TULANE ENVIRONMENTAL LAW JOURNAL

VOLUME 16 WINTER 2002 ISSUE 1

Transmigration of Hazardous Industry: The Global Race to the Bottom, Environmental Justice, and the Asbestos Industry

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To many environmentalists and proponents of workers' and human rights, the rampant deregulation and globalization of market economies during the latter stages of the twentieth century poses a potent harbinger of environmental degradation, labor exploitation, and the erosion of essential human rights. Theorists, activists, and academics argue that, along with the inexorable expansion of international markets and the dismantling of trade barriers, multinational corporations will re-write the rules governing the global economy, with an emphasis on trade facilitating mechanisms that will exacerbate environmental problems and the inherent inequalities of states *inter se*.[1] Ungoverned trade expansion without concomitant environmental regulation threatens a calamitous environmental pandemic. Meanwhile, in stark contrast to the relative ease with which trade agreements proliferate, "the legal mechanisms

1. *See* Robin Hahnel, *Globalization: Beyond Reaction, Thinking Ahead*, 8 NEW POLS. (N.S.) 31-33 (2000).

needed to address global environmental problems have been slow to develop."[2]

The syncopated development of multilateral economic and environmental agreements magnifies the schism between developed and developing countries not only by exaggerating existing economic asymmetries, but also by focusing environmentally harmful and unwanted practices in the Third World. Even more acutely, however, within developing countries, many governments primarily serve the interests of local elites by expanding "comparative advantages" in substandard wages, working conditions, and environmental regulations to the detriment of the workers and citizens of those countries.[3] Thus, multifactoral power imbalances conspire to concentrate the burdens of environmentally deleterious development on the most impoverished citizens of the developing world.

Born in the United States in the early 1980s as a vehement reaction to the disproportionate imposition of environmental hazards on racial and ethnic minorities and the poor, the environmental justice movement provides a relevant and effective construct for addressing institutional and doctrinal imbalances inherent in multilateral trade agreements.[4] In the absence of a massive regulatory induced diaspora of hazardous technology from the industrialized to the developing world, empirical evidence nevertheless confirms a pattern of transmigration of some of the most pernicious and, therefore, most heavily regulated industries.[5] Of these menacing émigrés, asbestos ranks prominently; and, as the signal phenomenon of massive toxic tort personal injury claims and litigation in the United States, likewise provides a telling illustration of the scope and magnitude of the problem to which international environmental justice movements must respond.[6]

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2. Alan Neff, *Not in Their Backyards, Either: A Proposal for a Foreign Environmental Practices Act*, 17 ECOLOGY L.Q. 477, 477 (1990).

3. Hahnel, *supra* note 1, at 33.

4. *See* Giovanna Di Chiro, *Nature as Community: The Convergence of Environment and Social Justice*, *in* UNCOMMON GROUND 298, 300-01 (William Cronen & W.W. Norton eds., 1996).

5. *See* Neff, *supra* note 2, at 484 n.32 (citing H. JEFFERY LEONARD, POLLUTION AND THE STRUGGLE FOR THE WORLD PRODUCT 111-12 (1988)).

6. *See id.* at 484-85.

I. ENVIRONMENTAL JUSTICE: A CONCEPTUAL AND ANALYTICAL TAXONOMY

A. Origin

In the manner of folk tradition, the environmental justice movement in the United States percolated throughout communities directly and acutely affected by the disproportionate imposition of, and exposure to, environmental hazards. A synthesis of the civil rights and environmental movements in the United States, environmental justice shares attributes, methodologies, and objectives of both, but can be adequately defined by neither. One of its earliest and most adamant proponents, Dr. Robert Bullard, explained in a recent interview that "the environmental justice movement is about trying to address all of the inequities that result from human settlement, industrial facility siting and industrial development."[7] As an alchemical union of civil rights and traditional environmentalism, environmental justice espouses "more of a concept of trying to address power imbalances, lack of political enfranchisement and to direct resources so that we can create some healthy, livable and sustainable types of models."[8]

B. Development

Just as clearly as the environmental justice movement incorporates at its core an intrinsic environmental element, the environmental justice agenda is not limited nor constrained by traditional environmental approaches or concerns precisely because of its antinomial origins in the civil rights movement. The tension and divergence arises because most traditional environmental groups "reflect larger society . . . and society is racist."[9] In a caustic diatribe against the "colonization of the movement by legal groups," Professor Luke Cole syllogistically explains that the environmental groups that emerged as radical opponents to "the system" have been co-opted by and become a part of this system by virtue of their own success; as "players" and constituent elements of the system, environmental groups intrinsically legitimate the system and its processes by their participation; the environmental justice movement, on the other hand, as a "transformative social movement," questions the

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7. Robert D. Bullard, *Environmental Justice: An Interview with Robert Bullard*, EARTH FIRST! J. (July 1999), *at* http://www.penweb.org/ej/bullard.html.

8. *Id.*

9. *Id.*

legitimacy of the system itself.[10] Therefore, to the extent traditional environmental groups accept and legitimate an "illegitimate system," its objectives and methodologies are anathema to the environmental justice cause.

Dr. Bullard explains in a more detailed manner:

> [S]ociety is so racist and because racism touches every institution—employment, housing, education, facility siting, land use decisions, you can't really extract race out of the decisions that are being made by persons who are in power and the power arrangements are unequal. When we talk about the institution of racism as it exists in environmental policy, enforcement, land use, zoning and all those things.[11]

But environmental issues constitute a fundamental concern of the environmental justice movement, which must necessarily seek a "dialog in an effort to coordinate and collaborate (traditional environmental and environmental justice) efforts most effectively."[12] Dr. Bullard concludes that the environmental justice movement must determine:

> [H]ow can we as people of color, working class people and poor people work on agendas that at the same time may conflict with the larger agendas of the big groups . . . . And I think that we have to agree to work on the things we are in agreement on and somehow work through those things where there are disagreements.[13]

Organizationally, like its civil rights forbearer, the environmental justice movement comprises "a lot of the small grass roots groups [that] operate from a bottom up model . . . [and] are more egalitarian . . . more democratic."[14] In the nature of its origination and operation, the movement reinforces the empowering qualities of the civil rights movement. According to Dr. Bullard, the genesis and organizational structure of environmental justice groups "does bring out the idea that power rests in all of us and when we operate as a collective, that's when we are most powerful and when we move forward as a unit, as a body and not necessarily with a hierarchy."[15]

Thus, as a nascent movement, environmental justice shares attributes exhibited by its two philosophical progenitors. Just as the environmental justice movement diverges from and, indeed, conflicts

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10. Luke W. Cole, *Lawyer, the Law, and Environmental Justice: Dangerous for the Movement*, RACE, POVERTY & THE ENV'T, Fall 1994, Winter 1995, at 4-6.
11. Bullard, *supra* note 7.
12. *Id.*
13. *Id.*
14. *Id.*
15. *Id.*

with the methods and aims of traditional environmentalism, however, it likewise operates beyond the sphere of traditional civil rights movements, as well. "Environmental justice is not a social program, it's not affirmative action, it's about justice; and until we get justice in environmental protection, justice in terms of enforcement regulations, we will not even talk about achieving sustainable development or sustainability issues until we talk about justice."[16] Clearly then, though derivative in conception, the environmental justice movement qualifies as a discrete and unique phenomenon, with its own behavioral characteristics and limitations. The delineation of the movement remains a more elusive subject, particularly in its emergent application in the international context.

C. Evolution

In its brief history, the environmental justice movement has focused primarily on perceived domestic abuses. However, operating beyond the traditional limits of both the civil rights movement and the environmental movement per se, and owing especially to its nonhierarchical formulation, the environmental justice movement provides an immensely adaptable vehicle for addressing the disparate imposition of environmental risks globally, in a wide variety of applications. Indeed, to an extent, the movement's ability to elude an easy definition derives precisely from the fact that it constantly evolves to address imbalances that lead to disproportionate burden sharing rather than merely responding to particular actors in specific contexts.

As a result, more recently, environmental justice advocates have acknowledged that "it's just one environment . . . if in fact we are going to have a global movement for environmental justice, we have to understand what environment is and what the agendas are."[17] According to this broader perspective, the fundamental dynamics that animate the environmental justice movement remain, more or less, constant. Regardless of geographical location or scope, "environmental injustice" results from "lack of economic and political clout and lack of having a voice to say 'no.'"[18] Therefore, the extant domestic environmental justice network is "trying to work with groups across political spectrums . . . the border and internationally to see that [they] address these issues in a comprehensive manner."[19]

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16. *Id.*
17. *Id.*
18. *Id.*
19. *Id.*

By adopting a more expansive global perspective, however, environmental justice advocates must effectively address geopolitical and economic factors many orders of magnitude greater than those that operate within the local and regional sphere. The problem is both massive and intrinsically embedded in the very fabric of our society. For instance, the dangerous occupational conditions and health hazards that exist in the Colonias and the Maquilas along the U.S.-Mexican border directly result from consumption patterns and behavior within the United States.[20] An intensely unpopular issue, the environmental justice movement has focused analytical attention on such disparities and inequities of wealth and privilege across international borders.[21]

In particular, adherents to the environmental justice construct recognize that propagating trade agreements threaten to further tilt the imbalance in favor of individuals and countries of relative wealth and power to the detriment of less economically and politically developed nations. The erosion of economic borders compounds the misdirection of efficiency gains and wealth distribution by an inversely proportionate export of environmental waste, hazardous technology, and unsustainable development policies.[22]

II. THE GLOBAL RACE TO THE BOTTOM: FREE TRADE AND REGULATORY FLIGHT

Without dislocations of wealth and resource transfers and the concurrent reflexive relocation of hazardous waste and technology, proponents of environmental justice would be merely tilting at windmills by expanding their focus to address multilateral agreements. Therefore, it is important to understand how and under what circumstances hazardous industry may migrate in what has been termed a "race of laxity," also known as a "race to the bottom." Well recognized as a domestic phenomenon, a "race to the bottom is characterized by the progressive movement of capital and technology from countries with relatively high levels of wages, taxation and regulation to countries with relatively lower levels."[23]

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20. *Id.*
21. *Id.*
22. *See* Hahnel, *supra* note 1, at 38; *see also* Bullard, *supra* note 7.
23. Debora L. Spar & David B. Yoffie, *Multinational Enterprises and the Prospects for Justice*, 52 J. INT'L AFF. 557, 564 (1999).

A. The Theory of Regulatory Flight

It seems intuitively logical that corporations acting in their own enlightened self interest will invariably shift production from industrialized countries with strict occupational safety and health and environmental standards to developing nations with more lenient regulations once the marginal costs of regulatory compliance exceed the cost of relocation. Although the developing world desperately needs infusions of investment capital and technology transfers, "the advent of the global economy has enabled multinational companies to escape from developed countries' labor standards and to depress working conditions and wages around the world."[24] According to the "bleak logic of globalization," less developed countries compete against each other to win multinational capital and development by depressing wages and labor and health standards.[25] "As a result: First World components are assembled by Third World workers who often have no choice but to work under any conditions offered them."[26] In very real and concrete terms, "[m]ultinational companies have turned back the clock, transferring production to countries with labor conditions that resemble those in the early period of America's own industrialization."[27]

Such a simple cost externalization model, however, fails to predict adequately the actual industrial transmigratory practice. In fact, other conditions coalesce to determine when and to what extent corporations pursue an agenda of competitive deregulation. Ultimately, the spectrum of predictive factors required for a "global race to the bottom" to occur more emphatically and inexorably cast the process as an environmental justice concern.

