of law that will do justice and allow the resulting adjudication to be given the most complete effect. To do so may require reworking traditional rules<sup>212</sup> toward a more expansive approach that takes into account the vital interests of the several jurisdictions that may have a concern in the matter.<sup>213</sup> In a case as multifaceted as one involving an international nuclear disaster, the better configuration will be that which avoids potentially distortive distinctions such as those between substantive and procedural laws,<sup>214</sup> and admits of the possibility

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212. Traditional conflict of laws rules were, if simpler, rather arbitrarily based upon territoriality. See JOSEPH H. BEALE, *A TREATISE ON THE CONFLICT OF LAWS* (1935), and *RESTATEMENT (FIRST) OF CONFLICT OF LAWS* § 610 (1934). Where a tort was concerned, all "substantive" matters were deemed governed by *lex loci delictus*. LEFLAR, *supra* note 156, § 86. This rigid rule led to procrustean characterizations and other fictive designs by courts to achieve justice, and became so unworkable that United States courts by and large have eschewed it. See Fowler V. Harper, *Policy Bases of the Conflict of Laws*, 56 YALE L.J. 1155 (1947); a good summary is found in James E. Westbrook, *A Survey and Evaluation of Competing Choice of Law Methodologies: The Case for Eclecticism*, 40 MO. L. REV. 407 (1975).

Similarly, contract claims were to be governed by *lex contractus*. See ALBERT A. EHRZENWEIG, *PRIVATE INTERNATIONAL LAW* § 66 (1967).

213. Modern flexible techniques include the "state's interest analysis" text, see BRAINERD CURRIE, *SELECTED ESSAYS ON THE CONFLICT OF LAWS* (1963); *Yarborough v. Yarborough*, 290 U.S. 202 (1933); the "principles of preference" test, a model developed in DAVID F. CAVERS, *THE CHOICE OF LAW PROCESS* (1965); and the best-known "most significant relationship" test embodied in the *RESTATEMENT (SECOND) OF CONFLICT OF LAWS* §§ 6, 145 (1971). These should offer sufficient flexibility to do the job at hand, and properly applied, they will lead to essentially the same result. See LEFLAR, *supra* note 156, § 109.

For contract-based claims, the situation is equally multifaceted. Commentators have come to recognize three tests most often: First, that matters concerning performance are to be governed by the law of the place where the contract is to be performed, *RESTATEMENT (SECOND) OF CONFLICT OF LAWS* §§ 206-07 (1971) second, the rule of "party autonomy" affording primacy to the expressed or implied intent of the parties, LEFLAR, *supra* note 156, § 415, *RESTATEMENT (SECOND) OF CONFLICT OF LAWS* § 187 (1971); third, the "center of gravity" (or "grouping of contacts" or "dominant contacts" or "most significant relationship" test), *RESTATEMENT (SECOND) OF CONFLICT OF LAWS* § 188 (1971) (similar to § 145 regarding tort). See also LEFLAR, *supra* note 156, §§ 145-51.

214. The "substantive-procedural" dichotomy in conflicts of laws should be laid to rest as shopworn and misleading. After all, the idea that procedural matters are always governed by the law of the forum is merely an offshoot of traditional territorial rules. LEFLAR, *supra* note 156, § 86; ALBERT A. EHRZENWEIG, *A TREATISE ON THE CONFLICT OF LAWS* § 114 (1962). The more pertinent inquiry, rather, weighs the respective legitimate interests of the jurisdictions involved to determine which has the superior stake in having its laws applied to a given element of the litigation. In LEFLAR, *supra* note 156, § 121, it is suggested that the first question should be whether, in light of standard choice-influencing considerations, the forum should apply its own law.

It has also been recommended that an "outcome-determinative" rule be used as an alternative. Robert A. Sedler, *The Erie Outcome Test as a Guide to Substance and Procedure in the Conflict of Laws*, 37 N.Y.U. L. REV. 813 (1962). However, this would



that certain matters ought to be controlled by the laws of one place and other matters controlled by those of another.<sup>215</sup>

Litigation in the wake of a transnational nuclear mishap can present choice of law complications as arduous as any found in international dispute resolution. There are bound to be at least two nations with solid interests in the laws to be applied,<sup>216</sup> and contracts to be considered as to some parties.<sup>217</sup> Of particular

turn out to be equally arbitrary.

There are also matters which may be considered at once procedural and substantive. A prime example is the important question of the ability of a defendant to implead additional parties as third party defendants. *See supra* notes 55-71 and accompanying text. Perhaps the most heavily debated subject in this field is that of statutes of limitations; under the conventional view they were considered procedural. RESTATEMENT (SECOND) OF CONFLICT OF LAWS § 142 (1971); *see also* FDIC v. Peterson, 770 F.2d 141 (10th Cir. 1985). However, recognition of their essential nature is now advancing. LEFLAR, *supra* note 156, § 128. *Cf. also* Home Ins. Co. v. Dick, 281 U.S. 397 (1930).

215. This notion, sometimes referred to as "depeçage," "scission," or "problem selection," is considered a relatively new concept of conflicts law but actually has direct precursors, such as the procedure-substance distinction, *see supra* note 214, and the differentiation between laws governing validity and the performance of contracts. *See* LEFLAR, *supra* note 156, § 280; EHRZENWEIG, *supra* note 212, § 56. *See also infra* note 217 and accompanying text.

216. Like the interests in choice of forum, the interests in choice of law will be similar, but not identical. It may be presumed that countries where plaintiffs reside will be most concerned with laws which maximize the compensation awarded victims (both in amount and over time for latent injuries), and countries of origin of defendants will merely wish for a just result. For an interesting, if wide-ranging, discussion of what some interests might be in the context of a suit in the United States arising out of a foreign disaster, *see generally In re Paris Air Crash* of March 3, 1974, 399 F. Supp. 732 (C.D. Cal. 1975). In Weinberg, *supra* note 132, at 309-10, the author argues that the conduct of operations within a country seems the peculiar concern of that country's law, and the extraterritorial application of United States safety standards would be inappropriate.

The interests which governments may assert on behalf of their citizens will also be relevant. *See supra* notes 42-47, 128-32 and accompanying text.

It has been held, however, that to apply different laws concerning recovery of damages with respect to different groups of plaintiffs violates constitutional requirements of equal protection. *In re Paris Air Crash*, 399 F. Supp. at 745-46.

217. The agreements would only apply to plaintiffs such as operators, other suppliers, foreign governments and the like.

Choice of law provisions in agreements are enforced in courts of the United States unless either the chosen jurisdiction has no substantial relation to the parties, or to give effect to the agreements would violate the public policy of the forum. *Zerman v. Ball*, 735 F.2d 15 (2d Cir. 1984); *S.A. Empresa de Viacao Aerea Rio Grandense v. Boeing Co.*, 641 F.2d 746 (9th Cir. 1981). Because these agreements do not entail consent to a particular forum, but rather only the application of its laws there should be no special obstacle to applying them. *See Interfirst Bank Clifton v. Fernandez*, 844 F.2d 279 (5th Cir. 1988). The agreements are generally considered to incorporate only matters deemed "substantive" rather than "procedural," and thus another nuance will confront the court. *See* FDIC v. Peterson, 770 F.2d at 142; *Des Brisay v. Goldfield Corp.*, 637 F.2d 680, 681-82 (9th Cir. 1981).

concern will be the thorny issues of causation,<sup>218</sup> foreseeability,<sup>219</sup> and immunity.<sup>220</sup> Because it is likely that a number of entities will be called upon to share legal accountability, rules concerning third party practice and liability will be of considerable consequence.<sup>221</sup>

Depending on the circumstances, claimants may base their selection of forum in part upon the desire to influence the choice of law to be applied.<sup>222</sup> Under traditional analysis, this would seem especially likely to lead to the selection of a United States court.<sup>223</sup> Although there are variations among jurisdictions

218. See *infra* notes 339-51 and accompanying text.

219. See *infra* notes 352-80 and accompanying text.

220. See *supra* notes 73-91 and accompanying text regarding immunity from suit, and *infra* notes 265-71, 292-99 and accompanying text regarding immunity from liability.

221. See *supra* notes 55-70 and accompanying text.

In the realm of third-party claims, some rights may be based upon doctrines of contribution and/or indemnity while others may be contractual.

In some countries following the common law tradition, the right of liability may be limited; the "common law allowed no contribution between joint or concurrent tortfeasors," see R.W.M. DIAS & B.S. MARKESINIS, TORT LAW 435 (1984) [hereinafter DIAS & MARKESINIS], and the courts of the United Kingdom have only recognized it since the Law Reform (Married Women and Tortfeasors) Act 1935. See *Pitts v. Hunt and Another*, [1990] 3 W.L.R. 542. By contrast, under civil law, it was considered to follow from the Roman *lex aquilia* that all persons who wrongfully cause damage should pay the full penalty; under modern laws all are liable, and the wrongdoer who pays damages may claim contribution. See F.H. LAWSON, NEGLIGENCE IN THE CIVIL LAW 76 (1950). For a recent and thorough discussion of United States law in this area, see WARREN FREEDMAN, JOINT AND SEVERAL LIABILITY: ALLOCATION OF RISK AND APPORTIONMENT OF DAMAGES 39-65 (1987).

222. An example which is often cited to illustrate this technique is *Hurtado v. Superior Court of Sacramento County*, 522 P.2d 666 (Cal. 1974), in which by choosing a California forum, a plaintiff was able to avoid Mexican limitations upon damages in an automobile accident case. Similarly, see *Allstate Ins. Co. v. Hague*, 449 U.S. 302 (1981); *Rosenthal v. Warren*, 475 F.2d 438 (2d Cir.), *cert. denied*, 414 U.S. 856 (1973).

In his dissent in *The Bremen*, Justice Douglas suggested that the forum selection clause in the parties' agreement was an attempt to obtain the advantage of an exculpatory clause because the British court would apply *lex fori*. *The Bremen v. Zapata Off-Shore Co.*, 407 U.S. 1, 24 (1972).

223. There is, of course, the understandable tendency for a tribunal to favor the familiar laws of its own system. See LEFLAR, *supra* note 156, § 89; I.F.G. Baxter, *Choice of Law*, 42 CAN. B. REV. 46 (1964). Moreover, plaintiffs may achieve some real advantages in United States courts. Although measures of damages are both regarded as substantive and not controlled by *lex fori*, RESTATEMENT (SECOND) OF CONFLICT OF LAWS § 178 (1971); LEFLAR, *supra* note 156, § 126, the right to a jury trial, RESTATEMENT (SECOND) OF CONFLICT OF LAWS § 129 (1971), and the issue of necessary or proper parties, *id.* § 125, are conventionally governed by *lex fori*.

An important initial consideration for any plaintiff in choosing a forum is the conflict of laws rules of the forum. In suits in United States courts, the law to be applied by the court includes its conflicts of laws rules. See *Day & Zimmermann, Inc. v. Challoner*, 423 U.S. 3 (1975); *Klaxon Co. v. Stentor Elec. Mfg. Co.*, 313 U.S. 487 (1941). But what if

within and outside the United States concerning when a court may consider itself bound to follow its own laws,<sup>224</sup> any deliberate use of forum preference would have direct undesirable consequences: Not only would the potential for distortive and misleading devices<sup>225</sup> to avoid undesirable results be enhanced, but principled international concerns are more likely to be ignored.<sup>226</sup> Nor is this merely a theoretical problem — any but the most measured approach may have inimical effects upon the international legal order, including loss of respect, or even retributive consequences, where decrees of United States courts are concerned.<sup>227</sup>

The superior means to address choice of law problems in nuclear disaster litigation will be for parties to show to the court why a given matter<sup>228</sup> should be governed by *lex fori* or the laws

conflicts rules require an interest or relational analysis leading to divergent laws? This might be the case if plaintiffs and defendants are from a number of jurisdictions all of whom assert an interest in the conflict. The result would seem logically to be inconsistent theories of liability; would this violate equal protection requirements? See *In re Paris Air Crash* of March 3, 1974, 399 F. Supp. 732 (C.D. Ca. 1975). Is the equal protection clause application itself dependent on choice of laws? It has been urged that a unitary federal rule of conflict of laws be adopted where necessary to avoid the application of inconsistent rules. See Henry M. Hart, Jr., *The Relations Between State and Federal Law*, 54 COLUM. L. REV. 489, 513-14 (1954); Susan J. Stabile, Note, *Tort Remedies for Servicemen Injured by Military Equipment: A Case for Federal Common Law*, 55 N.Y.U. L. REV. 601 (1980). In *In re Paris Air Crash*, the only solution (after consideration of the interests of the 36 jurisdictions involved) was to decide that California's conflicts rules pointed to the law of the forum, 399 F. Supp. at 742; to similar effect is *In re Air Crash Disaster Near Saigon, South Vietnam* on April 4, 1975, 476 F. Supp. 521, 526-29 (D.D.C. 1979). Perhaps the better solution can indeed be found in designating a single controlling law on a given issue, the approach argued for herein.

224. LEFLAR, *supra* note 156, § 89; CURRIE, *supra* note 213, §§ 177, 183; EHRZENWEIG, *supra* note 214, § 108 (1962).

RESTATEMENT (SECOND) OF CONFLICT OF LAWS §§ 122-423 (1971) contains an extensive listing of matters which are, and are not, to be governed by *lex fori*.

For a good overall survey concerning choice of law rules in Eastern and Western European countries, see C.G.J. Morse, *Choice of Law In Tort: A Comparative Study*, 32 AM. J. COMP. L. 51 (1984).

225. Examples include characterization, multiple rules for choice of law, or *renvoi*. See EHRZENWEIG, *supra* note 214, § 108; Robert A. Leflar, *Choice-Influencing Considerations in Conflicts Law*, 41 N.Y.U. L. REV. 267, 325-26 (1966).

226. This should include all relevant concerns, not only as sovereign entities, but as repositories of justice. LEFLAR, *supra* note 156, § 107; Robert Kramer, *Interests and Policy Clashes in Conflict of Laws*, 13 RUTGERS L. REV. 523 (1959).

227. This was the result of the doctrine, now discredited, of *Hilton v. Guyot*, 159 U.S. 113 (1895). See Kurt H. Nadelmann, *Reprisals Against American Judgments*, 65 HARV. L. REV. 1184, 1188 (1952).

228. An illustrative matter is attorney compensation. Although it might be brushed aside as merely an "issue relating to judicial administration," RESTATEMENT (SECOND) OF CONFLICT OF LAWS § 122 (1971), any participant in the process knows its true impor-

of another nation with a greater interest, for the court to adopt a flexible and creative approach<sup>229</sup> using as many sets of laws as needed to serve the legitimate interests involved, and for the court's reasoning to be as open and explicit as possible.<sup>230</sup>

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tance. Defendants will argue strenuously that the "American rule" (which does not allow attorney's fees to be recovered in general) ought to be applied, based upon their expectations and other reasons. Plaintiffs will on the other hand contend that a foreign jurisdiction (which for this purpose we assume follows the "English Rule" and allows recovery) should have its rules implemented, based upon its strong (and, it may fairly be said, substantive) interest in having its victims' losses completely repaid. Contingency fee attorneys may occupy the ungainly position of arguing, in effect, that their agreements prevent clients from being fully compensated if more fees are not court-awarded. This does not, however, present any greater inconsistency than do ordinary contingency fee arrangements in personal injury cases.

Another quite interesting issue is that of damages. That is, the rather liberal American allowance of punitive damages for malicious (or even "reckless") conduct will probably not operate unless United States substantive law is applied; the civil law does not usually regard damages as other than compensatory. Pierre Catala & John Antony Weir, *Delict and Torts: A Study in Parallel*, 37 TUL. L. REV. 573, 585-86 (1963) [hereinafter Catala] and the British and common law systems allow exemplary damages only in very limited circumstances, JOHN FREDERIC CLERK ET AL., CLERK & LINDSELL ON TORTS §§ 5-36 to 5-39 (R.W.M. Dias et al. eds., 16th ed. 1989). But civil law does recognize "moral damages" for nonpecuniary loss, and this is often referred to as a sort of surrogate for exemplary damages. 2 MARCEL FERNAND PLANIOL, TREATISE ON THE CIVIL LAW § 868A (Trans. La. St. L. Inst. 1959); Edith Friedley, *Moral Damages in Mexican Law: A Comparative Approach*, 8 LOY. L.A. INT'L & COMP. L.J. 235, 248-49 (1986).

229. For example, depending upon the nature of the harm alleged, the assertion might be made that the wrong occurred in the United States (as in the case of the wrongful design or manufacture of a facility or component — see, e.g., *In re Paris Air Crash of March 3, 1974*, 399 F. Supp. 732, 747 (C.D. Ca. 1975)). Although the traditional approach might point to the "place of wrong," the better decision would be one (not necessarily inconsistent) based upon the interest of the United States or another nation in having its laws applied. Under the rule set forth in the RESTATEMENT (FIRST) OF CONFLICT OF LAWS § 145 (1934), when the interests are weighed the result should be the same regardless of where a "wrong" is considered to have taken place.

This analysis would be useful to prevent circumvention of foreign laws that channel liability to a nuclear operator and require suit to be brought in the place of occurrence, as well as to avoid multiple actions.

230. The mere choice of the "better rule of law" can be criticized as merely a means of choosing between the parties without saying so. See LEFLAR, *supra* note 156, § 107 and citations contained therein. See also *In re Paris Air Crash*, 399 F. Supp. at 763; *Gordon v. Eastern Air Lines*, 391 F. Supp. 31, 34 (S.D.N.Y. 1975).

Although it is clear that a subject as multifarious as choice of law may be easily manipulated for good or ill (which explains in part the attempts which have been made to establish national and international systems as discussed *supra* notes 169-72 and accompanying text), a clear and definitive statement of the court's reasoning will go far toward enhancing the respect afforded the judgment and its likelihood of being enforced, as well as future decisions.

### D. Bases of Liability

There is little doubt that liability will be established against one or more parties involved in events leading to a nuclear accident, whether on traditional bases<sup>231</sup> or pursuant to evolving principles.<sup>232</sup> The grounds of liability will be both a function and a component<sup>233</sup> of the important choice of law considerations discussed in the preceding section.

#### 1. National Law Systems

The selection of a foreign nation's law which implements or follows the multinational treaty-based liability systems<sup>234</sup> would go far to limit the exposure of United States defendants, by mandating that claims be primarily asserted against the facility operator<sup>235</sup> and only in courts of the nation in which the incident

231. In most instances, a case may be constructed upon fault-based postulates of liability, such as negligence. The most significant accidents, those at Windscale, Three Mile Island, and Chernobyl, have all involved identifiable defects or operational errors which could readily be traced to defalcations on the part of one or more persons. In addition, there are established means for defining legal responsibility without the need to attribute fault to a defendant. *See infra* notes 233, 235, 239 & 245.

232. If and when the mass nuclear disaster occurs, it seems quite probable that new ground will be broken where all facets of legal responsibility are concerned, and liability may be imposed upon any number of theories. One special problem will be that of assigning liability for damage and injury caused by the intentional acts of terrorists, saboteurs or other such actors, which raises questions of foreseeability and proximate cause on an unprecedented scale. *See infra* notes 339-80 and accompanying text.

233. Certain of the claims by and against United States defendants may be contractual in nature. In addition, it is also possible that other actions might be brought in contract to avoid an undesired result under choice of law rules. *See Morse, supra* note 224, at 139. It is well known that foreign laws allow suits in contract for injuries United States law would consider to have been tortiously inflicted. Additionally, torts are often arranged under the law of "obligations" under many civil codes. *See* JOHN G. COLLIER, *CONFLICT OF LAWS* 192-95 (1987); 2 ALBERT VENN DICEY & JOHN HUMPHREY CARLILE MORRIS, *THE CONFLICT OF LAWS* 934 (J.H.C. Morris ed., 1980); HENRIET LÉON MAZEAUD & ANDRÉ TUNC, *TRAITE THÉORIQUE ET PRATIQUE DE LA RESPONSABILITÉ CIVILE DÉLICTEUELLE ET CONTRACTUELLE*, Chapter II, Section 1, § 2, nn. 145, 149, 190 & 207 (6th ed. 1965).

Of course, under national law systems imposing absolute liability against the operator, the theory of the suit would not matter. If, however, a theory were used to attempt to persuade a court that United States law or some law other than *lex loci delicti* should be applied, the outcome would depend upon the choice of law rules of the forum, *see supra* notes 223-24 and accompanying text, but should not be influenced by variations in stated theories of liability.

234. *See supra* notes 169-72 and accompanying text.

235. *See supra* note 171.

Exposure of a United States company would not exist thereunder except as a third party defendant based upon contract or intentional act (some nations also allow it for gross negligence). And because liability is solely grounded upon recourse by the operator

occurred.<sup>236</sup> Although it is not certain that multiple litigation may be completely forestalled thereby,<sup>237</sup> this desirable arrangement fits what the parties might or ought to have expected, and undoubtedly reflects the legislative intent of the drafters of the international conventions.

On the other hand, if the choice is a foreign law that does not possess the structural and procedural attributes discussed above,<sup>238</sup> then the United States defendant may be subjected to a system ill-suited to deal with the task before it.<sup>239</sup> This brings

and the operator's liability itself is limited, there is a built-in ceiling upon the exposure of the supplier. In addition, unlike United States law, liability would be completely excluded for the intentional acts of third parties. *See also infra* notes 370-71 and accompanying text.

This is a quite reasonable arrangement, if one recognizes that the laws of the country are calculated to provide adequate victim compensation through financial protection and/or government assistance, and that the agreement whereby the United States party became involved presumably took into account the liability limitations in its pricing structure.

236. *See supra* note 171 and accompanying text. Although it is true that this might subject the United States concern to suit in a foreign court, it enhances certainty and avoids multiple suits, and as such can only be seen as a worthy attempt in aid of justice and economy.

237. *See supra* notes 152-59 and accompanying text regarding suits against the operator in the country of occurrence and also against the supplier in the United States.

238. *See supra* note 175 and accompanying text regarding the small number of countries party to international liability arrangements with laws conforming thereto.

There are also a number of nations that have national legislation which to some extent adopts the principles of the two Conventions without themselves being parties, such as Mexico (Act of 1974 on Third Party Liability for Nuclear Damage; *see* 15 NUCLEAR L. BULL. 13 (1975)) and Chile (Nuclear Safety Act, Apr. 16, 1984, Act No. 18302, *see* 34 NUCLEAR L. BULL. 13 (1984)). Many other countries either have no laws concerning nuclear liability, or laws with few or no provisions that attempt to address the issues posed herein.

239. No attempt is made herein to summarize exhaustively applicable foreign law. There is little broad reference material that discursively surveys evolving global tort principles, and the analyst will, of course, consult in detail any laws that might be utilized under choice of law principles. Useful beginning materials, however, are the two-volume KONRAD ZWIGERT & HEIN KÖTZ, AN INTRODUCTION TO COMPARATIVE LAW (Tony Weir trans., 1977), and CHRISTOPHER MORSE, TORTS IN PRIVATE INTERNATIONAL LAW (1978).

For fault-based principles of liability, *see generally* LAWSON, *supra* note 49; FLEMING, *supra* note 49, at 1. With regard to liability without fault, in systems following the common law rule of strict liability for abnormally dangerous activity, the venerated *Rylands v. Fletcher*, 3 L.R.-E. & I. App. 330 (H.L. 1868), would seem to operate. Interestingly, the United Kingdom, home of *Rylands*, has not followed an across-the-board approach, but has assigned strict liability to certain activities, including nuclear energy, by statute. *See generally* DIAS & MARKESINIS, *supra* note 221. Civil law countries have also long allowed suits without the need to prove negligence of a defendant. *See, e.g.*, C. CIV. art. 1384 of the French Civil Code (liability for things in one's possession or control), whose evolution toward liability without fault is discussed in Catala, *supra* note 228, at

with it the possibility of suits in a number of fora in which it may not be possible to assert liability against a third party, problems of proof and application of foreign law,<sup>240</sup> and all the other consequences and vagaries attendant upon multiple litigation and conflicting court judgments.<sup>241</sup>

Finally, if United States law is chosen,<sup>242</sup> the bases of liability will in all likelihood be no less varied. Its national liability scheme is of limited application where international incidents are concerned,<sup>243</sup> and the laws otherwise applicable to civil suits<sup>244</sup> are thus the substantive basis of liability.<sup>245</sup> As in most

598-614.

If the matter is viewed as liability for a defective product, as it may be against a United States supplier, ever-developing doctrines of products liability may be brought into action. For general references, see WARREN FREEDMAN, *PRODUCTS LIABILITY: AN INTERNATIONAL MANUAL OF PRACTICE* (1987); H. DUINTJER TEBBENS, *INTERNATIONAL PRODUCT LIABILITY* (1979).

240. See *supra* note 239 and accompanying text.

241. See *supra* notes 152-68 and accompanying text.

242. This is the case when, for instance, an act related to design or manufacturing is asserted to have occurred in the United States or choice of law principles otherwise direct the application of United States law. See *supra* notes 126, 129 and accompanying text.

243. See *supra* notes 199-209 and accompanying text regarding limited applicability of Price-Anderson to occurrences outside the United States.

244. See *supra* notes 188-90 and accompanying text. For instance, one important case, *Silkwood v. Kerr-McGee Corp.*, was submitted to a jury on the alternative bases of the Oklahoma law of negligence and strict liability in tort. 464 U.S. 238, 244 (1984). Price-Anderson was inapplicable in *Silkwood*.

In most instances suit will be in federal court, based upon diversity of citizenship. See *supra* note 37 and accompanying text. It has been expressly held that the enactment of the Atomic Energy Act and Price-Anderson did not create a federal cause of action or federal common law. *Klick v. Metropolitan Edison Co.*, 784 F.2d 490 (3d Cir. 1986).

245. Even if the federal legislative scheme were somehow applicable, it contemplates minimal disturbance of state law where third party liability is concerned. The 1966 amendment to Price-Anderson, that was designed to facilitate establishing liability in the event of an extraordinary nuclear occurrence, merely modified state laws to provide for "waivers of defenses," but otherwise purported to leave them intact. 42 U.S.C. 2210(n)(1) (1988). See discussions contained in S. REP. NO. 1605, 89th Cong., 2d Sess. 6, reprinted in 1966 U.S.C.C.A.N. 3201; see also *In re Three Mile Island Litig.*, 605 F. Supp. 778, 780 (M.D. Pa. 1985); *Silkwood* discussion *supra* note 244.

Under state law, traditional negligence principles may be used, as well as liability without fault. See W. PAGE KEETON ET AL., *PROSSER AND KEETON ON THE LAW OF TORTS* at 677 (5th ed. 1984) [hereinafter KEETON]; 6 STUART M. SPEISER ET AL., *THE AMERICAN LAW OF TORTS*, ch. 19 (1988) [hereinafter SPEISER]; RESTATEMENT (SECOND) OF TORTS §§ 519, 520 (1965). For abnormally dangerous activities, the only limitation appears to be that liability is confined to the harm which makes the activity dangerous. "Atomic energy" is cited as its example of an activity from which the risk of harm cannot be removed. RESTATEMENT (SECOND) OF TORTS § 520 cmt. h (1965).

If the matter is viewed as one of products liability, the basis may be negligence, MARSHALL S. SHAPO, *THE LAW OF PRODUCTS LIABILITY* § 5.01 (1987), or strict liability in

other nations, the resolution of responsibility for overseas mass nuclear disaster is a role likely far exceeding that contemplated for existing national remedial laws.<sup>246</sup>

## 2. Governmental Liability

The development and utilization of nuclear energy is an enterprise which by its very nature demands integral governmental participation. Governmental responsibility was a principal focus of the drafters of national laws regarding nuclear liability, even though nothing like a comprehensive global regimen has been achieved.

There is much room for debate concerning the role of the state in victim compensation, and the proper relationship of the public and private sectors where nuclear energy is concerned. In certain systems and for prescribed circumstances, many of the questions have been addressed by statute and treaty, as discussed above. But for the defendant which finds itself subjected to mammoth damages exposure for its role in the development of a nuclear facility outside the United States, and for the tribunal which must sort through the issues involved, a significant inquiry is this: In the absence of an express provision of law, but in a realm in which public sector participation is central to the

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tort, RESTATEMENT (SECOND) OF TORTS § 402A (1965) (the modern paradigmatic expression). Modern risk allocation has extended virtual automatic responsibility to persons creating a dangerous condition or instrumentality, and strict liability is an established feature of the legal landscape in all states. SPEISER, *supra*, §§ 18.28, 18.29; FREEDMAN, *supra* note 34, at 13.

246. Most persons would regard the development of nuclear energy and related issues to be matters for federal pre-emption. They would, in addition to their national import, seem clearly to be within the federal power to regulate commerce and foreign relations. However, no "federalization" of the field has occurred. *See supra* notes 188-90 regarding application of state law remedies.

Although the Court pronounced in *Pacific Gas & Elec. Co. v. State Energy Resources Conservation & Dev. Comm'n*, 461 U.S. 190 (1983), that the federal government has pre-empted the field with regard to radiological safety standards of construction and operation, in *Silkwood*, it reaffirmed the primacy of state law remedies (specifically exemplary damages) and stated that no conflict existed between them and the federal regulatory system. *Silkwood*, 464 U.S. at 246. United States Courts of Appeals have rejected claims based on federal common law in *Kiick*, 784 F.2d at 494; *Commonwealth v. General Pub. Util. Corp.*, 710 F.2d 117 (3d Cir. 1983); *In re Three Mile Island Litig.*, 605 F. Supp. 778, 780 (M.D. Pa. 1985). To the same effect is *Bennett v. Mallinckrodt, Inc.*, 698 S.W.2d 854 (Mo. Ct. App. 1985), *cert. denied*, 476 U.S. 1176 (1986).

This dichotomization has been criticized for essentially creating conflicting dual federal and state regulatory regimes (one official and the other through the back door of punitive damage awards), *See Vincent F. Chiappetta, United States Nuclear Energy Policy After Pacific Gas and Silkwood*, 1985 ARIZ. ST. L.J. 79 (1985).



development of the industry and its benefits to the people, to what extent and upon what basis<sup>247</sup> ought the government be held to account?

#### a. United States Government

In addition to considerations of foreign relations,<sup>248</sup> it is possible to suggest a number of policy reasons why the United States Government ought to share responsibility in the event of an international nuclear mishap involving facilities, components, or materials furnished by United States suppliers.<sup>249</sup> The first of these is the sweeping and consistent pattern of aid<sup>250</sup> and promotional support<sup>251</sup> that has been provided to the nuclear export

247. Choice of law is discussed *supra* notes 210-30 and accompanying text.

See also *infra* note 266 regarding specific statutory choice of law rules for the liability of the United States.

248. These would include, *inter alia*, matters related to nuclear non-proliferation and the United States' interest in remaining a reliable supplier of nuclear equipment, technology, and materials in pursuit of its policies. See, e.g., Letter from Claiborne Pell, Senator of Rhode Island, to NRC (Nov. 9, 1979) concerning accidents to exported facilities and components. See also *Natural Resources Defense Council v. Nuclear Regulatory Comm'n*, 647 F.2d 1345, 1378 n.80 (D.C. Cir. 1981) [hereinafter *NRDC*]; Linder, Note, *supra* note 25, at 488-89; see also *infra* note 251 regarding United States nonproliferation policy and nuclear export industry.

249. This would be apart from the limited, direct obligation of the United States to indemnify in connection with nuclear activities undertaken pursuant to the government's contracts. See *supra* notes 205-07; 42 U.S.C. § 2210(d) (1988).

250. Not surprisingly, the nuclear industry as a whole has been the recipient of abundant direct federal payments; for 1979, the total was a staggering \$37.6 billion. See Energy Info. Admin., *FEDERAL SUPPORT FOR NUCLEAR POWER: REACTOR DESIGN AND THE FUEL CYCLE* (1981). The fiscal 1990 budget contained a legislative proposal to establish a government corporation for uranium enrichment, with initial funding of \$300 million, plus \$353 million for research and development of nuclear fission, and \$349 million for fusion; research and development assumed 50% private cost sharing. OFFICE OF MANAGEMENT AND BUDGET, *BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 1990*, at 5-36 (1989).

Price-Anderson itself, with its indemnity and limitation of liability provisions, is a quite significant, if indirect, subsidy. Among Price-Anderson's principal purposes was to encourage the development of the industry. See *NRC/DOE Reports*, *supra* note 180, at 21.

Specifically with regard to exports, among the leading vehicles of support for the industry is the U.S. Export-Import Bank. In the 1970's, 80% of the power reactors supplied by United States concerns (which were 70% of all those in operation or on order worldwide) were financed by this Bank. Ann Crittendon, *Surge in Nuclear Exports Spurs Drive for Control*, N.Y. TIMES, Aug. 17, 1975, at 1; see also generally Staff of Senate Comm. on Government Operations, 94th Cong., 1st Sess., *Facts on Nuclear Proliferation: A Handbook* 198 (Comm. Print 1975); George D. Applebaum, Comment, *Controlling the Environmental Hazards of International Development*, 5 ECOLOGY L.Q. 321, 342 (1975-76).

251. Encouragement of the nuclear industry, both domestic and export-oriented, has

industry as a matter of government policy.<sup>252</sup> Second is the in-

long been an important ingredient of national economic development. For example, in 1958 the United States signed a comprehensive "Agreement for Cooperation" with the European Atomic Energy Community, providing for credit and contributions to research and development leading to the establishment of nuclear facilities in Europe. Agreement for Cooperation Concerning Peaceful Uses of Atomic Energy, Nov. 8, 1958, U.S.-European Atomic Energy Community (Euratom), T.I.A.S. No. 10, at 75. In the Energy Reorganization Act of 1974, the declaration of policy and purpose includes the intent to "increase the productivity of the national economy and strengthen its position in regard to international trade," and priority for "export market potential." Energy Reorganization Act of 1974, Pub. L. No. 93-438, 88 Stat. 1233, (codified at 42 U.S.C. §§ 5801-5891 (1976)); see also LESTER S. JAYSON, *HANDLING FEDERAL TORT CLAIMS* § 6.04 [hereinafter JAYSON].

The Presidential pronouncement of United States policy regarding the extraterritorial application of the National Environmental Policy Act contains an express exclusion for most nuclear export activities. Exec. Order No. 12,114, 3 C.F.R. 356 (1979), *reprinted* in 42 U.S.C. § 4321 (2-5(v)) (Supp. III 1979). This exclusion was an accommodation to the needs of the nuclear export industry. See John L. Sullivan, Note, *The Export Exemption of Executive Order 12,114 and the Nuclear Regulatory Commission's Role in Export Licensing*, 6 ASILS INT'L L.J. 43, 62 (1982).

It is also clear, if paradoxical at first blush, that non-proliferation policy depends upon a strong export industry: if the United States is not a ready and reliable supplier, purchasers will turn to sellers who have fewer requirements for safety, lesser standards of production, and/or looser export controls. See Statement, *supra* note 5, at 769; S. REP. No. 467, 95th Cong., 1st Sess. (1977), *reprinted* in CONGRESSIONAL RES. SERVICE, LEGISLATIVE HISTORY OF THE NUCLEAR NON-PROLIFERATION ACT OF 1978 550, at 781 (principal among purposes of the Act was to enable United States business to get benefits from foreign nuclear sales, and promote employment and aid balance of payments).

As the domestic market has softened, pressure to rely on exports has increased. See Robert Boardman & James F. Keely, *Nuclear Export Policies and the Nuclear Non-Proliferation Regime*, in NUCLEAR EXPORTS AND WORLD POLITICS 3 (Robert Boardman & James F. Keely eds., 1983). When the Government of the Philippines expressed interest in a United States reactor in 1971, the State Department instructed the Embassy in Manila to give "all possible encouragement" to the purchase, and the funds were provided by Export-Import Bank. Remarks of Charles Warren, Chairman of United States Council on Environmental Quality, A Look Before We Leap: Applying NEDA to U.S. Actions Abroad, Address given at the 3rd Annual Conference, Nat'l Ass'n of Environmental Professionals, Arlington, Va. (Feb. 8, 1978), in Nicholas C. Yost, *American Governmental Responsibility for the Environmental Effects of Actions Abroad*, 43 ALB. L. REV. 528, 532-34 (1979) The reactor was completed, but has not yet been activated.

It has also been charged that the United States is now producing plutonium greatly in excess of its foreseeable domestic needs. See Matthew L. Wald, *Need for Bombs, Jobs, Safety Affect Fate of Plutonium Plant*, N.Y. TIMES, Feb. 14, 1988, at C7.

252. Just as the United States is far from the single largest source, it is certainly not the only nation to pursue such a policy. Indeed, the United States may be the participant overtaken by its more voracious competitors as it attempts to behave responsibly. See Bertrand Barré, *France's Pragmatic Approach to Non-Proliferation*, in THE NUCLEAR SUPPLIERS AND NONPROLIFERATION: INTERNATIONAL POLICY CHOICES, 67 (H. Jones et al., eds. 1985); Randy J. Rydell, *Navigating the Archipelago: Nonproliferation Orientations of Emerging Suppliers*, *id.* at 105; Erwin Häckel, *The Politics of Nuclear Exports in West Germany*, in NUCLEAR EXPORTS AND WORLD POLITICS 62 (Robert Boardman & James F. Keely eds., 1983) [hereinafter Häckel]; *Nuclear Plan By Britain*, N.Y. TIMES, Mar. 29, 1988, at D7 (following privatization of nuclear industry, UK Government seeks

tertwinning of nuclear exports with the structure of the federal regulatory system.<sup>253</sup> Third, the express legislative acknowledgment of the United States Government's facilitative role in the domestic development and utilization of nuclear energy<sup>254</sup> suggests the existence of an international obligation as well.<sup>255</sup>

Beyond these policy-based arguments, there are bases of governmental liability<sup>256</sup> under United States law.<sup>257</sup> Where a

increased participation by United States contractors and suppliers, promising less restrictive regulations than in United States); *The Vancouver Sun*, in which an official is quoted, concerning the sale by Atomic Energy of Canada, Ltd. (a government corporation) of a CANDU reactor to Turkey, and declined to answer the question of public liability for damages in the event of an overseas accident as "too hypothetical." Margaret Munro, *CANDU Plan Questioned*, VANCOUVER SUN, Aug. 23, 1985, at A16.

The foregoing illustrate the systemic irrationality of a global, market-oriented competition-driven market in dangerous products. A worldwide regulatory regimen is called for.

253. An "Agreement for Cooperation," which is a bilateral treaty between the United States and the recipient nation setting forth rights and responsibilities concerning the latter's development of nuclear energy with United States materials and technology, is required as the basic framework for nuclear exports. 42 U.S.C. § 2153 (1988).

In addition, the export itself is subject to a comprehensive regulatory scheme. The system entails governmental involvement both widespread and deep, and involves decision-making at the highest levels. See *supra* note 25 and accompanying text. See also JAYSON, *supra* note 251, at § 6.04[2]; Linder, Note, *supra* note 25, at 488-89.

For regulations outlining the detailed involvement of the NRC and DOE, as well as the State Department and Office of the President, in export determinations, see 10 C.F.R. § 110 (1988).

254. This role extends to both licensing matters, 42 U.S.C §§ 2073(a), 2093(a), 2111, 2131, 2133 (1988); 10 C.F.R. 50.1 (1992), 100.1 (1992), and civil liability matters, *supra* notes 25, 183-209, 251 and accompanying text.

255. This argument has been developed in an OECD/NEA Study, *Compensation for Nuclear Damage in the OECD Member Countries*, 20 NUCLEAR L. BULL. 50, 67-70 (1977) [hereinafter *Compensation for Nuclear Damage*].

If the government is to be held to any responsibility at all concerning its role in nuclear energy development, it may be difficult to justify the dual approach that exists with respect to domestic and offshore occurrences. See also *supra* notes 199-209 and accompanying text.

Price-Anderson is inapplicable to foreign nuclear disasters, except insofar as United States Government contract activities are involved, and even then the indemnification and liability limitation figures are much lower. See also *supra* notes 199-209 and accompanying text. In *NRDC*, both the NRC and the court were clearly more concerned with the hazards of the proposed nuclear facility in the Philippines to American military personnel stationed nearby than risks to the Filipino people themselves. *NRDC*, 647 F.2d 1345, 1354 (D.C. Cir. 1981).

See generally PETER H. SCHUCK, *SUING GOVERNMENT* (1983) for additional arguments in favor of extending governmental tort liability.

256. No treatment of governmental liability may be undertaken without concurrently addressing governmental immunity, with which it is integrally linked. There are specific rules limiting the liability of the United States Government, apart from its general waiver of immunity under the FTCA; see *infra* notes 262, 265-71 and accompanying text. For most other nations' governments, public sector liability and immunity may be considered two sides of the same coin.

257. As far as the liability, if any, of the Government of the United States is con-

wrongful or negligent act<sup>258</sup> on the part of the employees of an agency of the United States<sup>259</sup> is present in the context of an overseas nuclear mishap,<sup>260</sup> plaintiffs or other defendants will wish to include the United States in the litigation.<sup>261</sup> In order to

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cerned, United States law must be applied. Under the FTCA, the applicable law is that of the place where the act or omission occurred. 28 U.S.C. § 1346(b) (1988 & Supp. II 1990). Because the FTCA contains an exclusion for claims arising outside the United States, there will be no claim unless it is considered to have arisen in this country. Conversely, for foreign law to apply, the claim would almost certainly have arisen abroad as well, and no waiver of immunity would operate to allow suit. This is a logical consequence of the policy underlying the exclusion from the FTCA — not to have actions against the United States Government decided with reference to foreign laws. *Id.*

The law contemplated under the foregoing rules is that of the state of occurrence. *Richards v. United States*, 369 U.S. 1, 6-8 (1962); *Broudy v. United States*, 722 F.2d 566, 569 (9th Cir. 1983).