As a threshold matter, two necessary conditions must exist for a race of laxity to materialize.[28] Obviously, "[c]orporations can only launch a race to the bottom once they are free to move across national borders."[29] At a minimum, border controls that prohibit trade necessarily stifle any race to the bottom. On a more practical level, races to the bottom can occur only where trade barriers are minimal or, optimally, nonexistent.[30]

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24. *Id.* at 559 (citing Terry Collingsworth et al., *Labor and Free Trade: Time for a Global New Deal*, 73 FOREIGN AFF. 8, 9 (1994)).
25. *Id.*
26. *Id.*
27. Terry Collingsworth et al., *Labor and Free Trade: Time for a Global New Deal*, 73 FOREIGN AFF. 9, 9 (1994).
28. *See* Spar & Yoffie, *supra* note 23, at 565.
29. *Id.* at 564.
30. *See id.*

Empirical evidence aptly demonstrates the point. At the Uruguay Round of the parties to the General Agreement on Tariffs and Trade (GATT), many impediments to free trade were dismantled.[31] Thereafter, from 1985 to 1996, foreign investment skyrocketed from fifty-eight billion dollars to three hundred eighteen billion dollars.[32]

Beyond the mere ability to relocate production, corporations also require some incentive to overcome inertia and incur transaction costs associated with redistribution of development and production processes. Thus, "firms race only when regulation and factor costs are heterogeneous, and when this heterogeneity leaves gaps that can be turned to the firms' competitive advantage."[33] Typically, companies migrate towards lower taxes and/or lower wage costs in foreign locations, less expensive inputs, and/or less onerous regulations.[34] In the absence of differential factor costs or regulatory differences that affect product costs, little cross-border pressure inspires companies to move.[35] As a corollary, underdeveloped countries engaged in a competitive market for international capital and development will manipulate precisely these factors to entice foreign investment.[36]

Additionally, four variables influence the likelihood that corporations will take advantage of the opportunity to translocate across international borders.[37] The four elements—homogeneity of products, regulatory differentials, transaction costs, and sunk costs—refer to different elements of the interaction between firms and states in a global economy.[38] Global races to the bottom are more likely to result with increasing combinations of the described variables.[39]

Of the four facilitating factors, regulatory differentials most directly implicate environmental justice concerns. Assuming precisely the same or similar products can be produced in one country or another, companies will tend to seek the least burdensome regulatory environment in which the factor costs (including the costs of legal compliance and wage levels) reach their lowest possible point.[40] If differences between the costs of regulatory compliance and production

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31. *See id.*
32. *Id.* at 565 (citing 2 INT'L MONETARY FUND, BALANCE OF PAYMENT STAT. Y.B. 1997, pt. 2, at 68 (1998)).
33. *Id.* at 565.
34. *See id.*
35. *See id.*
36. *See id.*
37. *See id.*
38. *See id.*
39. *See id.*
40. *See id.* at 567.

factors are nonexistent or slight, firms are unlikely to incur additional sunk costs (especially in capital intensive operations) and transaction costs associated with cross border relocation.[41] Thus, firms are most likely to move when the regulatory and wage disparities between countries are greatest.

The race to the bottom effect, then, depends upon and derives from power imbalances within and between nations; essentially, "the race to the bottom effect depends upon how weak labor is elsewhere, period."[42] The resulting downward spiral of labor exploitation and diminishing occupational safety and health regulation exacerbates the imbalance between developed and developing nations and qualifies as precisely the type of disparity against which the environmental justice movement contends. "In other words, a race to the bottom occurs with global standards forced ever lower by the centripetal forces of multinational rivalry. In the process, human rights and justice suffer."[43]

Indeed, global race theorists define "justice," as a countervailing force necessary to stem an ungoverned race to the bottom in terms remarkably similar to the themes that resonate throughout the environmental justice movement. Addressing the prospects for justice in the context of multinational corporate competition, Debora Spar and David Yoffie explain:

> When we speak of justice, we are referring to the basic conditions of human livelihood, to the political and economic factors that expand the realm of human choice and possibility. Our definition of justice, based on the United Nations' description of human development, is the process of enlarging people's choices, ensuring access to basic resources and providing citizens with education and the ability to live a healthy life.[44]

The "global justice" polemic, therefore, directly links political concerns for justice with civil liberties, which also forms one of the cornerstones of the environmental justice movement.[45]

B. Regulatory Flight: A Polemical Approach

Detractors of the global race theorem counter that it is nothing more than that, an untested hypothesis.[46] To the contrary, free trade advocates

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41. *See id.*
42. Hahnel, *supra* note 1, at 38.
43. Spar & Yoffie, *supra* note 23, at 560.
44. *Id.* at 558 (citing U.N. DEV. PROGRAM, HUMAN DEVELOPMENT REPORT 1990 (1990), *available at* http://www.undp.org/reports/global/1990/en.
45. *Id.*

discount "global race" alarmists as biased proponents of "labor unions, protectionists and all those trying to score political and ethical points against globalization and freer trade."[47] "Global market" advocates tout diametric evidence that compliance with environmental regulations represents such a small component of a project's total cost that such considerations fail to materially influence international investment decisions.[48] Indeed, they argue, empirical examples in central and eastern Europe and Latin America indicate that privatization of industry through foreign investment generally leads to higher wages and improved working conditions.[49]

"Global race" antagonists, however, extrapolate anecdotal evidence in support of a miscalculated conclusion. In fact, World Bank economists analyzing international trade and development reach a different conclusion. As a more general principle, empirical data describes "a rising trend in developing country participation in dirty industry trade relative to other trade."[50] They conclude that the possibility cannot be dismissed that differences in national environmental policies qualifies as a "cost factor that influences the location of investment in dirty industries."[51] "Global race" theorists promote a precautionary approach, admonishing that "even the possibility of race-to-the-bottom effects are important enough to demand continued attention and rigorous inquiry."[52]

III. THE ASBESTOS PARADIGM

Beyond the rhetoric of "global race" and "global market" partisans, empirical proof confirms that at least some American industries' international location patterns have been significantly affected by environmental regulations in the United States.[53] In particular, "manufacturers of asbestos, arsenic trioxide, benzidine-based dyes, certain pesticides and a few other carcinogenic chemicals, some basic mineral processing industries, including those involved in copper, lead and zinc processing, and some producers of intermediate organic

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46. Reginald Dale, *Is There a Third World 'Race to the Bottom?' Don't Believe It*, INT'L HERALD TRIB., *at* http://www.iht.com/IHT/RD/98/rd012798.html (last visited Jan. 15, 2003).

47. *Id.*

48. *Id.*

49. *Id.*

50. Patrick Low & Alexander Yaetes, *Do 'Dirty' Industries Migrate?*, *in* INTERNATIONAL TRADE AND THE ENVIRONMENT 102 (Patrick Low ed., 1992).

51. *Id.* at 102-03.

52. Spar & Yoffie, *supra* note 23, at 563.

53. Neff, *supra* note 2, at 484 n.32 (citing LEONARD, *supra* note 5, at 111-12).

chemicals" have exported their "dirty industry" to the developing world.[54] Ironically, all modern international environmental treaties recognize and seek to institutionalize the need to fund and transfer clean, efficient, and beneficial technologies to the developing nations of the world.[55] In contrast, the asbestos debacle in the United States well illustrates the human and institutional toll exacted by dirty industry.

Indeed, in testimony before the United States House of Representatives Committee on the Judiciary, former Tulane University Law School Dean Paul R. Verkuil described the repercussions of historical asbestos use in this country as "a disaster of major proportions to both the victims and the producers of asbestos products, which the courts are ill-equipped to meet effectively."[56] Despite the discontinuation of virtually all uses of asbestos in the United States in the early 1970s, new asbestos-related personal injury lawsuits continue to be filed at a rate of over forty thousand per year, with well over two hundred thousand cases currently pending.[57] Estimates project that approximately three hundred thousand to four hundred thousand former asbestos workers in the United States will die of asbestos-related cancer due to occupational exposures.[58] The longevity and magnitude of the problem has taxed personal, occupational safety and health, medical, institutional insurance, and judicial resources to the point of crisis.[59] The enormity of the problem prompted the United States Congress to seek a nationwide solution through a proposed "Fairness in Asbestos Compensation Act of 1999," by which individuals claiming asbestos related injury would file claims through a truncated procedure merely requiring proof of exposure to an asbestos-containing material and an asbestos-related illness in order to receive recovery through a matrix based on the particular disease contracted.[60]

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54. *Id.*

55. *See, e.g.*, United Nations Framework on Climate Change, June 12, 1992, 31 I.L.M. 848; Convention on Biodiversity Diversity, June 5, 1992, 31 I.L.M. 818; Convention for the Protection of the Ozone Layer, Mar. 22, 1985, 26 I.L.M. 1516; Agenda 21, UNCED Report, U.N. Doc. A/CONF.151/26/ (1993), *available at* http://www.un.org/esa/sustdev/agenda21text.htm#sec1 (last visited Jan. 15, 2003).

56. *Fairness in Asbestos Compensation Act of 1999; Hearing on HR 1283 Before the House Comm. on the Judiciary*, 106th Congress 78 (2000) (statement of Paul Verkuil, Dean and Professor of Law at Benjamin N. Cardozo Law School, quoting the Ad Hoc Commission on the Asbestos Crisis appointed by Chief Justice Rehnquist (1990)) [hereinafter Verkuil Testimony].

57. *Id.* at 79.

58. KRISTIN SHRADER-FRECHETTE, RISK AND RATIONALITY 146 (1991).

59. *See* Verkuil Testimony, *supra* note 56, at 79.

60. *Id.* at 79-81.

To comprehend the nature and vastness of the diametric divergence between the principles espoused in modern multilateral environmental agreements and the reality of translocation of asbestos industries to the Third World, one must understand the history and evolution of the asbestos crisis in this country. If, indeed, the mammoth personal, economical, and institutional externalities generated by the asbestos conundrum have overwhelmed the enormous resources and infrastructure of the U.S. legal system, it would surely eclipse the ability of similar institutional structures in developing countries. Consequently, many thousands of severely harmed individuals will find no recourse for their injuries.[61]

IV. MYTH AND TRAGEDY: ASBESTOS USE AND ABUSE IN THE UNITED STATES

A. The Asbestos Phenomenon: A Current Perspective

No single substance or phenomenon has shaped the contours, generated the infrastructure, or defined the techniques of modern toxic tort law and litigation in the United States more than asbestos. To anyone who has followed the tobacco litigation with astonishment, the disputed—and in many respects concocted and misleading—scientific studies, corporate manipulation and deception, pattern of ineffectual regulation, and ultimate human toll seem a familiar and disconcerting reprise of the denouement of the asbestos litigation that began to unravel over seventy years ago. Far from merely a significant footnote of medical-legal history or a blueprint for other classes of toxic tort lawsuits, the effects and legacy of the asbestos epidemic resonate in terms of lingering illnesses, newly reported cases of asbestos-related disease, projections of significant future sickness well into the twenty-first century, and a robust docket of pending and new personal-injury tort cases. Perhaps most disturbingly, the relocation of many asbestos-dependent industries to the developing nations of the Third World portends a devastating cycle of illness, disability, and death in countries that lack the necessary infrastructure to deal with such a widespread occupational health crisis.

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61. *See id.* at 78.

B. The "Miracle Fibre": A Historical Perspective

Asbestos use, and the documented health hazards associated with its use, pre-dates the Christian era.[62] Well known to Egyptians and Romans, asbestos fibers were woven into flame retardant fabrics and incorporated as a binder in cementitious construction.[63] Legend tells of Peter the Great impressing rival leaders of his power by throwing a woven asbestos fiber napkin into a raging fire, later retrieving it unscathed.[64]

Remarkably, ancient cultures also recognized an unusually high incidence of pulmonary illness among those who worked closely with asbestos.[65] So prevalent were the breathing difficulties of the earliest "asbestos workers" engaged in textile processes involving asbestos, that the ancient Roman historian Pliny classified the resulting breathing illnesses among the known "diseases of the slaves."[66] Indeed, Pliny also reported the use of transparent bladder skin as crude respirators to minimize the inhalation of harmful dusts by slaves.[67]

Asbestos use and its associated pathology reached its zenith with the Industrial Revolution. The extreme physical demands of industrial processes involving high temperatures and pressures and corrosive chemicals required durable, noncombustible, nonflammable, and noncorrosive materials that were abundantly and economically available and suitable for incorporation in a variety of applications.[68] Asbestos provided a ready solution. Wartime demands in the shipbuilding and petro-chemical industries actually prompted the United States Navy to specify the use of asbestos-containing fireproofing materials in the bulkheads and boiler rooms of U.S. warships.[69] Post-war industrial growth, especially in the petro-chemical industry, insured vast and lucrative markets for asbestos-containing materials.[70]

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62. BARRY I. CASTLEMAN, ASBESTOS: MEDICAL AND LEGAL ASPECTS 1 (4th ed. 1996) (citing Nicholas G. Demy, Letter to the Editor, *Asbestosis*, J. AM. MED. ASS'N, Feb. 11, 1961, at 530).

63. *Id.*

64. *Id.*

65. *Id.*

66. *Id.* (quoting Adelaide M. Anderson, *Historical Sketch of the Development of Legislation for Injurious and Dangerous Industries in England*, *in* DANGEROUS TRADES 25 (Thomas Oliver ed., 1987); *see also* R.W. GOLDBERG, OCCUPATIONAL DISEASES 13 (1931).

67. Castleman, *supra* note 62, at 1 (citing DONALD HUNTER, THE DISEASES OF OCCUPATIONS 1009 (4th ed. 1969)).

68. *See id.* at 2.

69. *See id.* at 416, 420, 758-59.

70. NAT'L INSTS. OF HEALTH, U.S. DEP'T OF HEALTH & HUMAN SERVS., ASBESTOS EXPOSURE: WHAT IT MEANS, WHAT TO DO 1 (1989).

But even in the incipient stages of rampant industrialization, a disturbing health trend recurred. As early as 1897 in Vienna, and 1899 in Great Britain, physicians and factory inspectors catalogued accounts of devastating pulmonary diseases among factory workers in asbestos processing and manufacturing trades.[71] No serious efforts to control worker exposure to asbestos dusts in European industry followed until the 1920s; no significant, comprehensive efforts or regulations appeared in U.S. laws until the mid to late 1960s and early 1970s.[72]

C. Composition and Pharmacology

As a class, asbestos comprises a group of minerals occurring as masses of fibers that can be separated into thin threads which, in turn, can be woven into fabric, pressed and laminated into sheets, bonded into fire resistant boards, or incorporated as a binder in cementitious and fibrous components—such as sprayed-on board and pipe insulation, water supply and sewerage piping, roofing felts, and flooring and ceiling materials.[73] Characteristically, all commercially used asbestos types are nonflammable, noncorrosive, noncombustible, nonconductive substances that exhibit excellent resistance to wear and friction.[74] Inexpensive to mine, process, and fabricate, asbestos gained widespread use in commercial and industrial applications involving exposure to extreme heat, friction and wear, and highly corrosive chemical agents.[75]

Four main asbestos types, with different structures and characteristics, have been used widely in a variety of commercial and industrial applications:

—Chrysotile: fine, silky, flexible white fibers;
—Amosite: straight brittle fibers, light gray to pale brown in color;
—Crocidolite: "blue asbestos," straight blue fibers;
—Anthophylite: brittle, white fibers.[76]

Differing structures and characteristics dispose the different fiber types to different uses, and pose different and varying degrees of risk. Indeed, the very characteristics that made asbestos such an attractive component of the industrial age—its strength, inertness, durability, and

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71. *See* CASTLEMAN, *supra* note 62, at 2-3 (citing A. Netolizky, *Hygiene der Textilindustrie*, *in* HANDBUCH DER HYGIENE, 8 INDUSTRIAL HYGIENE 1102-03 (Th. Weyl ed., 1897); H.M. STATIONARY OFFICE, ANNUAL REPORT OF THE CHIEF INSPECTOR OF FACTORIES AND WORKSHOPS FOR THE YEAR 1898, at 171-72 (1907)).
72. *See id.* at 2, 329-33, 361-63.
73. *See* NAT'L INSTS. OF HEALTH, *supra* note 70, at 1-2.
74. *Id.* at 1.
75. *Id.* at 1-2.
76. *Id.* at 1.

susceptibility of reduction to small fibers for incorporation into other products—also pose the greatest threats to human health.[77]

The inherent mechanical characteristic of asbestos that poses a peculiar health threat derives from the critical "aspect ratio" typical of asbestos fibers. Defined in terms of the relationship of the overall length of the intrinsic fiber to its cross-sectional circumference, aspect ratios explain how asbestos fibers penetrate so deeply into the delicate structures of the human lungs, the esophagus, the stomach, and intestines.[78] Generally, asbestos fibers in their most elemental form appear, more or less, as javelins or toothpicks—long, thin, durable structures (notably, Chrysotile asbestos does not fit this pattern, as its fibers are somewhat curly and fluffy, which limits its penetrability).[79] Due to their shape and aspect ratios, once inhaled, asbestos fibers are able to avoid the body's natural defenses to introduction of alien substances—e.g., the mucosal layers and cilia that line the respiratory and alimentary tracts—and accumulate in the most delicate and vital functional structures of the pulmonary, gastrointestinal, and genitourinary systems. Indeed, the greatest and most insidious risk derives from microscopic fibers that escape easy detection. Thus, individuals may be exposed to the potentially most harmful dusts without even knowing it. Once acquired, these fibers remain indefinitely.[80]

Owing to their nonreactive character, asbestos fibers are not readily digested once swallowed or inhaled. Thus, once an asbestos fiber enters and lodges within the human body, it tends to remain there; the body's immunological mechanisms are essentially defenseless. Nevertheless, perceiving a foreign substance, the body attempts to isolate the nondigestible fibers by encapsulating them within protein coats.[81] If enough fibers are ingested, the prevalence of these encapsulated bodies themselves provoke an inflammatory response, which can progress independent of any further exposure to asbestos-containing materials.[82] At this point, an exposed individual suffers a class of progressive and usually chronic illness known as "asbestos-related disease."[83]

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77. *Id.*

78. *See* WORLD HEALTH ORG., OCCUPATIONAL EXPOSURE LIMIT FOR ASBESTOS, *available at* http://www.asbestos-institute.ca/main.html (last visited Jan. 15, 2003).

79. *See* NAT'L INSTS. OF HEALTH, *supra* note 70, at 2.

80. CASTLEMAN, *supra* note 62, at 6-16.

81. *Id.* at 7-8.

82. *Id.*

83. *Id.* at 6-16.

D. Asbestos-Related Diseases and Their Complications

A rare, highly pernicious, diffuse cancer of the epithelial lining of the pleural and peritoneal cavities, mesothelioma presents few and limited treatment options; most patients die within six months of diagnosis.[84] Unlike most other asbestos-related cancers, mesothelioma is not dose-response related, and cigarette smoking is not a known risk factor.[85] Indeed, aside from a very small background mortality risk, asbestos exposure seems the only known risk factor, though some researchers recently report an increased incidence of mesothelioma among individuals exposed to "SV-40" through tainted polio vaccines in the late 1950s. Average latency periods vary from twenty to twenty-five years, though latencies of as much as forty to forty-five years are not unusual.[86]

"Classic" asbestos induced lung cancer originates in the lower lobes, where asbestos fibers tend to penetrate and settle.[87] It is a quintessential dose-response related disease, with average latency periods of fifteen to twenty years (and thirty to thirty-five years not uncommon).[88] The "synergistic" effects of asbestos exposure and cigarette smoking greatly magnify the risk of contracting lung cancers.[89] Whereas cigarette smokers, on average, are ten times more likely to develop lung cancer as nonsmokers, smokers who also suffer heavy asbestos exposure are up to ninety times more likely to develop lung cancer than nonexposed individuals who do not smoke.[90]

Asbestos also has been implicated as a risk factor in laryngeal, esophageal, and gastrointestinal cancers.[91] Though the incidence and etiology of disease attributable to asbestos exposure are slightly more attenuated and controversial, these cancer types tend to demonstrate similar dose-response characteristics, latency periods, and synergistic interactions with cigarette smoking as lung cancer.

Asbestosis, the eponymous asbestos-related disease, describes a diffuse, interstitial fibrosis that limits gaseous exchange (of oxygen from the lungs and carbon dioxide from the capillaries) at the alveolar surfaces of the lungs and restricts the lungs' ability to expand fully on

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84. *See* NAT'L INSTS. OF HEALTH, *supra* note 70, at 3.
85. CASTLEMAN, *supra* note 62, at 86-87, 121-32, 330.
86. *See* NAT'L INSTS. OF HEALTH, *supra* note 70, at 4.
87. *Id.* at 7.
88. *Id.* at 4.
89. *Id.* at 5-6.
90. *Id.* at 6.
91. *Id.* at 3.

inspiration.[92] As a disease process, asbestosis progresses independently of further exposure when the prevalence of protein-coated "asbestos bodies" provokes an inflammatory response promoting additional fibrosis.[93] It can cause shortness of breath, paroxysmal nocturnal dyspnea (inability to breath when one lies down to sleep), coughing, fatigue, chest pain, and death.[94] It can also be a precursor to lung cancer.[95] Additionally, asbestosis also predispose individuals to pneumonia, bronchitis, and other pulmonary infections.[96] Latency periods typically range from ten to twenty years, but can be as short as five years or as long as forty years, depending on the intensity of exposure.[97]

Both the chest cavity and the lungs themselves are enveloped in thin, delicate, serous membranes, known respectively as the parietal pleura and visceral pleura. As a result of their aspect ratios and tough structure, asbestos fibers can pierce the lungs and lodge in the pleural lining, provoking a fibrogenic response. Though it can develop into asbestosis, pleural disease itself is a nonprogressive fibrotic disease. Commonly noted symptoms include shortness of breath, restriction of inspirational capacity, fatigue, nocturnal dyspnea, chest pain, and coughing. Pleural disease may also predispose individuals to pneumonia, bronchitis, and other pulmonary infections. Normal latency periods range from five to ten or fifteen years.

E. Duplicity and Duality: Industry Knowledge and the Role of the Medical-Legal Professions

Asbestos use in the United States benefited from two epochal developments—the Industrial Revolution of the late nineteenth and early twentieth centuries and explosive economic growth following World War II.[98] Used in many applications (from cigarette and gas mask filters, to roofing and flooring materials, and even children's modeling clay), asbestos perhaps gained its widest commercial popularity as a thermal insulation binding and reinforcing agent in industrial applications.[99] The advent of the Industrial Revolution and the proliferation of refineries and factories created a demand for inexpensive and abundantly available

92. CASTLEMAN, *supra* note 62, at 11-14.
93. *Id.* at 11-14, 39.
94. *Id.* at 11-14, 292-93.
95. *Id.* at 11-14, 57, 353.
96. *See* NAT'L INSTS. OF HEALTH, *supra* note 70, at 3.
97. *Id.*
98. *Id.*
99. *Id.*; *see also* CASTLEMAN, *supra* note 62, at 790.

construction materials that could withstand extraordinary temperature, chemical, and mechanical tolerances. Asbestos obliged. However, the Great Depression blunted industrial growth and, consequently, asbestos product use.

By 1927, sufficient toxicological and epidemiological evidence existed that the term "asbestosis" was coined in the medical literature, though a startlingly high incidence of disabling pulmonary disease among asbestos workers had been reported by a number of physicians, agencies, and researchers at least by the late 1800s.[100] In the United States, the first known reported case of compensation payments for asbestosis was detailed in a 1932 presentation to doctors, lawyers, and insurance executives (some of whom insured manufacturers of asbestos-containing products).[101] Nevertheless, the exigencies of world war spurred the widespread use of asbestos in the late 1930s through the mid–1940s. Indeed, even U.S. military engineers specified asbestos for use as bulkhead acoustical insulation, as fire protection, and in boiler rooms aboard ships, among other uses.[102]

Remarkably, despite the growing body of medical evidence regarding asbestos-related health hazards in the 1920s and 1930s, asbestos use skyrocketed even after the end of World War II.[103] The nearly monopolistic dominance of asbestos in certain industrial applications, particularly thermal insulation, derived from two primary causes: (1) the largest manufacturers of asbestos-containing products purchased, subsumed, and eliminated competitors who made alternative products; and (2) the major asbestos companies orchestrated a cartel to control prices and sectoralize markets to insure a uniform demand and supply of products at the most profitable sustainable prices.[104] With markets agreeably divided and well in hand, the major producers need worry only about the potentially adverse market effects of negative publicity.[105]

Members of the asbestos industry cartel followed closely and were well aware of the medical-legal significance of asbestos-related disease and resulting compensation and tort claims by the late 1920s and early 1930s. By 1929, Johns-Manville (J-M) faced a spate of pulmonary disability claims that were quickly and quietly settled.[106] In a fairly

100. CASTLEMAN, *supra* note 62, at 2-8.
101. *Id.* at 198.
102. *Id.* at 231-34.
103. *Id.* at 34.
104. *Id.* at 34-38.
105. *Id.*
106. *Id.* at 173-74, 246.

illustrative example of industry attitude and response to the potential crisis, one of J-M's most influential medical consultants, Dr. A.J. Lanza, cautioned that employees should not be advised of potential health hazards from asbestos exposure due to "the extraordinary legal situation."[107]