258. The primary framework for discussion herein will be tort liability, since in contractual arrangements between a company and the United States, indemnity and liability limitation under Price-Anderson will likely apply to most matters, even though the accident occurred outside the United States.

Additional obstacles exist to others casting a claim in terms of contract. Under the Tucker Act governing contract suits against the government, 28 U.S.C. § 1491 (1988 & Supp. II 1990), such action must be brought in the Court of Claims and cannot be combined with other District Court actions, and no party other than the United States can be joined. *United States v. Sherwood*, 312 U.S. 584 (1941). Additionally, the Tucker Act will not entertain agreements "implied in law," *Hatzlachh Supply Co. v. United States*, 444 U.S. 460, 465 n.5 (1980), nor derived from statutes and regulations unless they expressly authorize a damages award. *Sheehan v. Army and Air Force Exchange Service*, 619 F.2d 1132 (5th Cir. 1980), *rev'd on other grounds*, 456 U.S. 728 (1981). Also, the Court of Claims has refused to hear cases brought in contract but essentially sounding in tort, *Jackson v. United States*, 573 F.2d 1189 (Ct. Cl. 1978); *Bibbs v. United States*, 206 Ct. Cl. 896, *cert. denied*, 423 U.S. 985 (1975), and Tucker Act suits must be founded on contract in the sense of a meeting of minds. *Hargrove v. United States*, Ct. Cl. 228 (1982).

259. The United States Government is liable for the acts of the officers and employees of any federal agency. 28 U.S.C. § 2671 (1988 & Supp. II 1990). In addition, the United States is to be the named party, and not the agency, absent an express statutory directive to the contrary. 28 U.S.C. § 2679 (1988 & Supp. II 1990). However, absent its own negligence, the United States will not be responsible for the torts of its contractors. 28 U.S.C. § 2671 (1988 & Supp. II 1990); *United States v. Orleans*, 425 U.S. 807 (1976); *Logue v. United States*, 412 U.S. 521, 526 (1973). Finally, no finding of any non-delegable duty will be allowed. *Bramer v. United States*, 595 F.2d 1141 (9th Cir. 1979).

260. Claims related to nuclear weapons testing are not included. They are the subject of their own separate liability regimen. See *In re Consolidated United States Atmospheric Testing Litig.*, 616 F. Supp. 759 (N.D. Cal. 1985); *JAYSON*, *supra* note 251, § 6.05a.

261. Litigation is not the only avenue that might be followed, particularly where sympathetic or attractive circumstances are present. Authority exists for the settlement of claims by any agency of the United States Government, which would presumably include nuclear-related demands. 28 U.S.C. §§ 2677, 2679 (1988 & Supp. II 1990). The claim may be settled without limitation as to amount subject to the approval of the

impose legal responsibility, there must be a showing of negligence or other similar ground<sup>262</sup> of culpability under the applicable law;<sup>263</sup> if that law would hold a private person responsible, the United States can be liable.<sup>264</sup>

Before passing on to the bases of United States liability, it is necessary to note that there are principles of sovereign immunity under United States law that may apply.<sup>265</sup> One is with re-

Attorney General for payments in excess of \$25,000. 28 U.S.C. §§ 2672, 2675 (1988 & Supp. II 1990). There does not appear to be any limitation upon this statute with regard to claims arising outside the United States. See JAYSON, *supra* note 251, § 6.04[1][b].

Suit could also be brought against the United States Government pursuant to a private bill. See generally HOUSE COMM. ON THE JUDICIARY, 90TH CONG., 2D SESS. 1 PRIVATE CLAIMS ACTS AND CONGRESSIONAL REFERENCES (Comm. Print 1968) (statement of Col. Marion T. Bennett, Air Force Reserve). This too might be a useful solution in the right case, but not one to be relied upon in lawmaking.

262. The United States Government cannot be held strictly liable, whether in connection with an assertedly ultrahazardous activity or otherwise. *Laird v. Nelms*, 406 U.S. 797 (1972), reaffirming the traditional rule in *Dalehite v. United States*, 364 U.S. 15 (1953). This limitation was held to be the rule with respect to nuclear weapons detonation. *Bartholomae Corp. v. United States*, 135 F. Supp. 651 (S.D. Cal. 1955), *aff'd*, 253 F.2d 716 (9th Cir. 1957). It follows, *a fortiori* that this limitation would apply to nuclear power accidents as well. Price-Anderson allows domestic claims, by contrast, to be based on any applicable state law theory, including strict liability in tort. See *Silkwood v. Kerr-McGee Corp.*, 469 U.S. 238 (1989). This is not altogether inconsistent once it is remembered that the government there is indemnifying private defendants.

263. It will be recalled that in diversity actions the law of the state in which the court is located, including its choice of law provisions, will be applied. See *supra* notes 48, 61 & 247. Recall also that unless United States law is used, no federal government liability exists. See *supra* notes 77-78 and *infra* notes 265-66.

Suits brought pursuant to the FTCA are governed in all respects by state law. 28 U.S.C. § 1346(b) (1988 & Supp. II 1990). See *Richards v. United States*, 369 U.S. 1, 6 (1962); *Rayonier, Inc. v. United States*, 352 U.S. 315, 318 (1957); *Indian Towing Co. v. United States*, 350 U.S. 61, 64-69 (1955); *Broudy v. United States*, 722 F.2d 566, 575 (9th Cir. 1983).

264. *Rayonier*, 352 U.S. 315 (allowing forest fire to start and failing to exercise due care in extinguishing); *Weiss v. United States*, 787 F.2d 518 (10th Cir. 1986) (failure to depict known obstruction on aeronautical chart); *Molsbergen v. United States*, 757 F.2d 1016 (9th Cir. 1985) (failure to warn of radiation injury danger once discovered); *McKay v. United States*, 703 F.2d 464 (10th Cir. 1983) (dictum) (negligent operation of nuclear weapons facility causing radiation danger to nearby persons and property); *Loge v. United States*, 662 F.2d 1268 (8th Cir. 1981) (dictum) (failure to require tests of vaccine); *Aretz v. United States*, 604 F.2d 417 (5th Cir. 1979) (failure to change safety standards in light of information known).

The Supreme Court has stated that the fact that state law chooses to recognize a novel or unprecedented theory of liability does not necessarily prevent the United States from being held responsible. *Rayonier*, 352 U.S. at 319. See also *infra* notes 272-87 and accompanying text regarding basis of duty giving rise to United States liability.

265. Governmental liability in the United States begins with a rule of absolute sovereign immunity, with exceptions in the form of blanket statutory enactments or private legislation. *Lehman v. Nakshian*, 453 U.S. 156 (1981); *United States v. Sherwood*, 312 U.S. 584 (1941). The FTCA, 28 U.S.C. § 1346(b) (1988 & Supp. II 1990), is designed to

spect to claims arising in a foreign country;<sup>266</sup> in order for the United States to be held liable, it must be found that the wrongful act or omission took place within its borders.<sup>267</sup> The other ground of immunity<sup>268</sup> applies to the performance of a "discretionary function" by an agency of the government;<sup>269</sup> this has

consent to tort suits and to waive immunity with certain stated exceptions listed in 28 U.S.C. § 2680 (only a few of which are relevant to this writing). The exceptions must be strictly observed. *United States v. Testan*, 424 U.S. 392, 399 (1976); *DeGirolano v. United States*, 518 F. Supp. 778 (E.D.N.Y. 1981). It is also possible for the same grounds for immunity to be asserted in suits against individual governmental officials. See *supra* note 80 and accompanying text. *Harlow v. Fitzgerald*, 457 U.S. 800 (1982); *People of Three Mile Island v. Nuclear Regulatory Comm'rs*, 747 F.2d 139 (3d Cir. 1984).

266. 28 U.S.C. § 2680(k) (1988 & Supp. II 1990). See also *supra* notes 229, 242 regarding this exception and the applicability of United States law.

This exception to the waiver of immunity focuses on the situs of the wrongful act, *Roberts v. United States*, 498 F.2d 520 (9th Cir. 1974), *cert. denied*, 419 U.S. 1070 (1975), and is based on the policy against having claims against the public sector decided by reference to the laws of another country. *United States v. Spelar*, 338 U.S. 217, 221 (1949); *Meredith v. United States*, 330 F.2d 9, 10 (9th Cir.), *cert. denied*, 379 U.S. 867 (1964). Cf. *Beattie v. United States*, 756 F.2d 91 (D.C. Cir. 1984) (inapplicable to claims arising outside jurisdiction of any country).

267. See *supra* notes 229, 242 & 266 and accompanying text.

Courts have allowed suit based upon findings that the occurrences forming the basis of the cause of action took place in the United States, even if their operative effects may have been abroad. See, e.g., *Sami v. United States*, 617 F.2d 755 (D.C. Cir. 1979); *In re Paris Air Crash of March 3, 1974*, 399 F. Supp. 732 (C.D. Ca. 1975).

268. There is also an exception for "the execution of a statute or regulation," found at 28 U.S.C. § 2680(a) (1965), the same section as the "discretionary function" exception discussed *infra* note 269. This exception basically bars testing the legality of statutes and regulations by tort action. The two are distinct but often difficult to separate in practice. This exception is said to apply wherever the governing statute or regulation contemplates the making of rules or *ad hoc* decisions. *First Nat'l Bank of Albuquerque v. United States*, 552 F.2d 370 (10th Cir.), *cert. denied*, 434 U.S. 835 (1977).

269. 28 U.S.C. § 2680(a) (1965). This exception applies to the performance or non-performance of a discretionary duty, whether or not the discretion is abused. As will be seen below, it also applies in cases where negligence is alleged (in order to prevent eviscerating the proviso by rhetorical device). See H.R. REP. No. 1287, 79th Cong., 1st Sess. 6 (1945).

The exception involves examining the very nature of governmental conduct. See *Dalehite v. United States*, 346 U.S. 15 (1953). In that decision, regarded as the seminal one in applying the statute, the distinction between discretionary and "operational" decision-making was articulated; although this has continued to be paid lip service, it has been criticized and a later Supreme Court case focused on the discretionary nature of the conduct rather than the level of the person engaged in it (scarcely any more helpful). See *United States v. S.A. Empresa de Viacao Aerea Rio Grandense (Varig Airlines)*, 467 U.S. 797 (1984). In its most recent pronouncement, the Court relied on the presence of an element of "judgment or choice" as the defining criterion. *Berkovitz v. United States*, 486 U.S. 531 (1988).

It is clear that the exception actually involves balancing the need to shield the discretionary nature of some government activity against the purposes to be served by the FTCA. *Varig Airlines*, 467 U.S. at 808; *J.H. Rutter Rex Mfg. Co. v. United States*, 515

the potential to present a significant obstacle to a claim in the present context,<sup>270</sup> and will require a court to carefully distinguish between the protected exercise of discretion and a culpable failure to fulfill a function made mandatory by circumstance, required procedure, or public policy.<sup>271</sup>

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F.2d 97, 99 (5th Cir. 1975), *cert. denied*, 424 U.S. 954 (1976). As regards the law to be applied on the point, the court is not bound to follow state law rules, as it would be with regard to a finding of duty. *In re Agent Orange Prod. Liab. Litig.*, 818 F.2d 194, 198 (2d Cir. 1987); *Mitchell v. United States*, 787 F.2d 466, 468 (9th Cir. 1986).

270. The promulgation of regulations and issuance of licenses are generally considered within the discretionary function exception. *Hendry v. United States*, 418 F.2d 774 (2d Cir. 1969); *Varig Airlines*, 467 U.S. at 810. However, the issuance of a license in violation of safety standards, or without determining compliance with safety standards, is not considered within the discretionary function exception. *Berkovitz*, 486 U.S. at 541-42.

The discretionary function rule has been given broad application in cases involving domestic nuclear policy. In *Allen v. United States*, 816 F.2d 1417, 1424 (10th Cir.), *cert. denied*, 484 U.S. 1004 (1987), the court considered an injury arising from testing activities. The court held that the Atomic Energy Commission (whose functions are now divided between the NRC and the DOE), in planning and conducting monitoring and information programs was protected by the exception, whether or not it was negligent in failing to warn, and regardless of the level at which the activity was performed. The court seemed to emphasize the availability of administrative remedies. *Id.* at 1424. And in *General Pub. Utils. Corp. v. United States*, 745 F.2d 239 (3d Cir. 1984), *cert. denied*, 469 U.S. 1228 (1985), an action by owners of the Three Mile Island Plant alleging government failure to warn of equipment defects causing damage, the claims were barred by the exception, including those for negligent approval of design and construction plans, as well as the determination of what was necessary or significant from the standpoint of health or safety. *Id.*

271. Notwithstanding the expansive approach in *General Pub. Utils.*, it is unlikely that every decision involving choice by officials will be immune from scrutiny. All of the reported decisions, including the recent *Berkovitz* case, reveal that there is still a line to be drawn between policy decisions and wrongful implementation, in whatever terms it may be expressed. Other recent cases in which this has been done include: *Drake Towing Co. v. Meisner Marine Constr. Co.*, 765 F.2d 1060 (11th Cir. 1985); *Payton v. United States*, 679 F.2d 475 (5th Cir. 1982); *Aretz v. United States*, 604 F.2d 417 (5th Cir. 1979); *Gelley v. Astra Pharmaceutical Prods.*, 610 F.2d 558 (8th Cir. 1979)(dictum); *United States Fidelity & Guar. Co. v. United States*, 638 F. Supp. 1068 (M.D. Pa. 1986).

It also appears that the application of discretionary function immunity will depend upon the type of statute or regulation concerned. In the case of nuclear export licensing, the statutes are in the main broadly directive, and the regulations general, due no doubt to the highly technical nature of the subject. See 10 C.F.R. § 110.1 (1992). It will probably be necessary to look beyond published guidelines to the procedures and rules adopted internally by the NRC and DOE, and then to determine whether the standards therein set forth were followed, and whether the conduct complained of otherwise should fit the exception.

In any event, a full evidentiary hearing should be held, after discovery, in order to determine the availability of the "discretionary function" as an affirmative defense. *Stewart v. United States*, 199 F.2d 517 (7th Cir. 1952); *Moffitt v. United States*, 430 F. Supp. 34 (E.D. Tenn. 1976); *Desert Beach Corp. v. United States*, 128 F. Supp. 581 (S.D. Cal. 1955); see also JOHN STEADMAN ET AL., LITIGATION WITH THE FEDERAL GOVERNMENT

Assuming barriers of immunity can be overcome, the principal determinant in connection with the United States Government would be the existence of a duty that may be actionable.<sup>272</sup> Against such a duty, officials may be expected to argue that operating and maintaining the safety of a facility and materials is the charge of the recipient country's government,<sup>273</sup> and that insuring proper design and adequate fabrication is the task of the private manufacturer.<sup>274</sup> Such officials may also argue that separation of powers and foreign policy considerations militate against any judicial finding of official responsibility.<sup>275</sup> However, none of the foregoing contentions can usefully be taken to conclusion,<sup>276</sup> and all of them beg the question of whether or not

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§§ 13.107.4 to 13.107.5 (1983) [hereinafter STEADMAN].

272. Duty is primary among the elements of actionable negligence in United States law, the others being breach of duty, causation and damage. RESTATEMENT (SECOND) OF TORTS §§ 281-82 (1965); KEETON, *supra* note 245, at 356. In *Laird v. Nelms*, the Court stated: "In the vast majority of cases in the law of torts, liability is predicated on a breach of some legal duty owed by defendant to plaintiff, whether that duty involves exercising reasonable care in one's activities or refraining from certain activities altogether." 406 U.S. 797 (1972).

273. In *Natural Resources Defense Council, Inc. v. Nuclear Regulatory Comm'n*, 647 F.2d 1345, 1363 (D.C. Cir. 1981) the court determined that the safety and local environmental impact of a foreign (United States-supplied) nuclear facility would "turn substantially" on its ongoing operation and management, matters beyond the knowledge or control of the United States.

274. This argument of the government was endorsed by the Supreme Court, in the context of airplane design, in *United States v. S.A. Empresa de Viacao Aerea Rio Grandese (Varig Airlines) et al.*, 467 U.S. 797 (1984).

275. Thus, the conduct by the United States of its foreign nuclear policy may be contended to be a "political question" insulated from judicial scrutiny. *See, e.g.*, *Japan Lines, Ltd. v. County of Los Angeles*, 441 U.S. 434 (1979); *Baker v. Carr*, 369 U.S. 186 (1962); *Lori F. Damrosch, Foreign States and the Constitution*, 73 VA. L. REV. 483, 534 (1987).

It might also be argued that the United States Government ought not be held to any measure of responsibility because it cannot apply its standards of nuclear safety extra-territorially without impermissibly infringing the sovereignty of the recipient nation. Ronald J. Bettauer, *The Nuclear Non-Proliferation Act of 1978*, 10 LAW & POL'Y INT'L BUS. 1105, 1106 (1978). This was a factor in the decision that an environmental impact determination by the NRC was not required for an export sale to the Philippines. *NRDC*, 647 F.2d at 1356; *cf.* Harry H. Almond, *The Extraterritorial Reach of United States Regulatory Authority over the Environmental Impacts of its Activities*, 44 ALB. L. REV. 739 (1980).

276. As Judge Robinson noted in *NRDC*, 647 F.2d at 1379 (Robinson, J., concurring), problems inherent in a poorly designed facility or flawed component cannot be overcome solely by good maintenance. The United States should not abdicate its responsibility to take at least some measures to determine whether discernable design or production flaws exist. *Id.*, citing *In re Westinghouse Elec. Corp.*, 11 N.R.C. 631, 666 (1980) (Bradford, Comm'r, dissenting).

Such a duty on the part of the government may be constructed by analogy to those



there is a duty; the essential issue persists — allocation of legal accountability among various parties.<sup>277</sup> The requirement remains to determine upon what grounds, if any, the United States should be included; it is possible to enumerate at least three.

The first duty of the United States could be to prevent or warn of defects in nuclear technology or components, or proposed utilization risks, that become known or ought to be discovered during review of export applications by the NRC or some other relevant agency.<sup>278</sup> This theory places the United

found in the cases cited *supra* note 264; see also *United States Fidelity & Guar. Co. v. United States*, 638 F. Supp. 1068 (M.D. Pa. 1986) (60% of causal negligence attributable to EPA for failure to direct contractor to take certain steps once it undertook responsibility for cleanup of toxic waste site).

It has likewise been recognized that the presence of a political determination is not a talismanic shield against all liability. In *McKay v. United States*, the court stated:

It is true that there are political aspects present in, for example, making the decision to manufacture nuclear components, but this does not reach beyond the actual decision for purposes of making it a political question. Nor does it rule out all possible remedies which are available to people who are either physically or materially hurt. Thus the political question theory and the separation of powers doctrine do not ordinarily prevent individual tort recoveries (citations omitted).

*McKay v. United States*, 703 F.2d 464 (10th Cir. 1983).

Of course, the *McKay* opinion involved acts of the United States through contractors, as did *United States Fidelity*, but the issue of whether a duty exists is basically the same where the government is integrally involved in the activity concerned. See *supra* notes 253, 264 and accompanying text.

The matter of extraterritorial imposition of United States safety standards is a forensic red herring. No question of it exists apart from the issue of the foreign government's obligations and liabilities. See *infra* notes 288-302 and accompanying text.

277. See *supra* notes 51-71 and accompanying text.

278. Such a duty has been urged by a number of analysts and commentators. In his dissent in *In re Westinghouse Electric Corp.*, 11 N.R.C. at 667-68, Commissioner Bradford argued strenuously that the United States should be placed alongside the exporter in legal obligation because of the requirement of government approval. This position was highlighted in Judge Robinson's opinion in *NRDC*, 647 F.2d at 1379 n.2 (Robinson, J., concurring). See also Sullivan, Note, *supra* note 251, and Linder, Note, *supra* note 25, at 477. In that case, the NRC, with knowledge of the potential threats posed by the proposed location of the reactor on a geologically unstable site, voted 3-2 to allow the sale, and the Court of Appeals, also by split vote, upheld the determination on the ground that no environmental impact study was statutorily mandated on the part of the NRC. *NRDC*, 647 F.2d at 1351, 1370. One may speculate whether culpability might *ipso facto* arise from the sale of a hugely dangerous instrumentality whose safety of utilization is the subject of such controversy among the selling parties.

Other reported decisions have recognized duties arising from closely analogous situations. In *Broudy v. United States*, 722 F.2d 566 (9th Cir. 1983), it was stated that the United States could be held responsible for failure to monitor and warn of radiation danger to a serviceman where knowledge of the hazard was acquired after he left the military. To similar effect is *Aretz v. United States*, 604 F.2d 417 (5th Cir. 1979), regard-

States Government in a position similar to that of the manufacturer or exporter itself, in recognition of its responsibilities in the licensing and approval process.<sup>279</sup> Although arguably just and consistent with state law, such a duty may encounter a claim of immunity for the exercise of discretionary judgment in inspection and review; such a contention should not, however, be allowed to nullify the underlying duty.<sup>280</sup>

A second foundation on which a United States Government duty could rest is the disparity in expertise, relative to evaluating the risks associated with nuclear energy, that will usually exist between it and recipient nations.<sup>281</sup> This is supported empirically by the lack of relevant proficiency<sup>282</sup> in developing

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ing safety-related information acquired by a government agency that failed subsequently to alter its instructions for handling. And although liability was denied, it was recognized in *In re Agent Orange Prod. Liab. Litig.*, 818 F.2d 204, 208-09 (2d Cir. 1987), that prior knowledge and failure to warn might be a basis of official liability.

279. See *supra* note 253.

Industrialized nations have been accused of foisting onto lesser-developed countries all manner of subpar products in order to create markets. Both Congress and the NRC are aware of this problem in the context of nuclear facilities and technology, according to citations in *NRDC*, 647 F.2d at 1345, 1379-80 n.92.

According to a staff memorandum quoted in a statement of the Natural Resources Defense Council, Sierra Club and Union of Concerned Scientists, in *In re Westinghouse*, 11 N.R.C. 631, the NRC has had knowledge that United States manufacturers often did not furnish information adequately to foreign purchasers, and attempted design innovations first in foreign reactors.

After the Three Mile incident, a commission appointed by the Philippine Government concluded the reactor designed to be licensed and sold to it was not safe, but was based on "an old design plagued with unresolved safety issues." See *NRDC*, 647 F.2d at 1383 n.133.

280. See *supra* note 269 and accompanying text regarding "discretionary function" exception to waiver of immunity.

The NRC has thus far consistently refused to include foreign environmental, health or safety impacts among its considerations in export licensing, based upon the policy formulation of the executive branch referenced *supra* note 251. See citations contained in concurring opinion of Robinson, J. in *NRDC*, 647 F.2d at 1345, 1362; see also Sullivan, Note *supra* note 251; Linder, Note, *supra* note 25, at 477. It is doubtful this is the variety of "discretion" the drafters of the FTCA meant to insulate from review.

281. Accidental risk may increase, given the financial inability of lesser-developed countries to properly maintain or repair nuclear facilities.

282. In addition to lacking experience in general, lesser developed countries have regulatory resources that are inadequate to meet the problems of nuclear safety regulation. *NRDC*, 647 F.2d at 1370, 1380; Sullivan, *supra* note 251, at 59.

An example from the sale at issue in *NRDC*, is reported in Nicholas C. Yost, *American Governmental Responsibility for the Environmental Effects of Actions Abroad*, 43 ALB. L. REV. 528, 534 (1979), in which it is recounted that the Philippines requested the "loan of an expert" from the NRC to perform a two-week study, and were informed that a comparable application in the United States requires six man-years of work. The United States Geological Survey subsequently refused to certify the work of a commis-

countries, who nevertheless are eager to obtain the perceived benefits of the technology.<sup>283</sup> It resembles products liability notions of risk allocation that hold that the party to a transaction possessing superior know-how is in the best position to guard against, or at least inform of, product hazards.<sup>284</sup>

Thirdly, international law may be said to impose obligations which give rise to an additional basis of duty on the part of the United States Government.<sup>285</sup>

Although the critical task of allocating legal accountability remains, the foregoing concepts could form a valid basis for United States Government responsibility. In some respects, it may seem unsettling that liability of the United States is defined by public policy arguments and state and international law concepts still to be fully developed.<sup>286</sup> It is likewise far from clear to what extent legislative undertakings ought to form the basis of responsibilities<sup>287</sup> to persons and governments abroad. But these

sion appointed by the Filipino Government to study the likelihood of damage from seismic activity at the site. *NRDC*, 647 F.2d at 1383.

283. See generally WARREN FREEDMAN, *INTERNATIONAL PRODUCTS LIABILITY* (1986); H. DUINTJER TEBBENS, *INTERNATIONAL PRODUCT LIABILITY* (1979). See also *supra* notes 6 and 282.

284. As mentioned *supra* note 262 and accompanying text, the United States Government cannot be held strictly liable in tort. However, liability for defective products may also be grounded upon negligence. *United States v. Carroll Towing Co.*, 159 F.2d 169 (2d Cir. 1947); see also *supra* note 245. The government is not, of course, the actual vendor, so the parallel is not complete; however, if the government is found to have a duty it has breached causing injury, it is unimportant whether the right of action is called "products liability."

285. These obligations are discussed separately *infra* notes 303-10 and accompanying text.

In the United States, it has always been recognized that the law of nations is part of domestic law, subject to overriding constitutional requirement or federal legislation. See, e.g., *The Paquete Habana*, 175 U.S. 677 (1900); see generally THOMAS M. FRANCK & MICHAEL J. GLENNON, *FOREIGN RELATIONS AND NATIONAL SECURITY LAW* 96 (1987).

286. Recall the statement in *Rayonier* that liability of the United States may admit of novel concepts of duty and responsibility. *Rayonier, Inc. v. United States*, 352 U.S. 315 (1957).

287. The differing shadings of government liability under federal statutes and regulations are illustrated by the approaches taken in two decisions involving domestic injury, both involving federal agencies' allegedly having failed to control the distribution of substances which turned out to cause harm. In *Schindler v. United States*, 661 F.2d 552 (6th Cir. 1981), involving granting of a license to a private company to produce a vaccine, the court (citing numerous other federal cases), determined that regulatory statutes would be relevant to the duty of government in defining the "scope of the undertaking of the United States and the plaintiff's right to rely thereon." 661 F.2d at 560 n.28, 561 n.29. However, in *Baer v. United States*, 511 F. Supp. 94 (N.D. Ohio 1980), the court cites numerous opinions for the proposition that "the [FTCA] was not designed to redress breaches of federal statutory duties . . ." 511 F. Supp. at 96. But the opinion

are the instruments with which one must probe for a just solution in the absence of a workable global accountability arrangement.

b. Foreign Governments

Many of the same considerations treated in the preceding subsection will apply to the foreign nation or nations involved in an international nuclear power accident. Any determination of liability will necessarily include the governments of these countries.

There are policy reasons for this as persuasive as those concerning the United States.<sup>288</sup> First and perhaps foremost, the development and utilization of their nuclear energy compatibilities are no less a matter of governmental concern in other nations than in the United States.<sup>289</sup> In addition, the foreign state is charged with fulfilling obligations to its people that are inherent in the concept of nationhood, including at minimum the supervision and safe operation of the facility,<sup>290</sup> the protection of the populace from the effects of terrorism or other hostile activity,<sup>291</sup> and minimizing loss and injury in the event of disaster.

Nevertheless, the question of grounds of liability returns, and there are legal obstacles to be cleared. Although a foreign country may be held liable in the same manner and to the same extent as a private person under United States law,<sup>292</sup> this is cir-

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goes on to hedge, acknowledging "precedents which have addressed the issue have uniformly recognized that allegations of negligence in the enforcement of federal statutes or regulations are actionable under [FTCA] where the conduct in question results in a violation of a corresponding duty imposed by applicable state law." *Id.* at 97.

288. See *supra* notes 248-55 and accompanying text.

289. See Häckel, *supra* note 252; Ashok Kapur, *Nuclear Energy, Nuclear Proliferation and National Security: Views from the South*, in *NUCLEAR EXPORTS AND WORLD POLICY* 163 (Robert Boardman & James F. Keely eds., 1983); see also *supra* note 252 regarding other governments' promotion of nuclear industries.

290. See *Compensation for Nuclear Damage*, *supra* note 255, at 67; see also *supra* notes 72, 81 and accompanying text.

291. See *supra* notes 15-16 and accompanying text, and *infra* notes 375-80 and accompanying text.

It is the position of the IAEA, as reported in GAO REPORT 1985, *supra* note 6, at 16 & 19, that the ultimate responsibility for safety devolves upon the government where the nuclear facility is located.

292. 28 U.S.C. § 1606 (1976). RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW OF THE UNITED STATES § 207 (1987) states that foreign governments may be held vicariously liable for the acts of their political subdivisions or instrumentalities as a matter of substantive law.

cumscribed by immunity concepts.<sup>293</sup> Moreover, although most foreign jurisdictions<sup>294</sup> allow liability to be imposed both upon the public sector<sup>295</sup> and for official acts,<sup>296</sup> by virtue thereof a

293. The immunity of a foreign state from suit is the point of departure under the FSIA. See *supra* note 86. The only readily applicable exception is a counterclaim if the foreign government brings suit or intervenes. See *supra* notes 89-91 and accompanying text. See also *infra* note 298 and accompanying text.

294. It should be borne in mind that as to nations whose laws have been enacted pursuant to the multilateral treaties or those that have adopted liability schemes patterned after them, all liability is to be "channeled" to the facility operator, and some provision is expressly made for governmental liability once the limits of the operator's liability is surpassed. See *supra* note 171. In the event such law controls, there would also be no question of United States liability, and no United States concern would be held responsible except to the operator based on contract or willful wrong. See *supra* note 171.

295. This should not, of course, apply to nations with laws that channel liability to operators and have structured liability systems. See *supra* note 172 and accompanying text.

No attempt is made herein at a survey of foreign law, and summaries are provided only. It is even more difficult to synthesize government liability concepts than private vicarious liability, because of the many differences among public law systems of nations.

In general, however, it may be said that common law countries have largely banished previous concepts of non-liability by statute, and their governments may be held liable for breaches of official duty. See STREET, *supra* note 82, at ch. II; Jeremy McBride, *Damages as a Remedy for Wrongful Administrative Action*, 38 CAMBRIDGE L.J. 323 (1979); Constance Whippman, Comment, *The Liability of Public Authorities — A Retreat from Anns?*, 1986 J. BUS. L. 404; Gynla Eörsi, *Private and Governmental Liability for the Torts of Employees and Organs*, XI INT'L ENC. COMP. L. TORTS ch. 4, 85 (1975); see also S.H. Bailey & M.J. Bowman, *The Policy-Operational Dichotomy — A Cuckoo in the Nest*, 45 CAMBRIDGE L.J. 430 (1986).

Civil law countries mostly allow official entities to be held responsible upon the same grounds as private individuals or concerns, and include violation of official duties as a basis. Eörsi, *supra*, at 83; STREET, *supra* note 82, at 13; Council of Europe, *The Liability of the State and Regional and Local Authorities for Damage Caused by Their Agents and Administrative Services, Proceedings of the Ninth Colloquy on European Law, Legal Affairs* (1981); PAN AMERICAN UNION, THIRD PARTY LIABILITY IN THE FIELD OF NUCLEAR ENERGY 11 (1961).

For a survey of various nations' laws, see generally MAX PLANCK INSTITUTE, LIABILITY OF THE STATE FOR ILLEGAL CONDUCT OF ITS ORGANS (Hermann Mosler ed., 1967); RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW OF THE UNITED STATES § 451, n. 1 (1987).

296. Some common law and commonwealth countries distinguish between proprietary and governmental functions, maintaining official immunity for the latter. The degrees are variable, but the most notable example is India, where the law provides for governmental immunity for acts committed in the exercise of "sovereign power" even if an agent has acted negligently. Eörsi, *supra* note 295, at 93-94.

Latin American nations also have observed the proprietary-governmental distinction in the past, but it has been eroded to near extinction in Argentina, Brazil and Uruguay. Eörsi, *supra* note 295, at 104. In European countries, immunity concepts appear also to be well on the way to desuetude. For a country-by-country discussion see Eörsi, *supra* note 295, at 104.

It has been said that for all practical purposes, under the internal legal order of most countries, the state is not considered immune in its own courts. BADR, *supra* note 83, at

significant obstacle ironically appears in United States courts: The "Act of State" doctrine may thwart judicial inquiry into the official acts of a foreign government, as a matter of United States law and foreign policy.<sup>297</sup> This could include such things as supervision or operation of a nuclear facility, security measures taken, and the like. Unless an exception is found or formulated,<sup>298</sup> bases of liability might go unexamined. However, it

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78. Indeed, western concepts of sovereign immunity have generally been regarded as alien to most systems. BADR, *supra* note 83, at 78.

297. Under the classical epigrammatic formulation, "[t]he courts of one country will not sit in judgment of the acts of the government of another done within its own territory." *Underhill v. Hernandez*, 168 U.S. 250, 252 (1897); for a complete discussion, see RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW OF THE UNITED STATES § 443 (1987).

Although the act of state doctrine has ordinarily been applied to expropriation of American capital, it has often been employed in other contexts. See, e.g., *Republic of Philippines v. Marcos*, 818 F.2d 1473 (9th Cir. 1987); *Clayco Petroleum Corp. v. Occidental Petroleum Corp.*, 712 F.2d 404 (9th Cir. 1983), *cert. denied*, 464 U.S. 1040 (1984); *Hunt v. Mobil Oil Corp.*, 550 F.2d 68 (2d Cir.), *cert. denied*, 434 U.S. 984 (1977); *Timberlane Lumber Co. v. Bank of America Nat'l Trust & Sav. Ass'n*, 549 F.2d 597 (9th Cir. 1976). The Supreme Court affirmed a refusal to apply it in the context of alleged bribes paid to a foreign official in *W.S. Kirkpatrick & Co. v. Environmental Tectonics Corp.*, 493 U.S. 400 (1990), a decision seemingly evincing an intent to limit the application of the doctrine.

It could be said that the doctrine's foundational underpinnings, difficulties of applying foreign law and the potential for offense to another state, see *Banco Nacional de Cuba v. Sabbatino*, 376 U.S. 398, 415 (1964), but see *Kirkpatrick*, 493 U.S. at 409-10, seem pertinent to inquiries regarding operation of the nation's nuclear facilities and procedures undertaken to protect the health and welfare of its people.

The operation of the doctrine in a situation in which a plaintiff or counter-claimant contends a foreign state is liable under its own law is further discussed in Clyde H. Crockett, *The Liability of Foreign States: The Role of Foreign Municipal Law*, 11 N.C. INT'L L. & COMM'L REG. 51 (1986).

298. A number of possible exemptions from the act of state doctrine suggest themselves, although obviously none have been considered in anything like the instant context. For one, the rule has never been applied where a noncontroversial principle of customary international law is alleged to have been violated. See RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW OF THE UNITED STATES § 443 cmts. b and c (1987). This may have been the reasoning underlying its rejection. *Filartiga v. Pena-Irala*, 630 F.2d 876 (2d Cir. 1980); *Von Dardel v. Union of Soviet Socialist Republics*, 623 F. Supp. 246 (D.D.C. 1985); *Letelier v. Republic of Chile*, 488 F. Supp. 665 (D.D.C. 1980).

In a proper case, a "treaty exception" discussed in some decisions should apply to situations involving an "agreement for cooperation," *supra* notes 26, 253, dealing with responsibilities of the foreign government. Cf. *Kalamazoo Spice Extraction Co. v. Government of Socialist Ethiopia*, 729 F.2d 422 (6th Cir. 1984); *Ramirez de Arellano v. Weinberger*, 745 F.2d 1500 (D.C. Cir. 1984); *American Int'l Group v. Islamic Republic of Iran*, 493 F. Supp. 522 (D.D.C. 1980), *vacated on other grounds*, 657 F.2d 430 (D.C. Cir. 1981); RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW OF THE UNITED STATES § 443 cmt. j (1987).

In somewhat the same manner as under the FSIA, an exception might also be found if the foreign government brings an action in a United States court, by way of counter-claim. In *First Nat'l City Bank of New York v. Banco Nacional de Cuba*, 406 U.S. 759

does not seem that an international nuclear accident, causing massive losses and injury, in which the United States or United States defendants are sought to be held liable, even approximately fits the contexts in which the doctrine has been or should be employed. A court should, at a minimum, disregard it for purposes of allocation of responsibility among defendants.<sup>299</sup>

Apart from the foregoing difficulties, it is possible to base a model for foreign government accountability upon three normative pillars. First, the foreign state may have contractual commitments which operate in favor of the United States, and perhaps other defendants.<sup>300</sup> Second, foreign state responsibility under international law would at least equal that of the United States.<sup>301</sup> Third, and most important, the obligations inherent in

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(1972), the plurality held that the act of state doctrine did not preclude a setoff, not exceeding the amount of relief sought by the foreign official plaintiff, where the State Department had opined that the doctrine should not be applied, and there was no other indication that adjudication would damage foreign relations. *See also* Banco Nacional de Cuba v. Chase Manhattan Bank, 658 F.2d 875 (2d Cir. 1981). *But see* Empresa Cubana Exportadora de Azucar v. Lamborn & Co., 652 F.2d 231 (2d Cir. 1981).

The foregoing cases suggest that there is some latitude to find reasons not to apply the act of state doctrine, without doing violence to the orderly development of the law and international relations.

299. After all, in merely apportioning fault the court is not expressly passing judgment upon the actions of the government for purposes of rendering judgment or imposing sanctions, but rather sizing up the extent to which its acts or omissions are responsible for the occurrence.

*See infra* notes 381-410 and accompanying text regarding comparative fault analysis and apportionment of responsibility.

300. "Hold harmless" provisions between a foreign government and a United States supplier would furnish such a basis if present. As part of any "Agreement for Cooperation," for furnishing materials and technology, the recipient nation "must guarantee that 'adequate physical security' shall be maintained over exported material," 42 U.S.C. § 2153(a) (1988). Numerous such agreements contain indemnification clauses in favor of the United States, and further statements that the receiving government is responsible for material after delivery. *See, e.g.,* Agreement for Cooperation Concerning Civil Uses of Atomic Energy, July 17, 1972, U.S.-Brazil, T.I.A.S. No. 23, Part 3, 7439, at 2477; *but see also* Agreement for Cooperation Concerning Civil Uses of Atomic Energy, Aug. 8, 1963, T.I.A.S. No. 14, Part 2, 5446, at 1484 (acknowledging the "responsibility" of India for the handling and use of materials, but containing no hold harmless or indemnity clause).

It would be a matter of interpretation whether these agreements would encompass safety at nuclear facilities where the "material" presumably is being utilized, and whether their terms are intended to benefit others than the United States Government.

301. *See infra* notes 303-10 and accompanying text.

The extent to which international law forms part of the domestic law of other nations is beyond the scope of this writing. The subject is complicated by issues of constitutional law in each country and, in some cases, relations among bodies politic in federal systems.

However, in the majority of instances, as in the United States, *see supra* note 285, customary international law has been incorporated into local law, but remains subject to

nationhood should create a duty on the part of the government to share the responsibilities of prevention and amelioration of the effects of nuclear mishap.<sup>302</sup> These considerations clearly militate in favor of allowing a court to include the nation, or nations, in which an incident occurred or injury was caused among those required to share the burdens of recompense.

### c. Emerging Theories of State Responsibility Under International Law

Numerous developing constructs of state responsibility<sup>303</sup> under the law of nations<sup>304</sup> provide a foundation upon which the governmental liability discussed in the preceding sections may be said to rest.<sup>305</sup> In this framework, a foreign government would

overriding national legislation and judicial decisions of final authority. *See generally* WOLFGANG G. FRIEDMANN, *THE CHANGING STRUCTURE OF INTERNATIONAL LAW* 110-14 (1964); D.W. GRIEG, *INTERNATIONAL LAW* 52 (2d ed. 1976); IAN BROWNLIE, *PRINCIPLES OF PUBLIC INTERNATIONAL LAW* 44-53 (2d ed.1973).

302. *See also supra* notes 72, 81-82 and accompanying text.

303. The writings that have attempted to collect and synthesize the various theories include: Hartke, Note, *supra* note 13, at 324-31; Günther Handl, *International Transfer of Hazardous Technology and Substances: Caveat Emptor or State Responsibility? The Case of Bhopal, India*, in 79 *PROC. AM. SOC. INT'L L.* 303, 318 (1985) [hereinafter Handl, *International Transfer*]; Linder, Note, *supra* note 25, at 488-92.

304. Here the reference is to public international law, which governs the relations of nations *inter se* at the level of national political authority, as opposed to the workings of private law solutions and remedies across national boundaries, sometimes called "private international law," which furnishes the structure for the remainder of the discussion herein. *See* GERHARD VON GLAHN, *LAW AMONG NATIONS* 3 (3d ed. 1976); F.A. MANN, *STUDIES IN INTERNATIONAL LAW* 179 (1973). In a dispute before local courts, what is at issue is not interstate relations, but relations between two or more subjects of private rights and obligations, one of whom may be a state acting in a capacity that will subject it to the tribunal's jurisdiction. *See supra* notes 265-71 and 293-99 and accompanying text regarding state immunity.

305. Claims of nations against each other are normally asserted in international tribunals. *See supra* note 40. This is to be compared to suits within the national courts of a country, which are principally treated in this writing.

However, a foreign state has rights it may assert and it could do so in United States tribunals. Absent treaty, international law does not itself require any particular reaction with respect to violations of its precepts, and leaves nations free to make laws apply as they consider appropriate. *See* 1 CHARLES CHENNEY HYDE, *INTERNATIONAL LAW* § 219, at 729 n.5 (2d ed. 1945); *RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW OF THE UNITED STATES* §§ 402, 702 and 906, cmt. b (1987). *See also* 28 U.S.C. § 1350 (1988) (Alien Tort Claims Act); *Filartiga v. Pena-Irala*, 630 F.2d 876 (2d Cir. 1980); *Tel-Oren v. Libyan Arab Republic*, 726 F.2d 774, 777 (D.C. Cir. 1984) (Edwards, J., concurring); J.M. Lewis Humphrey, Note, *A Legal Lohengrin: Federal Jurisdiction under the Alien Tort Claims Act of 1789*, 14 *U.S.F. L. REV.* 105 (1979). Of course, this is not to suggest that a suit could be maintained without any connection to the United States; *see supra* notes 34-37, 42.