However, the conglomerate of asbestos companies did not merely maintain a passive veil of silence regarding health issues. Metropolitan Life Insurance Company (Met Life) insured a number of the largest asbestos-products manufacturers. In a pattern that would later repeat itself with devastating effect, Met Life funded a new department of industrial hygiene at McGill University beginning in 1926.[108] Within four years, researchers at McGill reported an unusually high incidence of asbestosis among a studied group of asbestos mineral miners.[109] Met Life, however, never issued permission to publish the report it funded.[110] To the contrary, within a few years the medical director of Met Life published his conclusions that asbestos miners do not contract asbestosis.[111]

Led by Met Life and J-M (conspicuously represented by its general counsel, Vandiver Brown), a consortium of asbestos-product interests funded several experimental animal studies of asbestos toxicity at the famed Saranac Lake Laboratory for Research (which performed pioneering research on tuberculosis and other pulmonary illnesses).[112] However, in exchange for financing the research, the industry executives demanded absolute editorial control and the exclusive right to approve or withhold publication of any reports of such studies.[113] Throughout the 1930s, '40s, and '50s, the asbestos cartel flagrantly exercised its editorial prerogatives and repeatedly suppressed publication of Saranac Lab studies that detailed the seriousness of and causal links between asbestos and asbestosis. In fact, the asbestos industry discounted the seriousness of asbestosis in published literature; eliminated references to incidences of lung and other cancers and the evidence of the carcinogenic properties of asbestos in the reports it allowed to be published from the Saranac Lab; and influenced governmental agencies, including the U.S. Surgeon General, to order researchers at facilities such as the National Cancer

107. *Id.* at 173.
108. *Id.* at 21-25.
109. *Id.*
110. *Id.*
111. *Id.*
112. *Id.* at 59-72, 80-95, 196-97.
113. *Id.*

Institute to curtail investigations of suspect industrial agents.[114] In many instances, Vandiver Brown, J-M's attorney, and Sumner Simpson, the president of Raybestos-Manhattan, with the assistance of Dr. A.J. Lanza, imposed their editorial judgment and selectively determined what findings and opinions would and would not be published.[115] The redacted, incomplete, and misleading studies these industry representatives essentially generated through the Saranac Lab exerted tremendous and lasting influence over occupational health professionals and state legislatures and worker's compensation boards considering inclusion of asbestos diseases in their worker's compensation systems.[116]

A New Jersey industry representative who expressed concern in the early 1940s regarding the troubling incidence of disease and disability among workers routinely exposed to asbestos dust offered a chilling anecdotal account of the methods and motives of asbestos company executives of the time.[117] In deposition testimony, the astonished official recalled the response offered by J-M's president, Lewis Brown, and its general counsel, Vandiver Brown, to his concerns:

> I'll never forget, I turned to Mr. Brown, one of the Browns made this crack (that Unarco managers were a bunch of fools for notifying employees who had asbestosis), and I said, "Mr. Brown, do you mean to tell me you would let them work until they dropped dead?" He said, "Yes. We save a lot of money that way."[118]

F. Compensation Laws, Regulatory Response, and Tort Litigation: Too Little, Too Late?

Switzerland first developed a state-sponsored system for compensating workers disabled by occupational injuries and diseases in 1877; Germany and Austria followed a few years later.[119] The inception of a worker's compensation system in the United States at the end of the 19th century, however, adopted a "schedule approach" to the concept of compensable work-related injuries that at first failed to include "occupational diseases," as opposed to accident induced injuries, in the schedule of compensable occurrences.[120] Gradually, the compensation laws of various states began to recognize and provide compensation for

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114. *Id.*
115. *Id.*
116. *Id.*
117. *Id.* at 581.
118. *Id.*
119. *Id.* at 159.
120. *Id.* at 161-62.

certain serious occupational illnesses clearly related to specific types of work place environments and exposures.[121]

Initially, the major corporate players in the asbestos industry actively resisted any attempts to include asbestos-related pneumoconisoses among the catalogue of compensable occupational diseases in the various state worker's compensation systems.[122] Even though relatively few workers filed asbestos-related worker's compensation claims, the specter of rampant compensation claims, with the attendant expense and adverse publicity, became a top concern of industry leaders as early as the 1930s.[123] The intense efforts by J-M executives to dissuade the New Jersey legislature from including asbestosis as a compensable occupational dust disease during the 1935 legislative session offers a prime illustration of the seriousness with which the industry viewed the threat of worker's compensation recovery, and the concomitant resources they would bring to bear on the issue.[124] To accomplish "the policy of Johns-Manville to oppose any bill that attempted to include asbestosis, as compensable," the company enlisted the assistance of captive members of the medical community to publish studies indicating asbestosis was clinically a less virulent disease than silicosis, which was then being considered for inclusion in the New Jersey compensation scheme.[125] New Jersey did not address asbestosis as a covered occupational disease until 1945.[126]

Notably, Germany provided worker's compensation coverage for asbestotics in the 1880s; though somewhat later, Britain listed asbestosis as a compensable illness in 1931.[127] Similarly, a well-developed and published body of international industrial medical research declared the health risks of asbestosis a far more pernicious threat than silicosis by 1933.[128] Thus, there seems little substantive medical or legal justification for distinguishing between silicosis and asbestosis, and providing worker's compensation coverage for the former, but not the latter.

But the asbestos industry was buffeted by a more grave economic threat, and by the mid-to-late 1940s abruptly altered its approach to worker's compensation laws.[129] Though worker's compensation coverage

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121. *Id.* at 162-70.
122. *Id.* at 161-74.
123. *Id.*
124. *Id.* at 184-93.
125. *Id.* at 180-82.
126. *Id.*
127. *Id.* at 27-30.
128. *Id.*
129. *Id.* at 161-74, 184-93.

could open the doors to compensation for asbestos diseases, those recoveries were limited in scope, amount, and were insurable.[130] While posing significant factual, scientific, and legal hurdles for personal injury plaintiffs, tort lawsuits, with unlimited judgment potentials and, perhaps more disconcerting to industry officials, broad and effective discovery mechanisms, prompted asbestos executives to reevaluate the desire to work within the compensation context rather than through an uncertain tort system. Vandiver Brown, the powerful and instrumental legal counsel to J-M, perhaps best described his company's attitude in this regard at a 1947 Industrial Dust Disease Symposium. According to Mr. Brown, "It remains our firm conviction that the worst Workmen's Compensation Commission is preferable to the best jury when the issue of compensation for an industrial injury is drawn between a laborer and his corporate employer."[131]

From a purely cost-benefit analysis, the industry preference seems only natural and logical. State compensation schemes provide limited recovery according to a quid pro quo in which an employer accepts responsibility for payment of compensation benefits without a showing of legal fault in exchange for limited liability according to an ascertainable schedule of benefits. In cases where liability can be demonstrated on a massive scale, limited liability may prove an attractive option.

Furthermore, most state recovery systems were notably unsophisticated and unprepared to address mass toxic injury claims with long latency periods from date of exposure to manifestation of an illness. Thus, many state laws included statutes of limitation that barred claims filed more than one year after an employee ceased working with a particular employer.[132] Due to the long latency periods for most asbestos-related diseases, few employees would manifest a disease process—or even have reason to suspect illness—prior to expiration of the limitations period.[133] Additionally, some states required that individuals work within the state for a specified period (often one to three years) before they became eligible under the state compensation system.[134] A great many exposed individuals were peripatetic contract workers, who frequently moved from job to job, state to state.[135] Consequently, they might not

130. *Id.*
131. *Id.* at 159.
132. *Id.* at 238-42.
133. *Id.*
134. *Id.*
135. *Id.*

meet the criteria for coverage.[136] Ultimately, the burden of submitting to worker's compensation laws proved more cost efficient to industry than adapting expensive protective devices and measures in the short term.[137]

Attempts to impose regulatory controls on exposure to asbestos-containing materials likewise traced a halting, circuitous path. Prior to 1970, monitoring and exposure requirements derived, if at all, from a patchwork of state industrial health codes.[138] In those states with some system of controls, the responsible agencies usually lacked the finances, technological resources, sophistication, or authority to meaningfully inspect, monitor, and regulate massive and complex industrial facilities.[139] In fact, historically, the insurers of the regulated community conducted the most extensive and consistent monitoring; their files remained confidential.[140]

In 1946, the American Conference of Governmental Industrial Hygienists (ACGIH) recommended Permissible Exposure Limits (PELs) based on Threshold Limit Values (TLVs), or tolerable exposure limits to asbestos-containing dust, of five million particles per cubic foot of air (MPPCF).[141] However, exposures below this threshold had already been demonstrated to cause asbestosis, and had been implicated in an increased incidence of lung cancer.[142] The carcinogenicity of asbestos exposure at levels below the TLV was more definitively documented in the 1950s.[143] Moreover, the 5-MPPCF recommended TLV involved such small concentrations of dust that conditions seemingly acceptable to the naked eye may, nevertheless, greatly exceed the threshold.[144] For instance, air samplings of a Rochester, N.Y., hotel lobby recorded concentrations of asbestos-containing dust between seven to eight times the recommended 5-MPPCF limit.[145]

Though not a governmental body itself, the ACGIH exerted a great deal of influence among state agencies assigned the task of monitoring and insuring good industrial hygiene practices.[146] As a result, the ACGIH-recommended TLV of 5-MPPCF became the standard in most

136. *Id.*
137. *Id.* at 247.
138. *Id.* at 270.
139. *Id.*
140. *Id.* at 270-71.
141. *Id.* at 315-24.
142. *Id.* at 315, 355-58.
143. *Id.*
144. *Id.*
145. *Id.* at 295.
146. *Id.* at 315.

states.[147] However, almost from its formulation, the threshold incited a withering storm of criticism.[148] In 1964, an English physician addressing a New York Academy of Sciences conference on the effects of asbestos exposure commented that absolutely no scientific basis whatsoever supported the 5-MPPCF limit promulgated by the ACGIH.[149] Nevertheless, that limit remained the standard throughout most of the United States until 1969.

The Walsh-Healey Act of 1969 marked the first coordinated attempt by the federal government to control and limit exposure to asbestos-containing materials in the workplace.[150] Employing a more exacting standard directed to the concentrations of asbestos fibers themselves, as opposed to simply measuring total particulates in the air, the Act imposed a TLV of twelve fibers per cubic centimeter of sampled air (f/cc).[151]

But that regulation also proved fraught with problems. Technically, industrial medicine experts derided the standard as too liberal, potentially subjecting workers to anywhere from two to six times the levels likely to produce adverse health effects.[152] Furthermore, the Walsh-Healey Act applied only to government contractors performing work under contracts valued at $10,000 or more.[153]

In 1971, the Occupational Safety and Health Act (OSHA), for the first time, established a comprehensive system to regulate workplace safety.[154] The Occupational Safety and Health Administration (also, OSHA) created under the Act adopted a 5 f/cc "emergency standard" in late 1971, and scheduled hearings to develop permanent standards to include warning labels and signs, handling practices, required safety equipment, medical examinations, and record retention.[155] In 1972, OSHA formally instituted a 5 f/cc standard and required specific safety precautions.[156] Additionally, the agency prospectively imposed more stringent standards, providing a four year transition period by the end of which industry would be held to a 2 f/cc limit on an eight-hour, time-weighted average, with peak exposures not to exceed 10 f/cc for up to fifteen minute intervals.[157]

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147. *Id.*
148. *Id.* at 318-30.
149. *Id.* at 324-30.
150. *Id.* at 330.
151. *Id.*
152. *Id.*
153. *Id.* at 361.
154. *Id.* at 331.
155. *Id.* at 331-32.
156. *Id.* at 332.
157. *Id.*

OSHA again issued another "emergency standard" in 1983, further reducing exposure limits for asbestos to 0.5 f/cc.[158] For facilities otherwise meeting the 2 f/cc standard, however, no further reductions in ambient air concentrations were necessarily required, as employers could comply through "any feasible combination of engineering controls, work practices, and personal protective equipment."[159] In other words, merely providing workers respirators (which had been shown to be ineffective) satisfied the regulation.[160]

OSHA resorted to a more protracted formal rulemaking process and, in 1986, set an exposure limit of 0.2 f/cc.[161] Notably, the permanent rule allowed the use of respirators to achieve compliance only as a last resort.[162] Not to be outdone by industry, the AFL-CIO petitioned the United States Court of Appeals for the District of Columbia Circuit for a stricter standard.[163] Thus, in 1994 OSHA established a permissible exposure limit of 0.1 f/cc, which was the lowest measurable level of asbestos according to reasonably available techniques.[164]