*See also supra* note 37 and accompanying text regarding jurisdiction in United



also be entitled to assert a right to compensation for its losses and injuries to its citizens against United States defendants. The theories have developed from decisions of international tribunals,<sup>306</sup> works of international organizations,<sup>307</sup> and the writings of international law scholars.<sup>308</sup> They may be asserted as an additional basis for a finding of duty,<sup>309</sup> or a separate ground of

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States courts for suits in which foreign states are plaintiffs, *supra* notes 84-93 for jurisdiction over foreign states and instrumentalities, and *supra* notes 84-88 for immunity from suit of same.

306. The best known of these is *Trail Smelter*, (U.S. v. Can.) 3 R.I.A.A. 1905 (1949); other leading decisions are the *Corfu Channel* case, (U.K. v. Alb.), 1949 I.C.J. 4 (Apr. 9), and the *Nuclear Tests* case, (Austl. v. Fr.), 1973 I.C.J. 99 (June 22).

307. The most prominent is the *Stockholm Declaration of the U.N. Conference on the Human Environment*, U.N. Doc. A/Conf. 48/14/Corr. 1 (1972), reprinted in 11 I.L.M. 1416 (1972). Principle 21 holds that states have "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 limits of national jurisdiction."

Among the others are U.N. General Assembly Resolution 37/137 (December, 1982) regarding Protection against Products Harmful to Health and Environment, and the International Law Commission Draft Articles on State Responsibility, reprinted in UNITED NATIONS CODIFICATION OF STATE RESPONSIBILITY 325 (Marina Spinedi & Bruno Simma eds., 1987).

308. See, e.g. Günther Handl, *State Liability for Accidental Transnational Environmental Damage by Private Persons*, 74 AM. J. INT'L L. 525 (1980); Luis Kutner, *The Control and Prevention of Transnational Pollution: A Case for World Habeus Ecologicus*, 9 LAW. AM. 257 (1977).

THE RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW OF THE UNITED STATES § 601 (1987), specifies a duty on the part of a country from which environmental damage is caused to another aggrieved nation, including access to its tribunals by the latter's citizens.

309. State responsibility in international law has been declared susceptible of being grounded upon negligence principles. See *supra* notes 232-35, 239-45 and accompanying text. IAN BROWNLIE, 1 SYSTEM OF THE LAW OF NATIONS: STATE RESPONSIBILITY 30 (1983); ALLEN L. SPRINGER, THE INTERNATIONAL LAW OF POLLUTION 131 (1983).

It has also been theorized that liability may be vicariously imposed on state governments, based upon acts of their agencies or nationals, even if unauthorized. See IAN BROWNLIE, PRINCIPLES OF PUBLIC INTERNATIONAL LAW 357-58 (1966); RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW OF THE UNITED STATES § 207 (1987). The *Barcelona Traction* case, (Belg. v. Spain), 1970 I.C.J. 3 (Feb. 5), has been cited for an obligation on the part of a state to regulate the conduct of its corporate citizens by Professor Handl in his remarks to the American Society of International Law. See Handl, *International Transfer*, *supra* note 303, at 321. These surpass the more traditional notions that responsibility may only be imposed for authorized actions of government instrumentalities. See 1 HERSCH LAUTERPACHT, INTERNATIONAL LAW 399-400 (1970).

State responsibility based on strict liability has also been suggested. See Günther Handl, *Liability as an Obligation Established by a Primary Rule of International Law*, 16 NETH. Y.B. INT'L L. 49, 57 (1985); SPRINGER, *supra*, at 132-33; JAMES BARROS & DOUGLAS M. JOHNSTON, THE INTERNATIONAL LAW OF POLLUTION 20 (1974). However, the United States is immune under its law from being held strictly liable. See *supra* note 262 and accompanying text.

liability.<sup>310</sup>

d. Effect of Government Responsibility on Liability of Private Defendants

In the international development and utilization of nuclear energy, where there is pervasive involvement of governments of exporting and importing countries,<sup>311</sup> an important issue will be the extent to which such involvement<sup>312</sup> could operate to reduce the liability of private defendants. This might operate in three general ways: First, to absolve private parties of liability, in whole or in part, by way of defense; second, to allow them to obtain contribution or otherwise to allocate a portion of liability to governmental defendants; third, to assist the private parties in avoiding multiple or inconsistent adjudications.

The mechanisms whereby private defendants might be relieved altogether of liability because of public sector involvement may be generically called "derivative immunity."<sup>313</sup> They include rather narrow defenses based on adherence to contract specifications,<sup>314</sup> and legal justifications grounded on the idea

310. See generally Handl, *International Transfer*, *supra* note 303, at 57; Linder, Note, *supra* note 25, at 488-93.

Additional theories may be expected to emerge as international law evolves. One suggestion provides that insofar as nuclear technology transfers permit or abet nuclear utilization, they violate *jus cogens* (peremptory rules of law) and are perforce the basis of state responsibility. See Walter T. Gangl, Note, *The Jus Cogens Dimension of Nuclear Technology*, 13 CORNELL INT'L L.J. 63 (1980).

However, the United States has been reluctant to recognize an obligation under international law with respect to the effects of domestic actions beyond its boundaries. See Sanford E. Gaines, *Environmental Effects Abroad of Major Federal Actions: An Executive Order Ordains a National Policy*, 3 HARV. ENVTL. L. REV. 136, 152 (1979).

311. See *supra* notes 5-6, 22-31, 81, 248-55 & 288-300 and accompanying text.

312. See *supra* notes 248-55 and accompanying text regarding liability of United States Government and *supra* notes 288-300 and accompanying text regarding that of foreign governments.

313. This term, a bit of umbrella shorthand, is borrowed from *Pratt v. Hercules, Inc.*, 570 F. Supp. 773 (D. Utah 1982), but does not denote any widely-accepted nomenclature. *Pratt* involved the availability of governmental immunity to a private defendant that had no contract with the government (being a second-tier subcontractor), and followed no specifications beyond general regulations. *Id.* at 796.

Ordinarily, there is no immunity for private concerns under United States law, even if their activities are closely government-related. *Foster v. Day & Zimmermann, Inc.*, 502 F.2d 867 (8th Cir. 1974). Indeed, even though some private concerns are created by the federal government for a specific purpose, or are officially constituted governmental agencies, they will not be insulated from suit. *Kiefer & Kiefer v. Reconstruction Fin. Corp.*, 306 U.S. 381 (1939); *Sloan Shipyards Corp. v. United States Shipping Bd. Emergency Fleet Corp.*, 258 U.S. 549 (1922); STEADMAN, *supra* note 271, § 16.121.

314. The "contract specification defense" applies to products manufactured to the

that a private contractor should enjoy immunity by virtue of having acted for the government.<sup>315</sup> If the "government contract" formulation of the latter notion were to benefit a United States supplier, it would be only in the limited realm of application of United States law<sup>316</sup> to the design or construction of a

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order and specifications of another party, whether governmental or private. RESTATEMENT (SECOND) OF TORTS §§ 404 cmt. a, 389 cmt. e (1965). It is based upon negligence principles, and insulates the contractor from liability unless specifications are so obviously defective that a reasonably competent contractor would realize the product is unsafe. KEETON, *supra* note 245, at 646-81. See also Shaw v. Grumman Aerospace Corp., 778 F.2d 736, 739 (11th Cir. 1985); Raymond A. Pelletier, Jr., Note, *Liability of a Manufacturer for Products Defectively Designed by the Government*, 23 B.C. L. REV. 1025 (1982). The manufacturer is held to as high a standard as the designer if it possesses special knowledge or expertise. RESTATEMENT (SECOND) OF TORTS § 289(b) and cmt. m (1965). Thus, the defense applies only when the contractor is not negligent.

315. This is the "government contract" defense, which holds that a private contractor is not liable for damage caused by necessary incidents to work performed under contract with a governmental body. The seminal decision is *Yearsley v. W.A. Ross Constr. Co.*, 309 U.S. 18 (1940). It has always been recognized that immunity must not be allowed for negligence in performing the work. *Fidelity Title & Trust Co. v. Dubois Elec. Co.*, 253 U.S. 212 (1920); *Merritt, Chapman & Scott Corp. v. Guy F. Atkinson Co.*, 295 F.2d 14 (9th Cir. 1961). The same is true for actions not authorized by the contract. *Yearsley*, 309 U.S. at 21. The policy is that the contractor should not have to shoulder the entire liability burden while at the same time producing in accordance with government specifications. See generally Jeanne Bynum, Note, *The Government Contract Defense: An Overview*, 27 How. L.J. 275 (1984).

The defense has burgeoned in the area of defective design cases involving military products. See *Boyle v. United Technologies Corp.*, 487 U.S. 500 (1988); *In re Agent Orange Prod. Liab. Litig.*, 818 F.2d 187 (2d Cir. 1987) (affirming formulation of doctrine at 506 F. Supp. 762 (S.D.N.Y. 1980), *aff'd*, 635 F.2d 897 (2d Cir. 1985) and 534 F. Supp. 1046 (E.D.N.Y. 1982)); *Bynum v. FMC Corp.*, 770 F.2d 556 (5th Cir. 1985); *McKay v. Rockwell Int'l Corp.*, 704 F.2d 444 (9th Cir. 1983). However, it has also been applied to a number of products for civilian use. *Boruski v. United States*, 803 F.2d 1421 (7th Cir. 1986); *Burgess v. Colorado Serum Co.*, 772 F.2d 844 (11th Cir. 1985); *In re All Maine Asbestos Litig.*, 575 F. Supp. 1375 (D. Maine 1983), *aff'd in part*, 772 F.2d 1023 (1st Cir. 1985).

The apparent theoretical basis of the defense is an extension of the immunity of the government with respect to military products and otherwise, under the "discretionary function" exception to the FTCA, *supra* notes 268-69. *Boyle*, 487 U.S. at 511; *Feres v. United States*, 340 U.S. 135 (1950); *McKay*, 704 F.2d at 448; *Boruski*, 803 F.2d at 1430; *Burgess*, 772 F.2d at 846.

The recent *Boyle* case made clear that the law to be applied with respect to the defense is federal common law. The elements, although variously stated, may be fairly said to be three: (1) preparation (or at least approval) by the government of reasonably precise specifications; (2) manufacture in accordance with those specifications; (3) at least equal knowledge on the part of the government of the risks associated with the product. *Boyle*, 487 U.S. at 512.

316. See *supra* notes 211-30 regarding choice of law.

Although the matter is not exactly settled, it seems analytically necessary that the government itself be immune with respect to the activity in order for the contractor to be shielded. See Jonathan Glasser, Note, *The Government Contractor Defense: Is Sover-*

nuclear facility or component pursuant to contract with a foreign government.<sup>317</sup> However, there is a less circumscribed imputed immunity following from agency principles, which should be much more useful.<sup>318</sup> If the facts and law will otherwise permit, neither derivative immunity application should be objectionable as a matter of policy.<sup>319</sup>

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*eign Immunity a Prerequisite?*, 52 BROOK. L. REV. 495 (1986). As discussed *supra* notes 292-96, foreign concepts of governmental immunity are in general much more limited than in the United States; in any case, the defense does not seem to be one which is much recognized in foreign law systems.

317. The defense would be unnecessary in case of manufacture under contract with the United States Government, because the indemnity and limitation of liability provisions of Price-Anderson would operate. It will be recalled that manufacture or supply pursuant to contract with the United States is the only area in which Price-Anderson is applicable to incidents occurring in foreign countries. See *supra* note 205-08 and accompanying text.

As regards foreign governments, there is the quite real possibility, made more likely where the purchaser lacks expertise and regulatory sophistication, that the specifications may only nominally be those of the government, and their true origin lies wholly, or nearly so, with the contractor. The extent of such contractor involvement which is consistent with the government contract defense has not been legally resolved (and would doubtless depend upon the circumstances), but some involvement may be permitted. *Schoenborn v. Boeing Co.*, 769 F.2d 115 (3d Cir. 1985), *cert. denied*, 474 U.S. 1082 (1986); *Koutsoubos v. Boeing Vertol*, 553 F. Supp. 340 (E.D. Pa. 1982), *aff'd*, 755 F.2d 352 (3d Cir.), *cert. denied*, 474 U.S. 821 (1985).

318. The private defendant would be regarded as the agent of the United States or a foreign government for this purpose. A discussion of such derivative immunity may be found in Mark K. Sales, Note, *Government Contract Defense: Sharing the Protective Cloak of Sovereign Immunity After McKay v. Rockwell International Corp.*, 37 BAYLOR L. REV. 181 (1985).

Under such a reading, it might be possible for a supplier to obtain the benefit of governmental immunity by making reference to the "Agreement for Cooperation" between the United States and the recipient nation, which forms the legal framework for the export of materials, facilities, and technology, to demonstrate that the governments themselves are the bargaining parties and the private concerns are but their agents.

The following are passages from a typical agreement:

With respect to the application of atomic energy to peaceful uses, it is understood that arrangements may be made between either party or authorized persons under its jurisdiction and authorized persons under the jurisdiction of the other party for the transfer of equipment and devices and materials . . . and for the performance of services with respect thereto.

. . . .

It is understood that the [NRC] may transfer to a person or persons under the jurisdiction of the government of the United States of America such of its responsibilities under this Agreement . . . as the Commission deems desirable.

Agreement for Cooperation Between the Government of the United States of America and the Government of the Federative Republic of Brazil Concerning Civil Uses of Atomic Energy, July 17, 1972, U.S.-Braz., 23 U.S.T. 2477 (entered into force Sept. 20, 1972). Similar treaties may be found in United States Department of State, *TREATIES IN FORCE* (1987).

319. The rationales most often cited in support of this kind of defense bear most

A second way in which public sector legal responsibility will bear upon the exposure of other defendants is in regard to contribution<sup>320</sup> or other loss apportionment among parties held jointly liable for a nuclear accident.<sup>321</sup> As a general proposition,

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readily upon military applications. These rationales include preventing second-guessing of military decisions through tort suits, encouraging contractors to work closely with officials, and avoiding the passing on of liability costs in an area where the government would not otherwise be liable. *See McKay*, 704 F.2d at 449-50. Although such concerns may not apply in shifting liability to a foreign government for its nuclear energy program, the broader justification that a contractor should not bear responsibility for doing a government's bidding remains.

Of course, compensation of the injured victims is the factor which ought to override all others. But this does not remove the issue of who should bear a share, and what share, of the burden. In United States cases involving the government contractor defense in the setting of defective products causing injury, there has almost always been an alternative means under federal law for the injured parties to be compensated (such as the Veterans' Benefit Act, 38 U.S.C. §§ 301-363 (1988), the Federal Employees' Compensation Act, 5 U.S.C. §§ 8101-8193 (1988), or the National Swine Flu Immunization Program, Pub. L. No. 94-380, 90 Stat. 1113 (repealed 1978)). With regard to the overseas development of nuclear energy, there would seem to be nothing repugnant about shifting all or part of the onus of compensation to the government that embarked upon the program. The fact that the government itself may be a plaintiff does not alter this. *See supra* notes 289-91 and accompanying text.

320. As discussed *supra* note 221, contribution among joint tortfeasors is now an established feature among legal systems worldwide.

Contribution is to be distinguished from "indemnity," which shifts the entire burden of liability from one defendant to another. Such liability shifting occurs only if the second party is deemed primarily liable to such an extent as to excuse the "passive" or "secondary" fault of the first party. *See, e.g., Eagle-Picher Indus., Inc. v. United States*, 846 F.2d 888 (3d Cir. 1988); *In re All Asbestos Cases*, 603 F. Supp. 599 (D. Haw. 1984); FRIEDMANN, *supra* note 301, at 41. Indemnity may, of course, also be based upon contract.

As to the choice of law governing issues of contribution and indemnity, United States courts have tended to treat the matters as part of the law applicable to the merits of the claim. *See LEFLAR, supra* note 156, at 442 THE RESTATEMENT (SECOND) OF CONFLICT OF LAWS § 221 (1971) states that these issues should be treated according to the most significant relationship like other choice of law matters, although the view has been expressed that as matters "primarily of remedy" they should be governed by *lex fori*. Albert A. Ehrzenweig, *Restitution in the Conflict of Laws: Law and Reason vs. the Restatement Second*, 36 N.Y.U. L. Rev. 1298 (1961). The former view seems superior, in view of the multifaceted choice of law tasks facing the court and the significance of the conflicting interests present. Civil law countries will apply rules governing the wrong, 2 ERNST RABEL, THE CONFLICT OF LAWS: A COMPARATIVE STUDY 275 (1958). On the other hand, the United Kingdom and jurisdictions following its processes will treat the matter as contractual (*i.e.*, as quasi-contract) and apply the law of obligations. 2 DICEY & MORRIS ON THE CONFLICT OF LAWS 1407-08 (Lawrence Collins ed., 11th ed. 1987). Properly done, these should not lead to inconsistent results.

321. Once contribution among jointly liable parties entered the common law, the proportion of liability was initially determined on a per capita basis. *See also supra* note 221. Now, however, in jurisdictions having comparative fault, contribution will be linked to causation in fact to define proportionate liability shares. *See Nance v. Gulf Oil Corp.*, 817 F.2d 1176, 1181 (5th Cir. 1987); *Hamme v. Dreis & Krump Mfg. Co.*, 716 F.2d 152,

the United States and other governments may be made the subject of contribution claims.<sup>322</sup> However, there remain the special obstacles of governmental immunity from suit<sup>323</sup> or from liability,<sup>324</sup> and the Act of State doctrine.<sup>325</sup> The more efficacious approach would be the allocation of liability under comparative fault, thereby bypassing the limitations upon contribution and indemnity; thus, the recovery for plaintiffs would in any case be reduced by the proportion of fault of an official party, even though the latter is beyond reach because of lack of jurisdiction or immunity.<sup>326</sup>

An important third effect of governmental responsibility upon that of private defendants may be to relieve them, in significant measure,<sup>327</sup> from the risks and burdens resulting from

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159 n.9 (3d Cir. 1982); *Mattschei v. United States*, 600 F.2d 205, 229 (9th Cir. 1979).

See also *infra* notes 381-410 and accompanying text.

322. Contribution and indemnity may be had against the United States Government, and it may be brought in as a third party defendant for such purpose under the FTCA if it has not been named by plaintiffs. *Lockheed Aircraft Corp. v. United States*, 460 U.S. 190 (1983); *United States v. Yellow Cab Co.*, 340 U.S. 543 (1951); *In re All Maine Asbestos Litig.*, 581 F. Supp. 963, 975 (D. Me. 1984). This is true even if two modes of trial — one jury and one non-jury — are required. *Yellow Cab*, 340 U.S. at 556; *STEADMAN*, *supra* note 271, at 284; but see *infra* note 324. In accordance with accepted choice of law principles, contribution against the United States in diversity suits is governed by the applicable state law. *United States Lines, Inc. v. United States*, 470 F.2d 487 (5th Cir. 1972); *In re General Dynamics Asbestos Cases*, 602 F. Supp. 497 (D. Conn. 1984).

As referenced *supra* notes 292-96 and accompanying text, notions of sovereign immunity are much less influential under foreign law, and a government may be expected, all other things being equal, to bear its share of legal responsibility as any other defendant.

323. Contribution or indemnity claims must be asserted against foreign governments or instrumentalities, regardless of applicable law, consistently with the FSIA. See *supra* notes 85-91 and accompanying text, in which the limited circumstances under which this may be done are outlined.

324. Contribution may be had from the United States Government only where the plaintiffs have a right of recovery against it. *United States v. Standard Oil Co. of Cal.*, 495 F.2d 911, 919 (9th Cir. 1974); *Van Sickel v. United States*, 285 F.2d 87 (9th Cir. 1960). If the United States is substantively immune from liability, no right of contribution or indemnity may be enforced against it. *Hefley v. Textron, Inc.*, 713 F.2d 1487 (10th Cir. 1983); *Certain Underwriters at Lloyd's v. United States*, 511 F.2d 159 (5th Cir. 1975).

325. See *supra* notes 297-98 and accompanying text.

326. See *infra* notes 381-410 and accompanying text regarding liability apportionment and comparative fault. Of course, the foreign government or instrumentality may seek to intervene in order to protect its interests, and perhaps in order to see justice completely done.