The machinations of asbestos industry executives are largely known today as a result of discovery conducted in personal injury litigation. Tort litigation also has facilitated internalization of the human health costs of asbestos production and consumption through numerous compensatory and punitive damage awards and settlements. In the seminal case of *Borel v. Fibreboard*, an insulator (as opposed to a miner, processor, textile worker, etc., who worked directly with, more or less, pure asbestos) sought recovery from insulation manufacturers for asbestosis allegedly acquired through exposures to asbestos-containing dusts as an insulation contractor employee.[165] The United States Court of Appeals for the Fifth Circuit ruled that manufacturers owe a duty to warn of potential product hazards "whenever a reasonable man would want to be informed of the risk in order to decide whether to expose himself to it."[166] A manufacturer, in this inquiry, is both held to the standard of an expert with respect to scientific knowledge relevant to its products and required to test and inspect its products.[167] Thus, a manufacturer may not

158. *Id.*
159. *Id.*
160. *Id.*
161. *Id.*
162. *Id.*
163. *Id.*
164. *Id.* at 333.
165. *See* 493 F.2d 1076 (5th Cir. 1973).
166. *Id.* at 1089.
167. *Id.*

simply avoid its legal duty by neglecting to conduct testing or failing to keep abreast of the state of scientific knowledge, and then merely plead innocence by ignorance.[168] Rather, the "extent of research and experiment must be commensurate with the dangers involved. A product must not be made available to the public without disclosure of those dangers that . . . reasonable foresight would reveal."[169] Moreover, a manufacturer may not rely on standard industry practice, but must demonstrate that it properly discharged its obligations to research and warn based on individual circumstances.[170]

The trial court in *Borel* also defined an "unreasonably dangerous" product as one presenting dangers beyond those reasonably contemplated by ordinary users based on knowledge commonly available to them.[171] On certification from the Fifth Circuit, the Louisiana Supreme Court, in *Halphen v. Johns-Manville Sales Corp.*, further extended the scope and application of the "unreasonably dangerous" product concept in the asbestos context.[172] After engaging in a lengthy and carefully articulated cost-benefit analysis of the public utility of asbestos-containing materials as compared against the risks to public health, the court in *Halphen* determined that the risks posed by asbestos exposure outweighed any tangible benefits of the products' use.[173] Therefore, the Louisiana Supreme Court created a class of risks deemed "unreasonably dangerous per se," into which asbestos was cast as the first ignominious member.[174]

The "unreasonably dangerous per se" label significantly eased the fairly daunting technical task of proving a particular manufacturer's legal fault due to its knowledge of health risks of asbestos exposure based on historical medical research and complex epidemiological studies (much of which was obfuscated by the very companies against which plaintiffs filed lawsuits).[175] Indeed, under the newly devised theory, a plaintiff need only prove exposure to a particular manufacturer's product, causation of an asbestos-related disease, and damages.[176] Nevertheless, a plaintiff was generally allowed to prove alternative causes of action based on a manufacturer's fault, typically premised on negligent failure to warn, or design, manufacturing, or compositional defects. Though logistically

168. *Id.* at 1090.
169. *Id.*
170. *Id.*
171. *Id.*
172. *See* 484 So. 2d 110 (La. 1986).
173. *Id.* at 118.
174. *Id.*
175. CASTLEMAN, *supra* note 62, at 781.
176. *Id.*

imposing as a sole theory of recovery, many plaintiffs elect to proceed under such alternative theories in addition to employing the "unreasonably dangerous per se" classification, particularly where discovery produces especially damaging evidence of knowledge of and crass disregard for risks to exposed employees or product users.

Due to the long latency periods typically required for contraction of an asbestos-related disease, asbestos litigation poses particularly difficult issues for which traditional tort law models offer no easy solution. Ordinary tort principles scarcely contemplated the problems and ramifications that attend determining the timing and triggers for an actionable illness. Customary limitations periods (including statutes of limitation and statutes of repose) could foreclose rights of action before an individual was aware of the particular disease process with which he or she suffered or the cause or causes for the illness, especially due to the lack of common knowledge of asbestos diseases in earlier years of the litigation.

Determining when an injury occurred, or a disease was contracted, also influenced applicable legal standards. For instance, many plaintiffs claimed exposures that straddled most jurisdictions' evolution from contributory negligence to comparative negligence principles. Transition from contributory to comparative negligence systems also effected changes in joint and several liability apportionment and contribution and indemnity rights among co-defendants. The timing of exposure may also affect the availability of punitive damages, in addition to limiting worker's compensation laws. For the sake of certainty and convenience, many jurisdictions determined that the most significant exposures occurred prior (or subsequent) to the relevant changes in a particular law and applied that version of the law to all disputes. Presumably, though empirically unusual to date, cases involving acts and exposures that took place exclusively before (or after) enactment or modification of a statute offer strong arguments in favor of deciding the case based on the law applicable at the time of the subject's acts and exposures.

G. Post-Script

An asbestos company's advertisement declares:

> "When life depends on it, you use asbestos."[177]

The Director of the Canadian Asbestos Institute proclaims:

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177. *Id.*

"In the Developing World asbestos is life,
and we should not be shy about saying so."[178]

In light of the foregoing, such statements may not sound too shocking—unless you consider that they were made in 1983 and 1990, respectively. Few mass toxic tort phenomena have received such expansive coverage as asbestos; and yet asbestos use and controversy continues to rage. Canadian industry representatives sponsor lawsuits in U.S. courts to enjoin and prohibit enforcement of EPA emergency safety standards.[179] The same interests continually claim that certain fiber types (principally Chrysotile) present little or no hazard. And, meanwhile, asbestos industries and products relocate to Asia, Africa, Latin America, and Eastern Europe with little more protection, regulation, or dissemination of information regarding hazards than existed in this country before widespread knowledge of the health risks.

V. REGULATORY REALLOCATION OF THE ASBESTOS INDUSTRY: FOUR CASE STUDIES

The diminishing permissible airborne fiber concentrations of asbestos mandated by the United States Occupational Safety and Health Act of 1971 as periodically amended, imposed regulatory burdens on U.S. manufacturers requiring huge capital investment to which their foreign competitors were immune.[180] In astonishingly brazen and prophetic testimony, a vice president for the Johns-Manville corporation admitted that the new OSHA safety and health regulations would "cause a significant number of jobs to be shifted to foreign workers. . . . We would simply be shifting the problem to other workers in the world."[181]

Three years later, the asbestos industry responded to new OSHA proposals with a report stating that manufacturers would not be able to comply even after implementation of the best available technology, prompting one well-known public health consultant to predict the U.S. asbestos textile industry would decline while imports from countries with weaker regulations would increase.[182] A remarkably accurate prediction, empirical data confirms that the U.S. asbestos industry, particularly the

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178. *Id.*

179. *Id.*

180. *See* Peter J. Berrie, Note, *Controlling the Export of Hazardous Industries: A Look at the United States Asbestos Industry*, 2 TRANSNAT'L L. & CONTEMP. PROBS. 273, 274 (1992).

181. *Id.* at 278 (quoting Judy Butler et al., *Dying for Work: Occupational Health and Asbestos*, 12 NACLA REP. ON AM. 2, 21 (1978)).

182. *See id.* (citing Barry I. Castleman, *The Export of Hazardous Factories to Developing Nations*, 9 INT'L J. HEALTH SERV. 569, 572 (1979)).

asbestos textile industry, relocated from the United States in the mid-1970s.[183] Prior to 1972, the United States exported more asbestos textiles than it imported.[184] By 1977, however, imports of asbestos textiles greatly exceeded exports, with over half coming from developing countries with no prior history of asbestos product trade.[185] In particular, exports from "Brazil, Mexico, and Taiwan escalated from almost zero to 4.5 million pounds per year" during that period.[186] The dislocation and reallocation of asbestos-containing product manufacture and consumption are vividly demonstrated by reference to asbestos product trade permutations in four representative countries: Brazil, Zimbabwe, China, and Poland.

A. Brazil

The geographical distribution of Brazilian exports reflects vulnerability and responsiveness to external environmental regulations.[187] As an illustration, "exports of sectors such as food products, in particular fruit and fish, timber and timber products, paper, textiles, and footwear are destined principally for the OECD [Organisation for Economic Cooperation and Development] countries."[188] In stark contrast, however, "the geographical distribution of Brazil's exports in other manufacturing sectors where environmental requirements are emerging in the OECD countries varies across sectors."[189] Products containing asbestos and other toxic and hazardous materials gravitate "primarily to developing country markets, which may reduce the vulnerability of these sectors to external environmental requirements."[190] Trade liberalization and the ongoing process of economic integration inspire particularly strong exports of such hazardous and toxic materials to Latin American trading partners.[191]

However, as the fifth largest producer and consumer of asbestos products in the world, the geographical distribution of Brazil's asbestos products, alone, fails to illustrate the coercive North-South pressures at

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183. *See id.*
184. *See id.*
185. *See id.* (citing CASTLEMAN, *supra* note 62, at 273-74).
186. *Id.* (citing CASTLEMAN, *supra* note 62, at 273-74).
187. VEENA JHA ET AL., RECONCILING TRADE AND THE ENVIRONMENT: LESSONS FROM CASE STUDIES IN DEVELOPING COUNTRIES 89 (1999).
188. *Id.*
189. *Id.*
190. *Id.* at 90.
191. *See id.*

work.[192] More than half of Brazil's substantial deposits of asbestos are mined by a European consortium created by Eternit and Saint Gobain.[193] Compared to Canada, the second largest asbestos producer in the world behind Russia, which uses only about twenty-nine percent of its production, Brazil uses seventy percent of its own production and actually imports Canadian asbestos.[194] Whereas asbestos use in the United States hovers at approximately one hundred grams per citizen per year, asbestos use in Brazil averages one thousand four hundred grams per citizen per year, and continues to escalate at a rate of seven percent per annum, while use in developed nations is being phased out.[195] The conditions that exist at the facilities operated by the joint venture between Eternit and Saint Gobain expose workers to roughly twenty times the permissible levels allowed in the United States.[196] However, much of the human toll goes largely unaccounted, as workers are intentionally terminated when they develop chronic illness, without adequate medical diagnosis or treatment.[197]

B. Zimbabwe

Like Brazil, Zimbabwe boasts abundant deposits of asbestos.[198] As an asbestos exporting country, Zimbabwe's exports of products regulated

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192. A. deFernanda Giannasi & A. Thébaud-Mony, *Occupational Exposures to Asbestos in Brazil*, 3 INT'L J. OCCUPATIONAL & ENVTL. HEALTH 150, 151 (1997).

193. *Id.* The pervasive presence and exploitation of asbestos mining, manufacturing, and consumption in Latin America by the French Corporation, Saint Gobain, proves especially astonishing. In 1996, France announced a total ban on the importation and use of asbestos and asbestos-containing materials in that country. *Canada to Appeal WTO Decision on France's Asbestos Ban*, DOW JONES NEWS SERV., Sept. 18, 2000, *available at* 9/18/00 *Dow Jones News Serv. 12:19:00*. Canada eventually appealed the French move to the World Trade Organization Dispute Settlement Panel, which in September 2000 upheld the French ban as properly motivated by health and safety concerns, agreeing that "controlled use" is unrealistic and safer substitutes exist. *The WTO Speaks: Chrysotile Is Bad for You!*, 39 BRIT. ASBESTOS NEWSL. (Summer 2000), *at* http://whitelung.org/ban/su00.html#wto. France historically imported a tremendous quality of Chrysotile asbestos from Canada and was considered a stalwart ally. Notably, the efforts of an informal coalition of workers, trade unionists, academics, scientists, and environmentalists coerced the French government to adopt Decree 96-1133, banning all uses of asbestos. *Id.* The real motivation behind Canada's aggressive reaction to the French ban proves even more crass. While the French market is not crucial to the Canadian asbestos industry, the potential loss of trade to developing countries is. *Id.* "Despite the relevance of the WTO decision to asbestos use in these nations, the terms of (the decision) excluded testimony 'about the technical feasibility of applying 'controlled use' of asbestos in Asia, Africa and Latin America, where uncontrolled use is the norm.'" *Id.*

194. *See* Giannasi & Thébaud-Mony, *supra* note 192, at 151.

195. *See id.*

196. *See id.* at 152.