327. This qualifier is because the doctrine to be discussed is one of United States law and, as shortly will be seen, of uncertain application outside courts of the United States.

suits and judgments in multiple fora<sup>328</sup> by the requirements of mandatory joinder. Under United States procedure,<sup>329</sup> certain classes of parties are to be joined if feasible;<sup>330</sup> the action may not be allowed to proceed against the other parties if the court determines, due to seriously prejudicial effects,<sup>331</sup> that it would be unjust to do so.<sup>332</sup> This could be employed in suits arising from nuclear disaster in which foreign governments or instru-

328. See *supra* notes 152-68 and accompanying text.

329. Federal civil procedure is discussed here, because it is highly probable that nuclear disaster suits will be brought, or wind up in, federal court. See *supra* notes 34-38 and accompanying text.

In addition, however well or poorly it fits principles of choice of laws, the rule appears to have been that mandatory joinder of parties is considered "procedural" and, in any event, to be governed by *lex fori* in United States courts. *Provident Tradesmens Bank & Trust Co. v. Patterson*, 390 U.S. 102, 125 (1968); 7 CHARLES A. WRIGHT ET AL., *FEDERAL PRACTICE AND PROCEDURE: CIVIL 2D* § 1603 (1986). The rules discussed in this section are subject to the provisions of Federal Rule 23 regarding class actions. See *FED. R. Civ. P.* 19(d).

330. Under *FED. R. Civ. P.* 19(a), the "persons to be joined if feasible" include those in whose absence complete relief cannot be afforded, or those with such an interest in the subject of the action that its adjudication in their absence would be gravely prejudicial to the interests of *present or absent parties*. *Id.*

The general policy is to allow courts to afford complete relief, and to avoid multiple or repeated suits. *Evergreen Park Nursing & Convalescent Home, Inc. v. American Equitable Assurance Co.*, 417 F.2d 1113, 1115 (7th Cir. 1969); *International Union of Operating Eng'rs Local 103 v. Irmscher & Sons, Inc.*, 63 F.R.D. 394, 397 (N.D. Ind. 1973); *WRIGHT, supra* note 329, § 1604.

331. Prejudice to those before the court includes the risk of double, multiple or otherwise inconsistent obligations to outside parties. *FED. R. Civ. P.* 19(a); *Haas v. Jefferson Nat'l Bank of Miami Beach*, 442 F.2d 394, 397-98 (5th Cir. 1971); *Ayers v. Ackerman*, 324 F. Supp. 814, 817 (D.S.C. 1971). It has been specifically stated to include the risk of sole responsibility for a shared liability. *Provident Tradesmens Bank & Trust Co.*, 390 U.S. at 110.

The factors the court is to consider are set forth in *FED. R. Civ. P.* 19(b). They include, *inter alia*, prejudice to present and/or absent parties arising from a judgment that may be rendered, whether such prejudice may be avoided, and whether plaintiffs will have an adequate remedy if the action is dismissed for nonjoinder. *FED. R. Civ. P.* 19(b).

None of these factors, nor any combination, is an automatic ground for dismissal. Rather, they are to be weighed on a case-by-case basis. *Kaplan v. International Alliance of Theatrical & Stage Employees*, 525 F.2d 1354, 1361 (9th Cir. 1975); *Lynch v. Sperry Rand Corp.*, 62 F.R.D. 78 (S.D.N.Y. 1973); *WRIGHT, supra* note 329, § 1608.

Prejudice to an absent party has been held to arise from *res judicata* that would seriously affect its rights. *State Farm Mut. Auto. Ins. v. Mid-Continent Casualty Co.*, 518 F.2d 292, 295-96 (10th Cir. 1975). Additionally, *res judicata* is not strictly required where that would be the practical effect. *WRIGHT, supra* note 329, § 1608.

332. These parties are usually denominated "indispensable." However, the analysis does not use indispensability as its starting point — rather, the court considers whether the action should, in equity and good conscience, be dismissed or allowed to continue in their absence, upon a review of all of the circumstances. *FED. R. Civ. P.* 19(b); *Provident Tradesmens Bank & Trust Co.*, 390 U.S. at 125; *WRIGHT, supra* note 329, § 1607.

mentalities<sup>333</sup> are partly liable<sup>334</sup> but cannot be reached under governing law,<sup>335</sup> or in which the United States Government may be considered wholly or partially accountable,<sup>336</sup> but is shielded by immunity.<sup>337</sup>

The impact of a determination of governmental responsibility upon international nuclear liability of private defendants is as multifaceted as other aspects of the private law approaches to the problem. Regardless of the bases of official responsibility, substantive and jurisdictional immunity may stand as obstacles to the imposition of liability. The foregoing are means that may be brought to bear to place the rightful portion of the burden upon the public sector.

### *E. Other Defense Issues*

In addition to the protections discussed in the preceding section that exist by virtue of governmental involvement in transnational nuclear development, other more traditional matters of defense merit mention.<sup>338</sup>

#### 1. Causation in Fact

There is no facet of the law of tort that is more elemental,

333. The idea developed in this paragraph might also be applied to foreign private defendants, although in most instances where they may be liable, there would be a basis for jurisdiction over them in United States courts. *See supra* notes 69-71 and accompanying text.

334. *See supra* notes 69-71 and accompanying text.

335. *See supra* notes 88-93 and accompanying text.

Dismissal was ordered in *Liman v. Midland Bank, Ltd.*, 309 F. Supp. 163 (S.D.N.Y. 1970), where a foreign defendant was beyond the reach of the court, but was essential to a proper adjudication, and an adequate remedy existed in the form of a suit pending overseas. Although the defendant in *Liman* was not a government or official instrumentality, there is no reason why the same joinder rules should not operate, for example, with regard to an absent foreign government which cannot be reached under the FSIA.

The Court in *Provident Tradesmens Bank & Trust Co. v. Patterson*, 390 U.S. 102, 109 (1968), pronounced that mandatory joinder rules might be employed in actions where necessary parties were not subject to jurisdiction. *See also* WRIGHT, *supra* note 329, § 1607.

336. *See supra* notes 248-87 and accompanying text regarding liability of the United States.

337. Courts have dismissed actions where the United States Government was deemed an indispensable party by virtue of its shared responsibility for an occurrence, but was not amenable to suit. *Mine Safety Appliances Co. v. Forrestal*, 326 U.S. 371 (1945); *Krause v. Rhodes*, 471 F.2d 430 (6th Cir. 1972), *rev'd on other grounds*, 416 U.S. 232 (1973).

338. Liability apportionment on the basis of comparative fault will be discussed separately *infra* notes 381-410 and accompanying text.



and more often taken for granted in legal analysis, than the requirement of causation in fact.<sup>339</sup> In the case of injury to people and the environment arising from the radiation release of a nuclear plant disaster, commentators have observed that causation in fact poses one of the prime tests of any system that would attempt redress.<sup>340</sup>

Conclusive proof is usually practically impossible,<sup>341</sup> especially with regard to the latent, delayed pathologic injuries that may be expected in the wake of a nuclear accident.<sup>342</sup> Thus, assessment based on well-founded assumptions must be done, with traditional methodologies thereby supplanted. The question of causation in fact has not been actually confronted in any of the legal orders, national<sup>343</sup> or international,<sup>344</sup> which attempt to

339. For a helpful comprehensive discussion, see Richard W. Wright, *Causation in Tort Law*, 73 CAL. L. REV. 1735 (1985). For application to environmental risks and toxic torts, see also Palma J. Strand, Note, *The Inapplicability of Traditional Tort Analysis to Environmental Risks: The Example of Toxic Waste Pollution Victim Compensation*, 35 STAN. L. REV. 575 (1983); Ora F. Harris Jr., *Toxic Tort Litigation and the Causation Element: Is There Any Hope of Reconciliation?*, 40 SW. L.J. 909 (1986).

340. See generally Norbert Pelzer, *Current Problems of Nuclear Liability Law in the Post-Chernobyl Period*, ENERGIEWIRTSCHAFTLICHE TAGESFRAGEN (January 1987), in 39 NUCLEAR L. BULL. 66 (OECD Secretariat trans., 1987); Berthold Moser, *Proof of Damage from Ionizing Radiation*, OSTERREICHISCHE JURISTEN-ZEITUNG No. 3 (February 1986), reprinted in 38 NUCLEAR L. BULL. 70 (1986); John V. Buffington, *The Price-Anderson Act: Underwriting the Ultimate Tort*, 87 DICK. L. REV. 679 (1983); NRC/DOE Reports, *supra* note 180.

341. Proof is difficult in this and other areas, such as litigation involving nuclear weapons testing, Agent Orange, and other toxic damage; see *infra* notes 342-52 and accompanying text.

The principal culprits are those of indeterminate and indeterminable causes. That is, similar injuries can be caused (albeit less severely) by non-nuclear causes and from radiation from other than nuclear sources, such as medical treatment and even the sun. See Pelzer, *supra* note 340. This is especially true of cancer, which is among the most prevalent types of harm likely to result; see also MERCK MANUAL, *supra* note 17, at ch. 257.

342. See Moser, *supra* note 340. See also MERCK MANUAL, *supra* note 17; Windscale Accident: 24-Year Perspective, 120 SCI. NEWS 152 (Sept. 5, 1981).

343. See *supra* notes 182-209, 234-46 and accompanying text. See also Jeffrey C. Bodie, Comment, *The Irradiated Plaintiff: Tort Recovery Outside Price-Anderson*, 6 ENVTL. L. 859, 859-63 (1976). There has, however, been legislation introduced in Congress in the occupational field that would modify burdens of proof with presumptions of causality, or create probabilistic methods of demonstration based upon data such as Department of Health and Human Services "radioepidemiological tables" to correlate radiation dosages with the probability of cancer.

Elsewhere, there have been judge-made modifications to causation requirements in Austria and Germany, requiring only that a link between radiation injury and disease not be excluded, and holding that asserted contributing causes can only be considered if approximately equal in importance. See Moser, *supra* note 340. In addition, a lone legislative attempt to tackle the issue has been made in Austria, where the *Atomhaftp-*

govern nuclear third party liability. This failure to confront is due, it may be supposed, to the novel and complicated problems posed.

A fitting and competent treatment of causation in litigation involving nuclear damage will require some means of easing the requirements of proof of origin of injury. This is not a methodology unknown to tort law, and there are models which may be adapted to the task. The more familiar techniques are those concerning multiple defendants;<sup>345</sup> in that category traditions of joint and several liability<sup>346</sup> have been aptly supplanted by presumption and burden-shifting constructs.<sup>347</sup>

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*flichtgesetz* (Nuclear Liability Act) provides that in case of injury from nuclear energy used for peaceful purposes, a set of presumptions will be allowed, based upon certain factual scenarios, and rebuttable on the basis of probability. Moser, *supra* note 340, at 79-81.

344. Under the international treaties, *see supra* notes 170-81 and accompanying text, there is no uniform set of guidelines, and the issue is left to the individual courts. Thus a national of a country with accepted forensic degrees of radiation exposure may be subject to having causation issues resolved under differing criteria of the state in which the occurrence took place. *See Pelzer, supra* note 340, at 69. Intermittently, there have been talks under way within the IAEA, World Health Organization, European Community, and OECD with the aim of fixing internationally-agreed "intervention levels." Pelzer, *supra* note 340, at 69.

345. In the instant case, multiple defendants include states, operators, suppliers, insurers, and perhaps others. *See supra* notes 48-54 and accompanying text.

346. *See generally* KEETON, *supra* note 245, §§ 41, 52.

Recognizing the potential for disproportionality inherent in the joint and several method, courts began to create techniques whereby apportionment among defendants might be attempted without undue prejudice to plaintiffs. The early benchmark applications usually noted are *Summers v. Tice*, 199 P.2d 1 (Cal. 1948) and *Ybarra v. Spangard*, 154 P.2d 687 (Cal. 1944), in which the burden was shifted to the alleged tortfeasors to divide responsibility among themselves, once a related injury had been shown.

347. The approach in *Summers v. Tice*, 199 P.2d 1 (Cal. 1948), was further refined in such cases as *Sindell v. Abbott Lab.*, 607 P.2d 924 (Cal.), *cert. denied*, 449 U.S. 912 (1980), in which responsibility was placed upon multiple manufacturers, many of whom had no connection in fact to the occurrence, but as to which the plaintiff was unable to distinguish. The defendants thus bore liability based upon a market share among those who could not exculpate themselves and were before the court. 607 P.2d at 937. The use of presumptions to augment proof has surfaced in at least one foreign radiation injury case; *see* Judgment of Feb. 10, 1966, Cass. Soc., *Dame Majori v. Commissariat a l'Energie Atomique* (Fr.).

A further model with potential for future application establishes causation based upon statistical evidence of increased risk, apportions responsibility among defendants according to the percentage of harm thus attributed to a defendant's activity, and uses class actions to achieve collectivized damages awards for administration and distribution. *See* David Rosenberg, *The Causal Connection in Mass Exposure Cases: A "Public Law" Vision of the Tort System*, 97 HARV. L. REV. 849 (1984); *see generally* PETER H. SCHUCK, *AGENT ORANGE ON TRIAL: MASS TOXIC DISASTER IN THE COURTS* (1987) for a discussion of the approaches that might have been taken to the issue in the Agent Orange litigation.

Causation in fact with respect to multiple or indeterminate plaintiffs is a further complication, due to the prospect of mass tort injury on a heretofore unenvisioned scale,<sup>348</sup> and the more confounding because of the deviation from orthodox modes it seems to require.<sup>349</sup> The most serviceable approach in the instant context will permit statistical rather than specific evidence of causation,<sup>350</sup> and a ratable sharing of damage award among injured plaintiffs.<sup>351</sup> The probable case, which will involve multiple defendants, multiple and indeterminate plaintiffs, and multiple potential causes, portends complexity and administration tasks on an unprecedented scale. While not beyond the capacity of courts using modern analytic and data management techniques, these requirements are also an eloquent argument for an institutionalized global compensatory system.

## 2. Legal Causation and Forseeability

An area almost certain to be the subject of controversy in any dispute concerning a nuclear energy mishap will be whether a given defendant ought to be held liable for an occurrence — the notion legal systems have named “legal cause” or “proximate causation.”<sup>352</sup> This concept, *sine qua non* to responsibility for any tort or delict, is not really a matter of causation except in the precursory sense, but rather reflects a policy limiting liability.<sup>353</sup> Although they are expressed in circumlocutory terms<sup>354</sup>

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348. One of the first examples was the difficulty of demonstrating that any of the plaintiffs in the Agent Orange litigation were actually injured by the herbicide, due to the variety of claimed illnesses which might have been due to numerous other causes. See SCHUCK, *supra* note 347, at 185, 271.

349. That is, it is one thing to say there has been an identified person harmed by the act of a discrete grouping of tortfeasors and thus public policy requires the latter to adjust among themselves the onus of recompense, but it is quite another to say numerous causes (including perhaps even natural ones) may have contributed to injuries to a large and perhaps incompletely-defined assemblage of persons and to require the partially responsible wrongdoers to bear the same onus.

At least one worthy effort has been made at systematic analysis of the problem. See Richard Delgado, *Beyond Sindell: Relaxation of Cause-In-Fact Rules for Indeterminate Plaintiffs*, 70 CAL. L. REV. 881 (1982), for an instructive in-depth treatment.

350. See Delgado, *supra* note 349, at 884-899; Rosenberg, *supra* note 347, at 881-87, for a discussion of drawbacks, advocating a “public law” proportional-based recovery.

351. Such an apportionment model is a key ingredient of the theoretical proposals thus far advanced, see, e.g. Delgado, *supra* note 349, at 900, and has been given practical application in the Agent Orange settlement. See SCHUCK, *supra* note 347, at 45.

352. See KEETON, *supra* note 245, § 41; RESTATEMENT (SECOND) OF TORTS § 431 (1965) (discussing the idea specifically as it relates to abnormally dangerous activities).

353. KEETON, *supra* note 245, § 41 at 263.

354. Among the constructs under which legal or proximate cause has been articu-

and have eluded concise formulation or even coherent application,<sup>355</sup> legal and proximate cause are solidly recognized in legal systems worldwide.<sup>356</sup>

The working proximate cause doctrine has numerous facets, two of which merit separate mention in the setting of a transnational nuclear accident. The first is foreseeability,<sup>357</sup> because it is a serviceable analytic device to limit responsibility for unusually hazardous activities. Where liability is imposed without fault due to the nature of the operation, the solution usually is to limit it to harm within the risk of the enterprise;<sup>358</sup> this question again amounts to legal policy,<sup>359</sup> and bears directly on other legal

lated, the two most prominent appear to be duty and foreseeability, but it appears the conventional wisdom is that most expressive attempts end up at the same destination.

355. In the United States, it is not certain whether proximate causation should be viewed as a question for resolution by the court or the trier of fact. Although Professor Keeton, *supra* note 245, § 41, concludes that the dominant persuasion in United States courts favors submission to the jury due to reasonable differences of opinion as to foreseeability and reasonableness, opposing views have been asserted vigorously in LEON GREEN, *THE RATIONALE OF PROXIMATE CAUSE* 122-27 (1927); ROBERT E. KEETON, *LEGAL CAUSE IN THE LAW OF TORTS* 49-60 (1963).

356. Despite equivalency theories of liability following from responsibility *in solidum* under the civil law, *see supra* note 49, legal cause is used as a means of liability limitation, as in the United States, based upon implicit policy considerations more normative than causal. *See* 2 KONRAD ZWIGERT & HEIN KOTZ, *INTRODUCTION TO COMPARATIVE LAW* 295-96 (Tony Weir trans., 2d ed. 1987); I.F.H. LAWSON & B.S. MARKESINIS, *TORTIOUS LIABILITY FOR UNINTENTIONAL HARM IN THE COMMON LAW AND CIVIL LAW* 118-19 (1982) [hereinafter LAWSON & MARKESINIS]; A.M. HONORÉ, *Causation and Remoteness of Damage*, in 11 *INTERNATIONAL ENCYCLOPEDIA OF COMPARATIVE LAW* "TORTS" ch. 7 (1971).

Concerning the common law outside the United States, *see generally* JOHN G. FLEMING, *LAW OF TORTS* (5th ed. 1983); RODNEY A. PERCY, *CHARLESWORTH & PERCY ON NEGLIGENCE* (7th ed. 1983); CLERK, *supra* note 228.

The multinational treaties concerning civil liability also recognize the concept by their exclusions for incidents arising from certain stated events, such as armed conflict, hostilities, civil war or insurrection, or grave natural disasters of an exceptional character. These are found in the Paris Convention, *supra* note 170, art. 9, the Vienna Convention, *supra* note 170, art. IV and Brussels 1962 Convention, *supra* note 170, art. VIII.

357. *See* KEETON, *supra* note 245, § 42 at 279; RESTATEMENT (SECOND) OF TORTS § 435 (1965).

Foreseeability is considered as subsumed within the civil law notions of "adequate cause" or "legal cause," to the same end. *See* LAWSON & MARKESINIS, *supra* note 356, at 121, 134; Honoré, *supra* note 356; ZWIGERT & KOTZ, *supra* note 356.

As to the common law, *see generally* FLEMING, *supra* note 356, PERCY, *supra* note 356 and CLERK, *supra* note 228.

358. *See* H.L.A. HART & A.M. HONORÉ, *CAUSATION IN THE LAW* 286 (2d ed. 1985); CLERK, *supra* note 228, at 1207-08, regarding common law, and LAWSON & MARKESINIS, *supra* note 356, at 143-44, concerning civil law.

359. The RESTATEMENT (SECOND) OF TORTS § 431 (1965), considering "legal cause," posits two "contrasting" theories: first, the scope of liability should extend no farther

cause issues.<sup>360</sup> With specific regard to nuclear power, the taxonomic range of predictable harm is wide indeed,<sup>361</sup> so unmixed foreseeability is unlikely to stand as a meaningful defense.

The second, and more significant for present purposes, aspect of legal or proximate cause is supervening cause.<sup>362</sup> This mechanism permits legal responsibility to be nullified even though fault or other bases of liability might otherwise be attributed to a defendant.<sup>363</sup> Supervening cause theory entails the same analysis and considerations as other dimensions of legal or proximate cause, but the most frequent inquiry concerns the expectedness of the event — if it can be anticipated, liability will exist nevertheless.<sup>364</sup> The context of international nuclear inci-

than foreseeable risks, *i.e.*, those by reason of which the actor's conduct is held to be negligent, or second, to all direct consequences or those indirect consequences which are foreseeable. A better illustration of the nebulousness of the normative noodling which always occurs in this area could scarcely be drawn. RESTATEMENT (SECOND) OF TORTS § 431 (1965).

As to the common law outside the United States, *see* W.V.H. ROGERS, WINFIELD AND JOLOWICZ ON TORTS 447-48 (12th ed. 1984) [hereinafter ROGERS], and for the civil law *see* LAWSON & MARKESINIS, *supra* note 356, at 119.

360. *See infra* notes 363-69 and accompanying text regarding supervening cause.

361. All systems seem to express the matter in terms of recognizing liability for risks the tortfeasor's conduct makes more probable. *See* KEETON, *supra* note 245, at 273; LAWSON & MARKESINIS, *supra* note 356, at 121-23; FLEMING, *supra* note 356, at 199; CLERK, *supra* note 228, at 521-24.

One author puts it thus regarding nuclear energy: "A choice of behavior requires balancing the costs of safer action times the likelihood of a perceived danger against the magnitude of potential injury; it follows that operators of nuclear plants are expected to take the most stringent safety precautions as a matter of course, because even if the likelihood of a mishap is slight, enormous damage is bound to be the result." Banks McDowell, *Foreseeability in Contract and Tort: The Problems of Responsibility and Remoteness*, 36 CASE W. RES. L. REV. 286, 295 (1986).

The RESTATEMENT (SECOND) OF TORTS § 520 cmt. h (1965) cites "atomic" energy is an example of an activity from which the risk of harm cannot be removed by taking precautions and the exercise of the utmost care.

362. Again, the terminology is multifarious; it is often said that an "intervening" cause "supersedes" liability, thereby becoming a "supervening" cause, hence the appellation.

363. *See, e.g.*, KEETON, *supra* note 245, at 29; RESTATEMENT (SECOND) OF TORTS § 440 (1965); LAWSON & MARKESINIS, *supra* note 356, at 127-28; FLEMING, *supra* note 356, at 192, for general explication of the various systems' approaches.

Supervening cause and its interpretation are a component of the liability regimen established under multinational treaties with respect to third-party nuclear liability, as discussed *supra* notes 169-72.

364. Examples might be recurring natural phenomena, predictable negligence of others, or even interfering intentional or criminal acts one might reasonably anticipate. *See* KEETON, *supra* note 245, at 303-05; FLEMING, *supra* note 356, at 199; LAWSON & MARKESINIS, *supra* note 356, at 129. *See also infra* notes 369-75 regarding terrorism and other intentional acts of third parties.

dents suggests consideration of two specific subjects: governmental regulatory failure, and terrorism.

A defalcation on the part of the government in whose territory the nuclear installation is located would lead directly to the question of supervening cause. It has often been recognized that the prospect of such official malfeasance is far from remote,<sup>365</sup> and thus a court might well disallow the defense and hold a manufacturer or supplier accountable notwithstanding. In such an event, a United States defendant would desire in turn to recoup some or all of its outlay by way of contribution or indemnity,<sup>366</sup> but would find it difficult to do so.<sup>367</sup> The solution needed to avoid this incomplete circle is to adjust liability among those responsible, whether or not before the court.<sup>368</sup>

The most portentous issues concerning intervening cause, both as a theoretical and practical matter, concern nuclear terrorism.<sup>369</sup> Not only will it pose difficult questions concerning al-

365. See *supra* note 282 and accompanying text regarding relative lack of expertise of foreign officials in the area of nuclear energy management. Although the full extent may never be known, it is widely considered that official bungling contributed to inferior design in causing the Chernobyl accident. See Malcolm W. Browne, *The 1986 Disaster at Chernobyl: A Year Later, Lessons are Drawn*, N.Y. TIMES, Apr. 26, 1987, at 1.

There is also some question that governmental regulatory failure was in large part to blame for the disaster at Bhopal, India in 1984, or at least the enormity of the injury and suffering caused. See Marc Galanter, *Legal Torpor: Why So Little has Happened in India After the Bhopal Tragedy*, 20 TEX. INT'L L.J. 273, 277 (1985); Rajeev Dhavan, *For Whom? And For What? Reflections on the Legal Aftermath of Bhopal*, *id.* at 295, 302-03; Weinberg, *supra* note 132, at 316. See also Stuart Diamond, *1982 Inspection Says Indian Plant Was Below U.S. Safety Standards*, N.Y. TIMES, Dec. 12, 1984, at A1.

366. The United States defendant might also be entitled to do so pursuant to an indemnification clause in an agreement with the foreign government. See *supra* note 300 and accompanying text.

367. See *supra* notes 81-93 and accompanying text regarding amenability to jurisdiction and substantive immunity of foreign governments. See also *supra* notes 297-99 and accompanying text regarding act of state doctrine.

Dhavan, *supra* note 365, at 303, and Galanter, *supra* note 365, at 286, report that the Government of India asserted sovereign immunity in the form of "diplomatic privilege" in connection with the tragedy at Bhopal.

368. See *infra* notes 381-410 and accompanying text regarding apportionment of liability and comparative fault.

In Weinberg, *supra* note 132, at 316, the author refers to the asserted impunity of foreign governments from suit in United States courts in the case of international calamities involving official regulatory malfeasance as "the problem of the empty chair," and suggests apportionment of damages liability as the only workable solution. Application of this theory under United States law is discussed in Leonard E. Eilbacher, *Comparative Fault and the Nonparty Tortfeasor*, 17 IND. L. REV. 903 (1984).

369. See *supra* notes 15-16 and accompanying text.

Of course, "terrorism" defies concise delineation or definition. The term is employed herein to refer broadly to the intentional violent acts of disaffected or renegade groups or

location of responsibility, but it is likely to aggravate the jurisdictional and choice of law complications of international litigation. Because of the exclusion of intentional or hostile acts causing nuclear incidents from the purview of international agreements<sup>370</sup> and the laws of most nations,<sup>371</sup> lawsuits under traditional rules may result regardless of where an incident occurs, where terrorism is a cause.

At one level, whether a terrorist act precipitating a nuclear accident absolves defendants of responsibility may be said to rest upon foreseeability and the traditional legal or proximate cause calculus.<sup>372</sup> Thereunder, the type of attack would be relevant,<sup>373</sup> and arguments in favor of foreseeability might be forcefully advanced: In addition to a manufacturer's arguable duty to build so as to withstand some level of assault, the well-recognized and much-discussed dangers involved make nuclear facilities tempting targets.<sup>374</sup>

But even if some such terrorist attacks might be "foresee-

individuals directed at nuclear energy facilities, and motivated either by political or non-political goals.

370. The multinational treaties, drafted before an entirely different historical and political backdrop from that of today, completely exclude from coverage liability for damage caused by an act of armed conflict, hostilities, civil war or insurrection. See the Paris Convention, *supra* note 170, art. 9; Geneva Convention, *supra* note 170, art. IV.

371. Unlike the United States, see *supra* note 196 and accompanying text, most nations patterning their laws after the multinational treaties have the same exclusions from liability as set forth *supra* note 370. Exceptions are The Federal Republic of Germany Atomic Energy Act VII (10) 1985, BGBI.I at 781, reprinted in 36 NUCLEAR L. BULL. Supp. at 3, (1985), and Switzerland Law on Civil Liability for Nuclear Damage, FF 12, Vol. I, at 1171 (1983).

Similarly, nations whose laws do not necessarily follow the conventions provide like restrictions. For example, Japan's Compensation for Nuclear Damage, Minpo, Law No. 147 of 1961, translated in 11 NUCLEAR L. BULL. 39, 43 (1973) provides an exclusion for damages for injury caused by "serious social disturbance."

In addition, many countries have no laws whatever dealing with third party or civil liability for nuclear accident injury. See *supra* note 238 and accompanying text.

372. See *supra* notes 352-68 and accompanying text.

It would seem that intentionally hostile acts on any sort of powerful scale would naturally be regarded as unforeseeable supervening causes. Cf. *In re Korean Air Lines Disaster of Sept. 1, 1983*, 646 F. Supp. 30 (D.D.C. 1986), holding that even if the United States Government had breached some duty to the passengers of KAL Flight 007, the action of the Soviet Air Defense Ministry was a superseding event which insulated it from liability.

373. The idea here is that a relatively minor assault might be something for which a manufacturer or designer could be held responsible, whereas an attack by a massive force might not. This could be resolved perhaps through foreseeability analysis, or could be a question of fault, i.e. whether a facility was negligently designed, or unreasonably dangerous.

374. See *supra* notes 15-16 and accompanying text.

able," it seems fundamentally inequitable to impose liability in most cases<sup>375</sup> upon outside suppliers, manufacturers and cooperating states. Instead, legal responsibility should rest upon the home government which chose the pursuit of nuclear energy. The proper placement of burden suggests dual policy inquiries: The first concerns the contours of United States public or private liability;<sup>376</sup> the other examines the basis and extent of home country official liability.<sup>377</sup> As to the latter, while norms of international law appear to establish legal accountability so far as they apply,<sup>378</sup> significant doctrinal obstacles exist to doing so under national laws<sup>379</sup> in United States courts.<sup>380</sup>

#### *F. Liability Apportionment and Comparative Fault*

The issues in the preceding passages are so far unresolved under existing apparatuses, and overlap so thoroughly from an application standpoint, that they all require assistance in the

375. Obviously it is not unjust if the precipitating cause is something that ought to have been guarded against in design and manufacture.

376. See *supra* notes 48-54, 248-85 and accompanying text.

377. See *supra* notes 72-94 and accompanying text regarding governmental defendants.

378. Under international law, liability seems settled as a matter of state responsibility, but this would operate only as to injuries and damage caused outside the borders of the nation where the facility is located, and to aliens within its territory.

This also applies specifically to a state's liability for acts of persons and instrumentalities within its jurisdiction, which appears to arise from a duty of due diligence in control of private persons. See 1 IAN BROWNLIE, *SYSTEM OF THE LAW OF NATIONS: STATE RESPONSIBILITY* 161, 180 (1983); ALONA E. EVANS & JOHN F. MURPHY, *LEGAL ASPECTS OF INTERNATIONAL TERRORISM* 567-70 (1978); Richard B. Lillich & John M. Paxman, *State Responsibility for Injuries to Aliens Occasioned by Terrorist Activities*, 26 AM. U. L. REV. 217, 221 (1977); but see also Hazem Attam, *National Liberation Movements and International Responsibility*, in UNITED NATIONS CODIFICATION OF STATE RESPONSIBILITY 35 (Marina Spinedi & Bruno Simma eds., 1987).

See also *supra* notes 303-10 regarding other theories of state responsibility under international law.

379. Under municipal law elsewhere, governments are increasingly subject to private law rules of liability. See, e.g., RENE DAVID, *FRENCH LAW* 104 (1972). In addition, enactments specifically concerning nuclear energy, where applicable, provide for shifting of responsibility to the state under defined circumstances. See *supra* notes 234-37 and accompanying text. However, under United States law, no cases have expressly ruled on the issue. See, e.g., *Tel-Oren v. Libyan Arab Republic*, 726 F.2d 774 (D.C. Cir. 1984); Note, *The Responsibility of States for Private Acts of International Terrorism*, 1 TEMP. INT'L & COMP. L.J. 69 (1985).

380. It will be recalled that under the FSIA, 28 U.S.C. § 1607 (1988), a counterclaim may be the only means whereby jurisdiction may be asserted over a foreign state or official instrumentality in this context. Moreover, immunity and the federal "act of state doctrine" may be at least comparable barriers. See also *supra* notes 265-71, 297-99 and accompanying text.



form of apportionment of responsibility among involved entities, whether or not present before the court, through a comparative fault approach.<sup>381</sup> This simply means the allocation of liability under laws<sup>382</sup> which operate beyond contributory fault or contribution and indemnity.<sup>383</sup>

Under the comparative fault theory, both liability and recovery would be reduced by the proportion of fault of an involved person or entity, even though the latter is insulated by lack of jurisdiction<sup>384</sup> or immunity.<sup>385</sup> Although used in some perhaps analogous contexts,<sup>386</sup> this concept has not been directly

381. Some form of comparative fault system is in effect in the great majority of states in the United States. KEETON, *supra* note 245, at 39.

There is considerable variation among the comparative fault (sometimes called "comparative negligence") statutes among the states. In some, comparative rules have altered joint and several liability. See *Nance v. Gulf Oil Corp.*, 817 F.2d 1176 (5th Cir. 1987) (applying Louisiana law); Paul E. Swan, Note, *Comparative Negligence: The Role of the Absent Tortfeasor in Oklahoma*, 34 OKLA. L. REV. 815 (1981). In others, joint and several liability has remained unchanged. See *Mattschei v. United States*, 600 F.2d 205 (9th Cir. 1979) (applying California law).

At the same time, the problem of the absent defendant is also beginning to be addressed legislatively. In New York, the Civil Practice Law and Rules limit liability for non-economic loss to an equitable share if a given defendant is not more than 50% liable, and allows the culpable conduct of a person not party to the action to be considered unless the claimant proves that with due diligence the person could not be included; with some significant exceptions, this applies also to claims for contribution and indemnity. N.Y. CIV. PRAC. L. & R. §§ 1601, 1602 (McKinney's Supp. 1986).

It should be noted that this approach ties in well with legal causation analysis which, after all, has as its driving logic the shifting of responsibility from one defendant to another. See KEETON, *supra* note 245, at 279.

382. The laws of the various states of the United States will be applied to allocation of fault in diversity of citizenship actions. See *Mullan v. United States*, 797 F.2d 845, 848 (10th Cir. 1986); *Rudelson v. United States*, 602 F.2d 1326, 1329 (9th Cir. 1979). But in *Hefley v. Textron, Inc.*, 713 F.2d 1487, 1494-97 (10th Cir. 1983), the court refused to give effect to the Kansas law of comparative fault, holding it "procedural" and "not outcome-determinative" and thus not binding on federal courts. Under the choice of law principles discussed *supra* notes 211-30 and accompanying text, as well as the practice in this and other circuits, this would appear questionable and unlikely to be followed.

As regards foreign law, in civil law jurisdictions it has uniformly been the practice to apportion damages based upon proportion of fault. KEETON, *supra* note 245, at 435. Many common law and commonwealth countries have adopted a similar rule by statute, the bellwether of which was the Law Reform (Married Women and Tortfeasors) Act, 1935, 25 & 26 Geo. 5, ch. 30, part II (Eng.). FLEMING, *supra* note 356, at 435; DIAS & MARKESINIS, *supra* note 221, at 438-39.

383. See *supra* notes 320-26 and accompanying text.

384. See *supra* notes 82-93 and accompanying text regarding jurisdiction over foreign governments and instrumentalities.

385. This issue will more likely arise if United States law is applied, because of the limited character of sovereign immunity under the laws of most other countries. See *supra* notes 292-96 and accompanying text.

386. The reported federal decisions involve not only immune defendants, but those

applied to a mass disaster case,<sup>387</sup> under prevailing interpretations the legal responsibility of an absent or immune actor must be borne by the remaining defendants, and liability may still exceed culpability.

### 1. Contributory and Comparative Fault and the Responsible Government

Defenses based upon the conduct of a plaintiff are, of course, established in the law of the United States,<sup>388</sup> as well as civil<sup>389</sup> and other common law<sup>390</sup> systems; they apply not only to negligence, delict and similar theories, but to liability without fault as well.<sup>391</sup> Where liability is asserted against United States

who are absent for other reasons, such as insolvency or bankruptcy, having settled with plaintiffs, or failure of the requisite statutory notice to commence suit. The largest category concerns employers immune from separate suit by virtue of workers' compensation laws.

387. Due no doubt to the intricacies normally present and the relatively nascent state of comparative fault law, the decisions applying it (particularly if cases involving workers' compensation are separated out) have proceeded on narrow bases and treated the subject gingerly. *See, e.g., Hefley v. Textron, Inc.*, 713 F.2d 1487 (10th Cir. 1983) (declining to apply state comparative fault law on "jurisdictional" and choice of law grounds); *Stearns v. Johns Manville*, 770 F.2d 599 (6th Cir. 1985) (unnecessary to resolve issue of numerous absent defendants because comparative fault not applicable to strict liability).

It has been held that judgments obtained by plaintiffs could be reduced by the fault of an absent settling defendant. *See In re School Asbestos Litig.*, 921 F.2d 1330 (3d Cir. 1990). *But see Mattschei v. United States*, 600 F.2d 205, 210 (9th Cir. 1979). *See also generally* Richard N. Pearson, *Apportionment of Losses Under Comparative Fault Laws: An Analysis of the Alternatives*, 40 LA. L. REV. 343 (1980).

388. *See supra* notes 381-82 and accompanying text. Comparative fault has supplanted contributory negligence and its associated rules, to varying degrees, in most states. *See KEETON, supra* note 245, at 477.

389. "Fault of the injured party" is a concept of long standing under civil codes; it is broader than common-law contributory negligence, and includes not only contemporaneous but also subsequent fault. But it also typically provides for allocation of damages based on proportion of fault. *KEETON, supra* note 245, at 470; *LAWSON & MARKESINIS, supra* note 356, at 364; *Pierre Catala & John Antony Weir, Delict and Torts: A Study in Parallel*, 39 TUL. L. REV. 701, 758 (1965).

390. The historic common law rule that required an incident to be the fault of one party or the other, leading to contributory negligence and its accompanying corollaries, has been modified nearly everywhere by legislation, such as the Law Reform (Contributory Negligence) Act, 1945, 8 & 9 Geo., 6, ch. 28 (Eng.) providing for adjustment in recovery based upon proportionate degrees of fault. *LAWSON & MARKESINIS, supra* note 356, at 74; *ROGERS, supra* note 359, at 150.

391. In the United States, most jurisdictions have allowed "comparative negligence" to be applied to strict liability actions. *KEETON, supra* note 245, at 478. Civil law systems generally apply the same apportionment calculus whether or not the defendant is charged with fault. *LAWSON & MARKESINIS, supra* note 356, at 133. The scope of legal excuse based upon the fault of plaintiff has been widened in recent years in common-law

defendants<sup>392</sup> in the wake of a transnational nuclear incident causing massive injury and losses, contributory fault would seem to apply as a matter of course. And there is no reason why it could not operate where a government itself is plaintiff,<sup>393</sup> or if private plaintiffs are deemed partially at fault.<sup>394</sup> However, it presents severe difficulties where it is most likely to be used — against groups of individual foreign claimants whose own government should bear partial responsibility.<sup>395</sup>

The efficacy of contributory fault to shift responsibility, in whole or part, to the government owning and operating the nuclear facility depends upon two questions: First, to what extent ought the mistakes of that government reduce individual claims on the part of its nationals?<sup>396</sup> Second, what legal means may be brought to bear in order to do so?

With respect to the first inquiry, despite the likelihood of reduction in compensation to innocent injured persons, claims of nationals of the operating country should not be allowed against

countries to encompass liability without fault. *Dias & Markesinis*, *supra* note 221, at 364-66; *Rogers*, *supra* note 359, at 446.

For a discussion in the products liability context, see generally *Freedman*, *supra* note 239.

392. This discussion posits, of course, that there is some basis for legal responsibility on the part of one or more United States parties. If there is not, as for example when the act or omission of a foreign party is regarded as the sole factual or legal cause, then there would be no reason for the matter ever to arise.

393. See *supra* notes 39-47 and accompanying text.

394. It is assumed that hardly ever would an issue of individual plaintiffs' personal negligence be present in the case of a disaster at a nuclear power plant causing widespread injury. If it somehow were, it could affect the workings of comparative fault laws, not only by reducing the recovery of plaintiffs, but also concerning whether the liability of multiple defendants would otherwise be joint and several, and whether plaintiffs bear a proportionate share of the fault that would otherwise be assigned to an absent or immune defendant. See *Austin v. Raymark Indus., Inc.*, 841 F.2d 1184 (1st Cir. 1988); *RESTATEMENT (SECOND) OF TORTS* § 886A cmt. i (1965); *Nance v. Gulf Oil Corp.*, 817 F.2d 1176 (5th Cir. 1987); *Swan*, *supra* note 381, at 815, regarding law of Oklahoma. This additional complexity is not wholly theoretical, however, as the present discussion will demonstrate.

395. If the plaintiffs' government is deemed to share in the fault, then it seems conceptually and morally correct to limit the government's own recovery. But it is troublesome to restrict redress to the extent the government is considered to sue on behalf of its people, see *supra* notes 43-47 and accompanying text. Is it worse to allow a negligent government to escape its share of culpability or to penalize its innocent citizens? Is it possible to cut finely enough in order to avoid doing one or the other?

396. The problem is only apparently compounded when the claimant is not of the nationality or otherwise under the control and protection of the responsible state; then, no issue of the rectitude of imputation is present, and the matter becomes one simply of assigning proportional liability to those responsible. In crude terms, it might be said that the plaintiff is considered to have come to the risk.

United States defendants to the extent their own government's failures contributed to the disaster. This should operate not only on claims by the government on behalf of its citizens,<sup>397</sup> but also their individual claims. In both cases, a government's recognized responsibility for the protection and well-being of those within its boundaries provides a legitimate basis to assign liability to it for all injuries to its nationals and residents that may be traced to fault on its part. This is so even though the losses are individualized and those persons are entirely blameless. There is simply no reason why that government ought not bear its share of the liability, regardless of the vehicle by which the claims are brought.<sup>398</sup>

The question becomes, then, what legal means exist to reduce the liability of United States defendants to reflect the proportional culpability of foreign governments or their instrumentalities.<sup>399</sup> There would seem to be two general contributory fault approaches — contribution and direct offset.

Contribution is one means whereby a party held liable to satisfy a damages award might recover a share from another responsible party.<sup>400</sup> However, its effectiveness against foreign governments and official entities is doubtful, due to the jurisdictional,<sup>401</sup> immunity<sup>402</sup> and judgment enforcement<sup>403</sup> problems

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397. See *supra* notes 46-47 and accompanying text regarding the doctrine of *parens patriae* and the assertion by a government of the rights of its citizens thereunder.