197. *See id.*

198. JHA ET AL., *supra* note 187, at 315.

in industrialized countries also prove vulnerable to environmental regulations in the developed world.[199] Typically, the trade measures exerting the most dramatic affects derive from the banning of products for environmental or health reasons.[200] "This has been the case for asbestos: Zimbabwe's asbestos exports significantly decreased due to a strong anti-asbestos lobby and the banning of products containing asbestos in certain developed countries."[201] Again, reflective of the North-South divide and the disproportionate burdens borne by the Third World, Zimbabwe's asbestos "[p]roduction only picked up after new export markets were found in the former Eastern Bloc, and Southeast Asia is now targeted as a future market."[202] Thus, studies commissioned by the United Nations Conference on Trade and Development and the United Nations Development Programme provide empirical evidence that, as markets for hazardous products recede and disappear in the developed world, new markets open in developing countries, resulting in a reallocation of unnecessary and unacceptable risks to the more vulnerable countries of the Third World.[203] Beyond merely closing their borders to toxic and hazardous products, corporate elements of the developed countries actually exploit hazardous natural resources in the developing countries, process and develop substances banned in their home countries, and then market them to the politically and economically impoverished nations of the Third World.[204]

C. China

If health and safety regulation in the industrialized countries deflected markets for asbestos-containing materials to the Third World, those same pressures also reallocated hazardous production to developing nations that lack the economic and political resources to reject development capital.[205] As a sequel to aggressive economic development, China has become a haven for polluting industry. Bowing to "the pressure of the rising cost of environmental protection in their

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199. *Id.* at 324.

200. *Id.*

201. *Id.*

202. *Id.* at 324-25. Significantly, the former Eastern Bloc countries are generally considered economies in transition in international environmental agreements such as the Framework Convention on Climate Change and the Vienna Convention for the Protection of the Ozone Layer.

203. *See generally* JHA ET AL., *supra* note 187.

204. *See* Giannasi & Thébaud-Mony, *supra* note 192, at 150.

205. *See* Berrie, *supra* note 180, at 280; Butler et al., *Dying for Work: Occupational Health and Asbestos*, 12 NACLA REP. ON AM. 2, 21 (1978).

parent country, or in other developed countries, some foreign firms have diverted their highly polluting industries to China, thereby affecting the Chinese environment."[206] Research reveals that "[i]ndustries related to the pesticide DDT, a long-cycle toxic pesticide, and asbestos are only two of the environmentally unfriendly products produced by foreign firms in China."[207] Consequently, the asbestos fibers mined by multi-national corporations in such Third World countries as Brazil and Zimbabwe are then processed and manufactured into marketable products by the same or similar companies in developing nations such as China.

While some of the profits certainly remain in the developing nations, the bulk of the profits and efficiency gains flow to the multi-national corporations and their home countries.[208] More importantly, virtually all the associated health and safety risks reside exclusively in the developing host nation.[209]

D. Poland

The post-Soviet era restructuring of the Polish economy proves an interesting environmental health and safety dialectic. On one hand, international trade liberalization and integration into the free market system has improved the state of Poland's environment by replacing inefficient and polluting alternatives and by forcing Polish suppliers to improve the environmental quality of their products.[210] For instance, Polish suppliers of petroleum products must now provide cleaner gasoline and engine oils to run more efficient and cleaner burning motor vehicles and machinery for export to other countries.[211]

However, a study commissioned by the United Nations Commission on Trade and Development and the United Nations Development Programme "also lists several cases where environmentally harmful products were exported to Poland by developed countries. Such products included, for example, domestically prohibited pesticides, asbestos and CFC-containing used refrigerators."[212] Nevertheless, this startling situation cannot be blamed entirely on the free market.

Under Soviet domination, Poland and other Eastern Bloc countries were obligated to process and manufacture asbestos from Russia, which

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206. JHA ET AL., *supra* note 187, at 126.
207. *Id.*
208. *See* Hahnel, *supra* note 1, at 35-36.
209. *See* Berrie, *supra* note 180, at 279 (citing H. JEFFREY LEONARD, ARE ENVIRONMENTAL REGULATIONS DRIVING U.S. INDUSTRY OVERSEAS? 67 (1984)).
210. JHA ET AL., *supra* note 187, at 269.
211. *Id.*
212. *Id.*

has been the world's largest producer for more than fifty years.[213] In many small Polish towns, such as Szczucin, plants that manufactured Russian-mined asbestos into asbestos-containing products constituted the largest employer of local citizens for decades.[214] Left over asbestos fiber was often used to pave roads, build playgrounds, houses, and barns, and was even knitted into sweaters for children, rugs, and slip covers.[215] The toll of devastation wrought in the small, relatively powerless and impoverished towns, therefore, results not so much from a specific market preference, but from precisely the type of power imbalance that spawned and continues to drive the environmental justice movement today. In fact, the looming health and economic catastrophe caused by asbestos use in the Third World far eclipses the asbestos crisis that developed in the United States in the early 1970s, and will persist far into the foreseeable future.

VI. REALLOCATION OF THE ASBESTOS RISK: A PRESCRIPTION FOR DISASTER

As illustrated above, the occupational safety and health, regulatory, and judicial resources of the United States have proven unable to effectively prevent, control, and rectify the long-term health effects of asbestos use in the United States. The regulatory and medical-legal dilemma proves even more daunting in the Third World. "[A]lthough developing countries are striving to implement environmental standards, they do not have the same elaborate system of safety and environmental regulations as the United States."[216] Moreover, even when developing nations institute environmental and occupational safety regulations, they either lack the political will or find them technologically and administratively impossible to enforce due to a lack of adequate resources.[217] As a result of the proliferation of the asbestos industry in the Third World, and developing nations' concurrent inability to adequately control asbestos use or protect worker safety, world health officials predict the asbestos "epidemic will kill at least one million [people] in the next few decades,

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213. *See* Dennis Cavehan, *Town Choked by Asbestos Struggles to Overcome a Homemade Disaster*, USA TODAY, Feb. 9, 1999, at A8.

214. *See id.*

215. *See id.*

216. Berrie, *supra* note 180, at 279 (citing Barry I. Castleman, *Workplace Health Standards and Multinational Corporations in Developing Countries*, *in* MULTINATIONAL CORPORATIONS, ENVIRONMENT, AND THE THIRD WORLD 151 (Charles S. Pearson ed., 1987)).

217. *See id.* (citing U.N. CENTRE ON TRANSNAT'L CORPS., ENVIRONMENTAL ASPECTS OF THE ACTIVITIES OF TRANSNATIONAL CORPORATIONS: A SURVEY, at 24, U.N. Doc. ST/CTC/55, U.N. Sales No. E.85.II.A.11 (1985)).

a health disaster whose scope far exceeds the well publicized asbestos related cancer epidemic that befell workers exposed to asbestos in the United States and other industrialized nations."[218]

Astoundingly, if anything, the world-wide projections of asbestos-related mortality may actually minimize the risk. Whereas consumption of asbestos-containing materials continues to diminish in the industrialized world, consumption in developing countries such as Brazil is increasing at a rate of approximately seven percent per year.[219] However, no epidemiological study of asbestos workers has ever been conducted in Brazil, and a great majority of the low-earning workers exposed to asbestos in that country have no access to medical care that would include sophisticated diagnostic methods.[220] Brazilian asbestos plants also sponsor an intentionally high rate of employee turnover by indiscriminately dismissing workers after they complete a designated period of service.[221] Due to the long latency period for manifestation of asbestos-related illness, the Brazilian practice has prompted many commentators to conclude that the high turnover rate represents nothing more than a strategy to limit occupational disease claims and diagnosis by liquidating employees before they manifest an asbestos-related illness.[222] The problem of under-diagnosis is compounded because Brazilian industry provides no follow up medical monitoring or care subsequent to the dismissal or retirement of a worker.[223] "Thus, in Brazil, occupational diseases resulting from asbestos exposure are almost never identified, reported or compensated."[224] Though one of the largest asbestos producing countries in the world, the experience in Brazil is typical of that in other developing countries.[225]

VII. PROPOSED SOLUTIONS: PROTECTION OR EMPOWERMENT?

As a transformative, participatory social campaign, the environmental justice movement functions on a democratic, nonhierarchical level that espouses a "bottom up" approach involving all members of the affected population.[226] As such, it is a distinctly

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218. Cavehan, *supra* note 213, at A8; *Worldview Asbestos: Deaths Rising in Poor Countries*, AM. POL. NETWORK GREENWIRE, Feb. 8, 1999, at 7(9).
219. *See* Giannasi & Thébaud-Mony, *supra* note 192, at 150.
220. *See id.*
221. *See id.* at 151.
222. *See id.*
223. *See id.*
224. *Id.*
225. *See id.* at 150.
226. Bullard, *supra* note 7.

empowering vehicle that galvanizes and catalyzes ordinary people to advocate in their own self-interest.[227] On the international plane, proposed solutions to the asbestos crisis range from a complete regulatory ban, to regulated and limited use, to deference to corporate self-policing. Some proposals espouse a "bottom up" approach similar to that embraced by the environmental justice movement. Others promote a "top down" regulatory approach. Ultimately, the goal, whatever the construct, should seek to alleviate or minimize any risk posed by exposure to asbestos-containing materials during all phases of the mining, processing, production, and use of those products. In the United States, where the asbestos crisis has raged for almost seventy years, tort lawsuits filed by injured claimants actually fomented a regulatory response rather than vice versa. A similar approach in the international sphere may prove equally successful.

A. Transnational Law Litigation

Traditionally, "international law was not concerned with the way in which a sovereign state treated its own nationals in its own territory."[228] First articulated by Jeremy Bentham in 1789, the phrase "international law" defined a legal system that "was exclusively about the rights and obligations of states *inter se* and never about the rights and obligations of individuals."[229] Consequently, individuals seldom have recourse to international fora, benefit from few substantive remedies, and generally cannot obtain civil damages through any existing international process.[230] In particular, the state-centric bias in international dispute resolution finds emphasis in the field of human rights protection and advocacy.[231] However, "the classical theory [of international law] no longer prevails in its unadulterated form."[232]

International human rights advocates propound a transnational law litigation model consonant with Liberal theories of international

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227. *Id.*

228. William Aceves, *Liberalism and International Legal Scholarship: The Pinochet Case, and the Move Toward a Universal System of Transnational Law Litigation*, 41 HARVARD INT'L L.J. 129, 129 (2000) (quoting R v. Bowstreet Metro. Stipendiary Magistrate, *ex parte* Pinochet Ugarte (Amnesty International and others intervening) (No. 3) 2 All E.R. 97, 170 (H.L. 1999) (Lord Millett)).

229. *Id.* at 130 (quoting BENTHAM, AN INTRODUCTION TO THE PRINCIPLES OF MORALS AND LEGISLATION (J.H. Burns & H.L.A. Hart eds., 1970)).

230. *See id.*

231. *See id.* at 130-31.

232. *Id.* at 129 (quoting R. v. Bowstreet Metro. Stipendiary Magistrate, *ex parte* Pinochet Ugarte (Amnesty International and others intervening) (No. 3) 2 All E.R. 97,170 (H.L. 1999) (Lord Millett)).

relations, which focus on the role of individuals and domestic institutions in the international discourse of human rights conflicts.[233] Unlike traditional international law constructs, Liberal theory operates from the "premise that the primary normative unit is the individual, not the state."[234] According to a prominent proponent of Liberal theory, "the end of states and governments is to benefit, serve and protect its components, human beings; the end of international law must also be to benefit, serve and protect human beings, and not its components, states and governments."[235] By recasting individuals and groups as the underlying determinants of state behavior, the Liberal paradigm reforms transnational law by "structuring patterns of individual and group interaction in transnational society" to generate interests that shape and constrain state action.[236] Thus, in contrast to the classical state-centric archetype, "a universal system of transnational law litigation emphasizes the individual rather than the state, and domestic institutions rather than international tribunals."[237] The decentralization of the international legal order in favor of a more egocentric perspective dovetails well with the environmental justice movement's emphasis on individual and collective action on matters of relevant interest to the affected individual or group.

To be effective, a universal system of transnational law litigation requires three constituent elements: "(1) a network of liberal democracies; (2) that apply the principle of universal jurisdiction; (3) to enforce common international standards."[238] Though not immune to institutional bias and special interest group pressures, democracies provide the necessary transparency of government, civil and political rights, and economic, social, and cultural freedoms to allow vindication of individual and collective rights.[239] The constitutional structure of liberal democracies create and sustain relatively independent judiciaries that, though not totally divorced from politics, affirm and promote the

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233. *See id.* at 133 (citing Andrew Moravcisk, *Taking Preferences Seriously: A Liberal Theory of International Politics*, 51 INT'L ORG. 513 (1997)).