If a *parens patriae* suit is brought by the government, and recovery is denied or reduced, the effect on the well-being of the people is direct and palpable. Nevertheless, the result is both logically correct and just, due to the "quasi-sovereign" nature of the rights being asserted (*i.e.* those for which the government is responsible for the benefit of all its nationals).

398. It will be recalled that in a proper case, the Government of the United States might be held to account for injuries that are the consequences of the acts of its citizens under principles of "state responsibility." See *supra* notes 303-10 and accompanying text. In light of this, it would seem unjust for the government which owns the facility and chose to embark upon the course of development of nuclear energy *not* to be made responsible for its own errors.

399. See *supra* notes 52-63 and accompanying text regarding foreign private defendants.

400. It will be recalled that multiple responsible parties will be held jointly and severally liable (or liable *in solido*) for harm caused, and each may be called upon to satisfy the entire award. See *supra* note 49 and accompanying text. Theories under which legal responsibility may be reduced by the proportional fault of another party by another means, such as reducing recovery by plaintiff against any one defendant, are yet to be fully developed. See *supra* notes 382-87 and accompanying text.

401. See *supra* notes 82-93 and accompanying text regarding jurisdiction over foreign states and instrumentalities. This problem would not, of course, be present in a suit involving a foreign government as co-plaintiff, but the government may, for a variety of reasons, including strategic ones, absent itself from the proceedings. See *infra* note 409.

402. See *supra* notes 82-93, 292-97 and accompanying text regarding immunity of

posed. A direct offset against claims by a foreign government will pose different<sup>404</sup> but comparable hindrances. Because it is unlikely individual plaintiffs would be at fault,<sup>405</sup> and there is no established basis for imputing defalcations of governments to their nationals,<sup>406</sup> contributory fault would seemingly affect only direct claims of foreign governments and instrumentalities in their own right.<sup>407</sup> Only a fraction of the likely demands for relief would then be affected. This situation might be addressed by expanding the rights of foreign governments to assert the claims of their citizens in United States courts and then in turn reducing the recovery by the amount the foreign government is at fault.<sup>408</sup> Such a structure portends uncertain results,<sup>409</sup> how-

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foreign governments and instrumentalities.

403. See *infra* notes 415-26 and accompanying text.

404. In this connection, recall the counterclaim exception to the FSIA under United States law, which can surmount both jurisdictional and immunity obstacles. 28 U.S.C. 1607 (1988). See *supra* notes 89-91 and accompanying text.

405. See *supra* notes 394-95 and accompanying text.

The fault likely to be asserted would be in the form of inadequate operation or supervision, or other "regulatory failure" on the part of the government in whose territory the facility is located. See *supra* note 282 and accompanying text. For a chronicle of the same problem as it has affected litigation in the wake of the Union Carbide disaster, see Galanter, *supra* note 365, at 277.

It is remotely possible that a defense in the nature of assumption of risk could be posed, the theory being that the plaintiffs assumed the hazard by living in the proximity of the reactor. However, in view of the wide area that might be affected by the discharge of massive amounts of radiation, and the consensual nature of this defense, it would not likely be held applicable. See KEETON, *supra* note 245, at 478.

406. See *supra* notes 394-95 and accompanying text.

407. It will be recalled that under United States law, a foreign government may assert only a limited class of claims related to its "quasi-sovereign" interests, and not those of its individual citizens. See *supra* notes 43-47 and accompanying text.

408. In view of the likelihood that the regulatory failures of the Indian Government may have played a role in the disaster at Bhopal, this idea of expanding the rights of foreign governments to assert the claims of their citizens has been urged in Lisa F. Butler, Comment, *Parens Patriae Representation in Transnational Crises: The Bhopal Tragedy*, 17 CAL. W. INT'L L.J. 175 (1987). The contrary is argued in Lisa M. Hawkes, Note, *Parens Patriae and the Union Carbide Case: The Disaster at Bhopal Continues*, 21 CORNELL INT'L L.J. 181 (1988), in which the author asserts that participation of the Indian Government on behalf of the people individually not only would violate United States law requirements as to parties plaintiff, but in fact hindered the settlement of the litigation.

409. If the risk of wholesale judicial imputation of fault to its nationals through its presence as *parens patriae* is present, the government may simply forego assertion of its quasi-sovereign claims, or raise them in a separate forum, as a matter of strategy.

It could also attempt to walk the legal tightrope of rendering assistance to its people, as by class action sponsorship, without being a party of record, and thus pose an

ever, and the central issue of ultimate accountability will still not have been frontally addressed.

The better solution requires transcending current legal theory. The court should ascertain the proportion of damage and injury attributable to the acts or omissions of the operating government, in frank recognition of its paramount obligations to its people when it chooses the path of nuclear development. This should be accompanied by the application of comparative fault to reduce the recovery of plaintiffs against United States defendants.<sup>410</sup> An added benefit that may flow from this approach is the incentive foreign governments would have to seek to participate by way of intervention, in order to be allowed to make presentations in support of their interests and those of their nationals. Until, however, an international responsibility regimen can be established to supply marshalled resources and jurisdictional unity in the wake of nuclear disaster, the foregoing approach is only systemically just under the law of nations, and conforms to accepted principles of moral responsibility.

#### IV. RECOGNITION AND ENFORCEMENT OF FOREIGN JUDGMENTS IN UNITED STATES COURTS

Despite the advantages to plaintiffs in bringing suit in the United States,<sup>411</sup> litigation concerning a massive nuclear accident in another country may be carried on elsewhere, for quite sufficient reasons.<sup>412</sup> If a compensation award by a foreign tribunal is not satisfied abroad,<sup>413</sup> then laws governing the enforce-

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additional dilemma for the court to resolve.

410. See *supra* notes 381-98 and accompanying text.

411. See *supra* notes 33-35 and accompanying text.

Since the problems of international liability for nuclear injury have begun to be considered, it has been recognized that enforceability of judgments would be among the foremost benefits to foreign parties in United States courts. See HARVARD STUDY, *supra* note 98.

412. Among other things, a United States court may determine the lawsuit should be transferred on the grounds of *forum non conveniens* or may decline to hear it as a matter of international *lis pendens* in order to avoid the problems of multiple and inconsistent results. See respectively, *supra* notes 109-44, 160-64 and accompanying text.

413. It is all but certain judgment creditors would find themselves in the United States in search of reachable assets of most United States defendants.

For a useful listing summary of the practices of various nations with respect to executing foreign judgments as well as the few multilateral conventions including the Convention on Jurisdiction and the Enforcement of Judgments in Civil and Commercial Matters, 18 I.L.M. 21 (1979) (as amended by the Convention of Accession), see RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW OF THE UNITED STATES § 491, reporters' notes 6, 7 (Tentative Draft No. 4, 1983). Broadly speaking, the conditions imposed resemble

ability of foreign judgments<sup>414</sup> will be a central component of the protection of United States defendants from oppressive or disproportionate liability.

### A. *United States Courts and Foreign Judgments in General*

The United States is not a party to any international agreement concerning the recognition or enforcement of foreign judgments;<sup>415</sup> there is also no domestically applicable federal enactment. Accordingly, as with numerous other matters of arguably national import, the subject is left to state law.<sup>416</sup> However, common threads can be identified among the States,<sup>417</sup> the most important of which rest upon considerations of jurisdiction and public policy.<sup>418</sup>

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those found in the United States, although it is important to note that, unlike the United States, reciprocity is a prominent requirement of the laws of many nations. *See, e.g.,* Japan's Minji Soshoho (Code of Civil Procedure) arts. 200, 514 & 515; Foreign Judgments (Reciprocal Enforcement) Act of 1933, 23 & 24 Geo. 5, ch. 13 (Eng.) and Code of Civil Procedure (ZPO) § 328 (F.R.G.).

It is also worthy of note that under the EEC Convention, a judgment against a United States defendant in a member's courts, even if based upon "exorbitant" jurisdiction, could nevertheless be entitled to enforcement against its assets in any other member nation. *See* Kerr, *The EEC Judgments Convention — Some Repercussions Beyond the EEC*, INT'L B. NEWS 13 (Apr./May 1981).

414. This passage is devoted to issues concerning whether such foreign judgments should be given effect according to their terms -- that is, enforced by way of execution simply by their introduction as juridical *faits accompli*. It should also be noted that in some instances, even if refused such conclusive effect, foreign judgments might be accepted in part as evidence of matters litigated. *See* RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW OF THE UNITED STATES § 492 cmt. i (Tentative Draft No. 4, 1983).

415. However, several of the treaties of friendship, commerce and navigation between the United States and other nations provide for the reciprocal recognition and implementation of arbitration agreements and awards. *See, e.g.,* Michael H. Brenscheidt, *The Recognition and Enforcement of Foreign Money Judgments in the Federal Republic of Germany*, 11 INT'L LAW. 261 (1977).

416. Thus, enforcement actions would be prosecuted in state court or in federal courts based upon diversity of citizenship. *See, e.g.,* Somportex Ltd. v. Philadelphia Chewing Gum Corp., 453 F.2d 435 (3d Cir. 1971).

417. *See* RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW OF THE UNITED STATES § 492 (Tentative Draft No. 4, 1983).

Many States have enacted the Uniform Foreign Country Money-Judgments Recognition Act. *See, e.g.,* N.Y. CIV. PRAC. L. & R. art. 53 (McKinney 1978 and 1992 Supp.). The act in general provides for mandatory non-recognition if due process requirements are not met or personal jurisdiction is not obtained, and sets forth other discretionary grounds, including, *inter alia*, lack of subject matter jurisdiction, faulty notice, fraud, public policy, conflict with another judgment, violation of a forum selection agreement, or "seriously inconvenient" forum. *Id.*

418. One venerable constraint which has not fared well of late in the United States is the requirement of reciprocity. *See, e.g.,* Somportex, 453 F.2d at 440; Cowens v. Ticonderoga Pulp & Paper Co., 219 N.Y.S. 284, *aff'd*, 159 N.E. 669 (1927); RESTATEMENT (SEC-

If a United States defendant succeeds in having an action transferred to another tribunal on grounds of forum non conveniens,<sup>419</sup> its ability to contest the enforcement of a judgment rendered there will, not surprisingly, be impaired. It is virtually certain one basis for challenge will be removed by the customary requirement to agree to the jurisdiction of the foreign court,<sup>420</sup> and although a defendant may not be compelled to honor the award as a condition to relocation of the case,<sup>421</sup> it may be hard pressed to attack a judgment rendered in the system whose efficacy and fairness it championed in arguing for transfer.<sup>422</sup>

Difficulties in implementing decrees and awards rendered abroad will face not only plaintiffs. Any defendant who is unsuccessful in convincing a foreign court to reduce its liability due to the responsibility of the home government or its agencies<sup>423</sup> may face immunity as a barrier to collecting under contribution or indemnity outside the United States,<sup>424</sup> and the FSIA's limits on enforcement of judgments against other national governments within the United States.<sup>425</sup>

Thus it again appears United States defendants may be well advised to refrain from resistance to having nuclear disaster suits brought in their home courts, despite the risks.

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OND) OF CONFLICT OF LAWS § 98 (1971); RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW OF THE UNITED STATES § 481 (1987). Cf. *Her Majesty Queen in Right of Province of British Columbia v. Gilbertson*, 597 F.2d 1161 (9th Cir. 1979) (reciprocity is a factor which may be taken into account even if no longer mandatory).

419. See *supra* notes 109-44 and accompanying text. Again, comparison to the Union Carbide litigation is inevitable.

420. See *supra* notes 133-35 and accompanying text.

421. See *supra* note 136 regarding the United States Court of Appeals for the Second Circuit's disapproval of such a condition in *In re Union Carbide Corp. Gas Plant Disaster*, 634 F. Supp. 842 (S.D.N.Y. 1986), *rev'd in part* 809 F.2d 195 (2d Cir. 1987), *cert. denied*, *Executive Committee Members v. Union of India*, 484 U.S. 871 (1987).

422. Such rhetorical chickens returned to roost for Union Carbide as negotiations progressed toward settlement and the parties skirmished in the arena of public opinion, with the defendant being scathingly criticized for praising the Indian court system and then in turn seeking disqualification of its judges as well as resisting its rulings. See Stephen R. Weisman, *Bhopal Suit Marches On, In Circles*, N.Y. TIMES, Aug. 7, 1988, at E24.

423. See *supra* notes 381-98 and accompanying text regarding apportionment of liability based upon comparative fault, and parties absent due to lack of jurisdiction or immunity.

424. See *supra* notes 82-93, 292-97 and accompanying text regarding immunity of foreign governments.

425. 28 U.S.C. §§ 1610 and 1611 (Supp. 1992). These sections set out the limitations on ability to execute on property of a foreign government in the United States. See also *supra* notes 84-91 and accompanying text regarding FSIA.



### B. Factors in Nuclear Liability Judgments

Recent experience suggests that a massive international disaster of human origin, of which the nuclear accident is the archetype, will be followed by a tumultuous venting of moral, psychological, and emotional forces. In such a climate, it is problematic whether any judicial system presently constituted would be perceived as capable of functioning at its foremost. The enormous pressures in the aftermath of such a calamity may portend that some courts' judgments outside the United States ought not be given full effect in the United States against all parties sought to be held liable.<sup>426</sup>

For one thing, it is likely that in such an emotionally-charged setting core concepts of legal responsibility might not be observed; this may include matters encompassed within general notions of due process,<sup>427</sup> as well as other more specific items.<sup>428</sup> Relatedly, special problems would be posed by the presence of the foreign government as plaintiff in its own courts,<sup>429</sup> and

426. Not only would this be a factor in the United States, but also in any nation party to a multinational agreement concerning third-party nuclear liability with respect to a judgment rendered in a non-contracting party nation, or in a nation whose law concerning limitation of liability differed greatly from its own. In addition, the problem of multiple suits and judgments remains ever present.

427. See HARVARD STUDY, *supra* note 98, at 34-35.

In connection with this subtopic, the litigation surrounding the incident at Bhopal continues to provide an instructive prototype. It was a matter of recurring concern that the plaintiffs there would ultimately have had great difficulty executing the judgment the Indian courts rendered. See Stephen Labaton, *Bhopal Outcome: Trial is Avoided*, N.Y. TIMES, Feb. 15, 1989, at D3.

An excellent example arose in the realm of theory of liability. The Indian Government posited that Union Carbide, as a multinational corporation (whose separate entity existence from its Indian subsidiary was likely to have been disregarded — that being another illustrative dimension of the problem), owed a "nondelegable duty" to be sure its overseas activities caused no harm. From the manner in which the case evolved, especially including the order for an "interim payment" by Union Carbide of \$195 million before liability had been established, observers concluded that the government's liability construct had been accepted. See Weisman, *supra* note 422, at E24.

428. For example, what weight would be given to arguments based upon *force majeure* or other supervening causes such as the acts of third parties? In many other systems, there are fewer restrictions upon the admissibility of evidence and the function of judges differs markedly. See HARVARD STUDY, *supra* note 98, at 32-33.

In the *Union Carbide* litigation in India, a judge entered an order barring the defendant from entering into any out-of-court settlement with any individual party. See Stephen R. Weisman, *New Court Setback for Carbide in Bhopal Case*, N.Y. TIMES, July 1, 1988, at D3.

429. The Government of India enacted national legislation in 1985 making it the sole legal representative of all Indian Bhopal victims, and has acted as such throughout all negotiations leading to settlement. Such a situation has, if nothing else, the effect that

many other defects can readily be envisioned.<sup>430</sup>

### C. Multiple Judgments in Multiple Fora

The desire to obtain compensation for losses suffered in a mass nuclear disaster will very probably compel plaintiffs to seek redress in more than one forum.<sup>431</sup> This may be due, for instance, to liability limitations under domestic laws,<sup>432</sup> traditionally lower damage awards in domestic courts,<sup>433</sup> or, *apropos* the current subtopic, the perceived need to obtain judgments that enjoy the greatest likelihood of enforcement where assets may be found. Conflicts between courts' judgments are among the recognized bases for refusal to honor foreign decrees,<sup>434</sup> and this may assist United States parties in avoiding the potentially ruinous effects of multiple and inconsistent dispositions.

It bears re-emphasis, however, that the preferable solution is to attempt to address *a priori* the question of multiple judgments, in the interest of systematic resolution of the important issues presented and the just extraction of compensation from those responsible. This might be accomplished by the careful application of *forum non conveniens*,<sup>435</sup> or international *lis pendens*.<sup>436</sup>

In addition, steps might be taken to neutralize the incentive for plaintiffs to bring duplicative litigation. Courts could adopt

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the plaintiff would be highly vulnerable to domestic political criticism if a settlement were seen as inadequate. See Weisman, *supra* note 422, at E24. In addition, the government considered itself empowered to disregard completely the effects of any proceedings in other courts (specifically, suits in state court in the United States) in which it was not involved. In 1990, the Indian Government began efforts to avoid the settlement of the previously-negotiated settlement of the litigation and reopen both civil and criminal proceedings. See Andrew Blum, *Bhopal: The Case that Just Won't Go Away*, NAT'L L.J. May 21, 1990, at 15; *India Seeks To Reopen Bhopal Case*, N.Y. TIMES, Jan. 22, 1990, at D1.

By way of contrast, see also *supra* notes 41-47 and accompanying text regarding foreign governments as plaintiffs in United States courts.

430. In addition to the myriad procedural obstacles which may be present, there is the prospect of domination of the judiciary by the political branches in some nations, and that of judicial partiality, all of which loomed in the *Union Carbide* dispute.

431. See *supra* notes 152-59 and accompanying text regarding multiple suits.

432. See *supra* notes 235-37 and accompanying text regarding national legislation imposing limitations upon liability, and corresponding provisions of the multilateral treaties regarding nuclear liability.

433. See *supra* notes 95-99, 228 and accompanying text.

434. This is among the grounds enumerated in the Uniform Foreign-Money-Judgments Recognition Act in force in most States. See *supra* note 417.

435. See *supra* notes 109-44 and accompanying text.

436. See *supra* notes 160-64 and accompanying text.

choice of law principles to make uniformity of results in the United States and elsewhere more likely.<sup>437</sup> Or, federal legislation could be enacted that would limit recovery in United States courts to that which injured plaintiffs could obtain in the country of occurrence.<sup>438</sup>

So long as private law mechanisms are the available tools, United States defendants will be justified in seeking solutions of the foregoing types. However, when struck to the touchstone of moral justice and held in the light of needed order in the international realm, such answers are disturbingly flawed. Rather, as is true of other private law constructs, they argue eloquently in favor of the travails necessary to the creation of a globally operative and comprehensive regimen of responsibility.<sup>439</sup>

## V. CONCLUSION

On a planet which, for better and worse, seems to have its present-term destiny harnessed to nuclear energy, and in which there are so many users and suppliers worldwide, no system of laws based upon the separate-nation-state paradigm is likely to suffice to meet the problems of just redress of injury and responsibility allocation that may arise in the wake of massive transnational nuclear disaster. The efforts that have been made to surpass the limitations of the existing order by international convention have not yet attained general application or even widespread acceptance, and contain deficiencies in any event that render them incomplete.

There is significant likelihood that an incident at a foreign nuclear facility may implicate one or more United States companies and the United States Government as potentially liable parties at least in part. There is an equally strong probability that relief will be sought in United States courts, in an effort to maxi-

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437. That is, if the law of the state in which the incident occurred is given complete application, then at least in theory the recovery of plaintiffs would be the same whether suit was commenced here or abroad, subject always to the instant issues of judgment enforceability. See also *supra* notes 210-30 and accompanying text regarding choice of law.

438. This is among the suggestions contained in HARVARD STUDY, *supra* note 98, at 18.

439. As reviewed *supra* notes 169-72 and accompanying text, the multilateral treaties provide for jurisdictional unity and corollary guarantees of the enforcement of damages awards among the signator nations. It may be persuasively urged that these features are the most beneficial parts of the treaties; if such mechanism were in effect worldwide, then this writing would perforce be unnecessary.

mize meaningful recovery. Although our domestic tribunals cannot be said to have been intended as fora for such momentous adjudications, there are many means under United States jurisprudence as it has evolved, and the law of nations, to deal with the challenges posed. Multiple suits and judgments can be avoided, a choice can be made among applicable laws that allows for the legitimate interests of nations concerned to be given due recognition, and liability can be justly apportioned among parties and governments responsible. United States law, including conflict of laws provisions, is also suited to giving full effect to matters of defense likely to arise in such mass litigation. In addition, in the event suit is brought outside the United States against American concerns, a measure of justice can be achieved by applying established principles concerning recognition and enforcement of foreign judgments.

All of the foregoing can be accomplished by the use of established, accepted and mostly tested precepts of domestic and international law, thereby ameliorating in significant measure the prejudice to the world order, and the efforts which have been made to strengthen its legal foundation, that might otherwise result. At the same time, the extraordinary effort required bears eloquent witness to the need to work toward a global regimen that will operate to handle transnational nuclear litigation; the same is true concerning other mass toxic tort claims.