234. *Id.* at 137 (quoting FERRANDO TESON, A PHILOSOPHY OF INTERNATIONAL LAW 1 (1998)).

235. *Id.* at 138 (quoting TESON, *supra* note 234, at 1).

236. *Id.* at 138 (quoting Anne-Marie Slaughter Burley, *International Law and International Relations Theory: A Dual Agenda*, 87 AM. J. INT'L L. 205, 230 (1993)).

237. *Id.* at 150.

238. *Id.* at 150-51.

239. *See id.* at 151-52. Notably, the existing political climate in China may not support civil and political rights to a degree sufficient to participate effectively in a transnational law litigation regime. Any ameliorative regime that fails to address the Chinese asbestos industry would pretermit a significant component of the global asbestos crisis.

rule of law insulated from direct political influence.[240] Therefore, by confining transnational law litigation to countries with established and independent judiciaries for the enforcement of international legal norms, transnational law litigation provides decentralized fora for the vindication of individual rights and interests against governments, institutions, and other corporate and individual entities. Through better access to legitimate and authoritative tribunals, transnational law litigation should better facilitate the filing of individual lawsuits to vindicate individual harms and interests, thereby publicizing violations of individual and human rights and better protecting individuals by generating wider visibility and educating others, including similarly affected individuals, of their plight.[241]

The ultimate goal of Liberal International Law theorists seeks to generate *ex ante* respect for rights to supplant the need for *ex post* accountability for human rights violations through a process of publicity, judicial acknowledgement of legal rights and transgressions, and resulting pressure on the traditional actors in the international realm—states.[242] If successful, such an approach would inspire nations to adopt the United Nations agenda that seeks to codify human rights norms and publicize violations in an effort to eliminate them.[243] By synthesizing the retrospective and remedial aspects of private party civil litigation and the broader constitutional and statutory agenda of public law litigation, transnational law litigation relies on affected individuals and collectives "to vindicate public rights and values based upon international norms through the domestic legal process."[244] In concept and execution, transnational law litigation theory encapsulates the essence of environmental justice.

B. The Alien Tort Claims Act

The two remaining constituent elements of a universal system of transnational law litigation, namely, the application of universal jurisdiction and the enforcement of common international standards, can be appreciated in the application of the Alien Tort Claims Act (ATCA).[245] Enacted in 1789, the ATCA provides: "The district courts shall have

240. *See id.* at 152.
241. *See id.* at 182-84.
242. *See id.*
243. *See id.* at 182.
244. *Id.* at 140 (citing Harold Hongju Koh, *Transnational Public Law Litigation*, 100 YALE L.J. 2347, 2348-49 (1991)).
245. *See id.* at 133.

original jurisdiction of any civil action by an alien, for a tort only, committed in violation of the law of nations or a treaty of the United States."[246] At least from the perspective of the United States, the ATCA provides the type of universal jurisdiction in a domestic U.S. forum (federal district court) promoted by Liberal theory advocates of transnational law litigation.[247] Pursuant to the Alien Tort Claims Act, "[f]ederal courts . . . consistently recognize[] subject matter jurisdiction . . . when three conditions are met: (1) an alien sues; (2) in tort; (3) alleging a violation of international law."[248] Thus, the act comprises a jurisdictional statute that entitles aliens to sue in U.S. district court so long as they can demonstrate violation of a substantive law of nations or a treaty of the United States.

International law derives from conventions entered by two or more nations, or through customary international law, defined as general practice performed consistently with the conviction that the practice is mandatory.[249] Absent allegations of a specific violation of an international treaty, U.S. participation in the formulation of the usage, commitments, and principles that articulate customary law proves particularly important.[250]

U.S. asbestos conglomerates operating overseas should be subject to federal district court jurisdiction for torts filed by aliens under the Alien Tort Claims Act. Several international conventions recognize the right to a safe and hygienic work-place. The Draft Declaration of Principles on Human Rights and the Environment declares, at part II, section 9, that "all persons have the right to a safe and healthy working environment."[251]

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246. 28 U.S.C. § 1350 (1993).

247. *See* Aceves, *supra* note 228, at 133.

248. *Id.* at 143; *see, e.g.*, Abebe-Jira v. Negewo, 72 F.3d 844, 847 (11th Cir. 1996); Kadic v. Karadzic, 70 F.3d 232, 238 (2d Cir. 1995); Hilao v. Marcos, 25 F.3d 1467, 1473 (9th Cir. 1994); Trajano v. Marcos, 978 F.2d 493, 494 (9th Cir. 1992); Filartiga v. Pena-Irala, 630 F.3d 876, 887 (2d Cir. 1980); Doe v. Unocal Corp., 963 F. Supp. 880 (C.D. Cal. 1987).

249. *See* The Statute of the International Court of Justice, art. 38, *available at* http://www.icj-cij-org/icjwww/ibasicdocuments/ibasictext/ibasicstatute.htm#CHAPTER_II (last visited Jan. 15, 2003)).

250. *See generally* Aguinda v. Texaco, Inc., 1994 WL 142006 (S.D.N.Y. 1994).

251. *Draft Declaration of Principles on Human Rights and the Environment*, U.N. Hum. Rts. Comm., pt. II, § 9 (May 16, 1994), *available at* http://www.worldpolicy.org/globalrights/environment/envright.html (last visited Jan. 15, 2003). Reflecting an amalgamation of human rights and concern for the environment analogous to the synthesis of civil rights and environmentalism inherent in the environmental justice movement, the UN Human Rights Committee's Draft Declaration of Principles on Human Rights and the Environment espouses similar techniques and objectives. *Id.* pmbl. For instance, at part IV, section 22, the Declaration seeks to secure a healthy and ecologically sound environment by requiring, inter alia,

-collection and dissemination of information concerning the environment;

The San Salvador Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights also recognizes that

> the essential rights of man are not derived from one's being a national of a certain state, but are based upon attributes of the human person, for which reason they merit international protection in the form of convention reinforcing or complementing the protection provided by the domestic law of the American states.[252]

To articulate and enforce the principles of the Protocol, article 3 specifically guarantees the enforcement of other provisions of the convention "without discrimination of any kind for reasons related to race, color, sex, language, religion, political or other opinions, national or social origin, economic status, birth or any other social condition."[253] In the occupational context, article 6, subsection 1 recognizes the universal right to work under dignified and decent circumstances.[254] Article 7 of the same protocol more explicitly guarantees the right to work under just, equitable, and satisfactory conditions by requiring safety and hygiene at work.[255]

In more general terms, the Stockholm Declaration of the United Nations Conference on the Human Environment declares that "[m]an has the fundamental right to freedom, equality and the adequate conditions of life, in an environment of equality that permits a life of dignity and well-being."[256] Principle 6 of the Stockholm Declaration proscribes "[t]he discharge of toxic substances or of other substances and the release of

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> -prior assessment and control, licensing, regulation or prohibition of activities and substances potentially harmful to the environment;
> -public participation in environmental decision-making;
> -effective administrative and judicial remedies and redress for environmental harm and the threat of such harm;
> -monitoring, management and equitable sharing of natural resources;
> -measures to reduce wasteful processes of production and patterns of consumption;
> -measures aimed at ensuring that transnational corporations, wherever they operate, carry out their duties of environmental protection, sustainable development and respect for human rights;
> -and measures aimed at ensuring that the international organizations and agencies to which they belong observe the rights and duties in this Declaration.

Id. pt. IV, § 22. Furthermore, at part V, section 25, the Declaration commands that "special attention shall be given to vulnerable persons and groups." *Id.* pt. V, § 25.

252. Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights, Nov. 14, 1988, 28 I.L.M. 156.

253. *Id.*

254. *Id.* art. 6.1.

255. *Id.* art. 7(e).

256. Stockholm Declaration of the United Nations Conference of the Human Environment, June 1972, Principle 1, 1 I.L.M. 1416.

heat, in such quantities or concentrations as to exceed the capacity of the environment to render them harmless."[257] Individually and collectively, the referenced conventions and declarations reflect customary, normative rules of international law that recognize the right to exist and work in a healthful environment, free of toxic and dangerous conditions.

Perhaps even more significantly, the U.S. laws and regulations under the Occupational Safety and Health Act and the Toxic Substances Control Act, regulate and limit the uses of asbestos-containing products, the circumstances under which individuals may work with or around those products, and establishes permissible exposure levels. OSHA work-place regulations would clearly prohibit the type of uncontrolled use of asbestos that continues to be the norm in developing countries.[258] "While this would not necessarily inhibit actions in the United States leading to conduct abroad permitted by foreign law, it is relevant as confirming United States adherence to international commitments to control such [activities]."[259] The circumstances regarding asbestos use in the Third World tend to support the appropriateness of permitting suit in U.S. district court under the jurisdictional auspices of the Alien Tort Claims Act.

Thus, the Alien Tort Claims Act may simultaneously offer recourse to foreign nationals harmed by exposure to asbestos-containing materials under conditions prohibited in this country or by international convention or customary law and, by extending "universal jurisdiction" to enforce common international standards, illustrates the manner and potential efficacy of a transnational law litigation model to address cross-border, occupationally induced toxic torts. Portending ramifications far beyond the individual cases that could be lodged under such a procedure, and of particular importance to the international environmental justice movement, "the test of transnational public law litigation is not favorable judgments, but practical results: the norms declared, the political pressure generated, the government practices abated, and lives saved."[260]

C. Lubbe v. Cape PLC

As *Aguinda v. Texaco*, discussed in the preceding Part, aptly demonstrates, any lawsuits filed by foreign nationals in the U.S. federal

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257. *Id.* Principle 6.

258. *See* Giannasi & Thébaud-Mony, *supra* note 192, at 153.

259. Aguinda v. Texaco, 1994 WL 142006, at *7 (S.D.N.Y. 1994).

260. Aceves, *supra* note 228, at 145 (quoting Harold Hangju Koh, *The Haitian Refugee Litigation: A Case Study in Transnational Public Law Litigation*, 18 MD. J. INT'L L. & TRADE 16 (1994)).

district courts for alleged tortious conduct in host countries are likely to be met with exceptions of forum non conveniens.[261] In July 2000, the United Kingdom House of Lords Court issued a remarkable victory for over three thousand South African plaintiffs seeking jurisdiction in U.K. courts for asbestos-related personal injury claims sustained in their home country of South Africa.[262] In more than three thousand individual cases consolidated under the *Lubbe* caption, plaintiffs claimed damages for personal injury and death suffered as a result of exposure to asbestos in mines and processing facilities located in South Africa and owned by various subsidiaries and predecessor corporations to the defendant.[263] Notably, all alleged exposures occurred entirely within South Africa as a result of the plaintiff's employment or as the result of living in areas contaminated by the actions and production processes of the defendant.[264] Significantly, the defendant maintained no presence or assets anywhere in South Africa for approximately ten years prior to the filing of the lawsuits against it.[265]

Interestingly, plaintiffs did not pursue claims against the defendant as their employer or the owner and operator of the facility where plaintiffs worked, or as the immediate source of the contamination in the area where other plaintiffs lived.[266] Rather, plaintiffs sued defendant "as a parent company which, knowing . . . that exposure to asbestos was gravely injurious to health, failed to take proper steps to ensure that proper working practices were followed and proper safety precautions observed" throughout its working subsidiaries.[267] Consequently, the defendant breached the duty of care owed to those individuals who worked for its subsidiaries or who lived in the area of its operations.[268] In response to the individual and consolidated lawsuits, the defendant promptly applied for a stay of proceedings on forum non conveniens grounds.[269]

Resolution of the defendant's motion to stay based on forum non conveniens traced a surprisingly complex and disputatious procedural course, involving two separate hearings at the trial level, two separate appeals to intermediate appellate courts and, ultimately, resolution by the

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261. *See generally Aguinda*, 1994 WL 142006.
262. *See* Lubbe v. Cape PLC, [2000] A.C. 383 (H.L. 2000).
263. *See id.* at 383.
264. *See id.* at 387.
265. *See id.*
266. *See id.* at 387.
267. *Id.*
268. *See id.*
269. *Id.*

Court of the House of Lords. During the first appeal process, the appellate court reversed the trial court's issuance of a stay, holding that the trial judge failed to properly weigh the fact that plaintiffs alleged negligent conduct on the part of the U.K. parent company and its managerial employees in the United Kingdom through their conduct and control of the South African subsidiaries.[270] Furthermore, the trial judge failed to properly account for the fact that the proposed South African forum had been unavailable until the defendant offered to accept jurisdiction.[271] On remand to the trial court, the defendant again applied to stay all actions re-urging the forum non conveniens argument and a collateral abuse of process argument based on the mass filing and consolidation of several thousand claims.[272] Through the second hearing and appeal phase, both the trial and appellate courts agreed that South Africa was clearly and distinctly the more appropriate forum for the trial of what now amounted to a group action and, therefore, stayed proceedings in the United Kingdom.[273] However, the House of Lords Court reversed.[274]

Taking great pains to acknowledge the integrity, ability, and reputation of the South African judicial system, the House of Lords Court, nevertheless, allowed the consolidated plaintiffs to proceed in the United Kingdom by essentially reversing the burden of proof. Adverting to inveterate common law, the court noted that the plea of forum non conveniens "can never be sustained unless the court is satisfied that there is some tribunal having competent jurisdiction, in which the case may be tried more suitably for the interests of all the parties and for the ends of justice."[275] By application of this principle, the defendant must persuasively show not only that the United Kingdom is not the natural or appropriate forum for trial, but to also establish that another available forum exists which is clearly or distinctly more appropriate than the English forum.[276]

Initially, the burden rests with the defendant to show the availability of a more appropriate forum.[277] If the court concludes at that stage that there is no clearly more appropriate and available forum, that ends the

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270. *Id.* at 388.
271. *Id.*; *see also* Aguinda v. Texaco, 1994 WL 142006 (S.D.N.Y. 1994).
272. *See Lubbe*, [2000] A.C. at 388.
273. *See id.*
274. *See id.* at 395.
275. *Id.* at 389 (citing Sim v. Robinow 19 R.665, 668 (1892) (emphasis added)).
276. *Id.* at 389-90.
277. *See id.* at 389.

inquiry.[278] On the other hand, should the court find that some other available forum proves prima facie more appropriate for trial, the court will ordinarily grant a stay on forum non conveniens grounds, unless the plaintiff can demonstrate circumstances that indicate plaintiff will be unable to obtain substantial justice in the foreign jurisdiction.[279]

In *Lubbe*, the House of Lords Court divided the controversy into two components. First, the court concluded that the individual elements of proof regarding the scope, nature, and extent of personal injuries and damages predominated over the issues of defendant's liability, vel non.[280] Because records of medical treatment, the distinctly personal nature of each plaintiff's exposures, injuries, and losses, and evidence to prove derivative claims required the involvement of witnesses and evidence in South Africa, the courts of that country qualified as the more appropriate forum as a threshold matter.[281] Resolution of issues likely to involve inquiry into the parent company's degree of control of the operations of its subsidiaries, what its directors and employees knew or should have known, the actions taken or not taken, and the testimony and the local evidence necessary to prove or disprove those points paled in comparison.[282]

Therefore, the burden then shifted to the plaintiffs to show that they could not obtain substantial justice by pursuing remedies in South African courts. Though further differentiated in briefing and argument, plaintiffs essentially adopted a two-part argument. First, they adduced impressive evidence of the incredibly complex, logistically imposing, and exceedingly expensive nature of the litigation. Due to the prevailing plaintiff's fee arrangements in South Africa and the unavailability of legal aide in that country for personal injury claims of that nature, plaintiffs argued and convinced the House of Lords Court that they could not obtain adequate legal representation to vindicate their interests.[283] Adverting to article 6 of the European Convention on Human Rights, the House of Lords Court agreed that the lack of funding and legal representation in South Africa would deny plaintiffs a fair trial on terms of litigious equality with the defendant.[284] Consequently, granting a stay

278. *Id.* at 390.
279. *Id.*
280. *See id.* at 390-91.
281. *Id.* at 391.
282. *Id.*
283. *Id.*
284. *See id.* at 394.

on forum non conveniens grounds would lead to a denial of substantial justice to the plaintiffs.[285]

Although the gravamen of the House of Lords Court's decision focused on the denial of substantial justice that would result from a stay in the United Kingdom, the court incidentally addressed two collateral issues. First, the court acknowledged the merit of defendant's assertion that it could be prejudiced to the extent it may be denied the opportunity to implead potentially liable third parties unless the case were prosecuted in South Africa.[286] However, the court found that plaintiffs' agreement to pursue recourse only to the extent of defendants' actual fault alleviated that concern.[287] Additionally, the court agreed with plaintiffs' argument that the relatively rudimentary group action procedures in South Africa constituted a procedural obstacle that might further thwart the ends of justice, especially considering the logistics and expense of the proceedings at issue.[288]

The House of Lords Court decision in the *Lubbe* case directly addresses some of the fundamental concerns of transnational law litigation and environmental justice. First, as demonstrated in the *Aguinda* case, home country defendants are likely to raise objections of forum non conveniens asserting that host country fora provide more convenient and appropriate avenues for litigation based on the geographical distribution of the vast weight of documentary evidence and testimony.[289] While perhaps true, the procedural move may also stay proceedings in the courts of developed nations, which possess more elaborate and sophisticated procedures and remedies and valuable experience in dealing with such complex litigation. Furthermore, large, multinational corporations could muster and dedicate legal assistance greatly disproportionate to the legal and judicial assets available in developing countries. As the House of Lords Court concluded in the *Lubbe* case, such disparate legal resources would deny aggrieved plaintiffs a fair trial on terms of litigious equality.[290]

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285. *Id.*
286. *See id.*
287. *Id.*
288. *See id.* at 393.
289. *See* Aguinda v. Texaco, 1994 WL 142006 (S.D.N.Y. 1994).
290. *See Lubbe*, [2000] A.C. at 393.

D. The Role of International Nongovernmental and Intergovernmental Organizations

Emergent international law theory recognizes that the international community comprises not only a community of states.[291] "Corporations, nongovernmental organizations, individuals, and intergovernmental organizations are all now active participants in the emerging international legal order."[292] The parallel "Global Forum" conference of nongovernmental organizations (NGOs) conducted concomitantly with the 1992 United Nations Conference on the Environment and Development (UNCED) held in Rio de Janeiro formally involved NGOs in the international environmental process to an unprecedented degree.[293] Indeed, the UNCED agreements emphasize the need for transparency and free and thorough dissemination of relevant information to allow greater access and participation by NGOs.[294] Agenda 21, in fact, explicitly encourages and mandates NGO participation at many levels of the substantive negotiation and implementation process.[295]

In the amplified sphere of international intercourse, the environmental justice notion of "community" must expand commensurably to embrace a larger group of similarly interested individuals without strict geographical constraints. International occupational health and environmental groups and trade unions, in particular, have advocated for bans on asbestos use, as well as industrial hygiene practices to minimize or eliminate occupational exposure to asbestos-containing materials. In addition, they have developed, compiled, and disseminated the results of medical research and promoted educational and training services to advise and protect vulnerable individuals and groups from unwitting exposure to dangerous conditions.[296]

Among intergovernmental organizations advocating on behalf of workers rights, the International Labor Organization (ILO) ranks prominently and boasts an active record and agenda. The General Conference of the ILO adopted the Asbestos Convention, 1986, No. 162,

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291. Phillipe J. Sands, *The Future of International Adjudication*, 14 CONN. J. INT'L L. 1, 2 (1999).

292. *Id.*

293. *See* Michael Grubb et al., *The 'Earth Summit' Agreements: A Guide and Assessment*, *in* THE ROYAL INSTITUTE OF INTERNATIONAL AFFAIRS, AN ANALYSIS OF THE RIO 1992 U.N. CONFERENCE ON ENVIRONMENT AND DEVELOPMENT 44 (1993).

294. *Id.*

295. *Id.*; *see also* GREENING INTERNATIONAL LAW, at xx (Phillipe Sands ed., 1994).

296. *See* WORLD HEALTH ORG., OCCUPATIONAL EXPOSURE LIMIT FOR ASBESTOS (1989), *available at* http://www.asbesto-instiute.ca/main.html (last visited Jan. 15, 2003).

in an effort to institute a uniform international code of practice for the safe use of asbestos.[297] More of an aspirational guidance statement than an enforceable system of laws, the Asbestos Convention exhorts ratifying member states to adopt national laws and regulations that prescribe measures to be taken for the prevention and control of, and protection of workers against, health hazards due to occupational exposure to asbestos.[298] Although article 11 imposes a ban on the use of Crocidolite, other members of the amphibole group and Chrysotile asbestos elude an outright ban in favor of controlled use according to a best practicable technology type of standard.[299]

Like its OSHA counterpart in the United States, the 1986 Asbestos Convention also requires appropriate labeling, notice of hazards, and safe methods of use, and prescribes adoption of permissible exposure limits according to reasonable practicable technology with an over-arching goal of protecting worker health and safety.[300] Acknowledging the very real risk posed by secondary "household" exposures resulting from contaminated clothing worn home from the work site, articles 18 and 19 mandate special procedures for protective clothing, changing rooms, and appropriate disposal methods.[301] Due to the incremental, clandestine progression of asbestos disease and the long latency periods that precede manifestation of illness, part IV delineates a plan of medical monitoring and surveillance to disclose the presence and progression of any asbestos-related illness.[302] Finally, part V promotes education and training regarding potential health hazards, methods of prevention and control, and appropriate work practices.[303]

The general principles, protective and preventive measures, surveillance, monitoring, and educational programs of the 1986 Asbestos Convention are further and more specifically addressed in the companion Asbestos Recommendation, 1986, No. 172, adopted by the General Conference of the International Labor Organization in conjunction with the Asbestos Convention.[304] In most material respects, the Asbestos

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297. *Id.*

298. *Asbestos Convention, 1986, No. 162*, art. 3, ILO (June 24, 1986), *available at* http://www.ilo.org/public/English/protection/safework/cis/oshworld/ilostd/c162.htm (last visited Jan. 15, 2003).

299. *Id.* arts. 9-12.

300. *Id.* arts. 13-17.

301. *Id.* arts. 18-19.

302. *Id.*

303. *Id.* Part V.

304. *Asbestos Recommendation, 1986, No. 172*, ILO (June 24, 1986), *available at* http://www.ilo.org/public/English/protection/safework/cis/oshworld/ilostd/n172.htm (last visited Jan. 15, 2003).

Recommendation, 1986, conforms to the practices mandated by the United States Occupational Safety and Health Act and regulations adopted by the Occupational Safety and Health Administration.

Uniquely qualified in specific technical areas and adaptable to rapidly evolving conditions, NGOs and intergovernmental organizations (IGOs) are often singularly qualified to advance innovative and controversial issues in the international discourse. Furthermore, they often collaborate on matters of mutual interest and concern, bringing their respective expertise to bear on larger problems. Exemplifying this collaborative and cooperative spirit, the World Health Organization (WHO) studied and issued a report on safe occupational exposure limits for asbestos to guide many countries, particularly those in the developing world, in establishing safe occupational exposure limits for asbestos in order to ratify the ILO Asbestos Convention, 1986, No. 162.[305] The work of the WHO, reported in conjunction with its April 1989 meeting at Oxford, United Kingdom, sought to inform national authorities on appropriate standards for setting and revising occupational exposure limits for asbestos.[306] The World Health Organization report concluded, among other things, that safe exposure levels existed, below which no significant risks for contracting lung cancer or mesothelioma were projected.[307] Echoing the ILO differentiation by fiber type, the WHO report advocated a complete ban of Crocidolite, as well as Amosite asbestos (another member of the amphibole group), but merely recommended establishing permissible exposure levels for Chrysotile asbestos and other members of the amphibole group.[308] Otherwise, the WHO session recommended continued scientific investigation and study to determine long range health effects of exposure to fibrous amphiboles other than Crocidolite and Amosite.[309]

By 1999, the International Commission on Occupational Health (ICOH) endorsed a complete international ban on the use of asbestos and asbestos-containing materials.[310] The ICOH predicated its position on the decree of the Collegium Ramazzini calling for an immediate ban on all

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305. *See* WORLD HEALTH ORG., OCCUPATIONAL EXPOSURE LIMIT FOR ASBESTOS (1989), *available at* http://www.asbestos-institute.ca/main.html (last visited Jan. 15, 2003).

306. *See id.*

307. *See id.*

308. *See id.* Specifically, the report recommended an occupational exposure limit for an individual worker of two fibers per milliliter on a eight-hour time weighted average, with an eventual goal of reducing the eight-hour time weighted average exposure limits to one fiber per milliliter or less. *See id.*

309. *See id.*

310. *See* International Commission on Occupational Health, *Call for an International Ban on Asbestos*, *at* http://www.icoh.org.sg/eng/news/asbestos1.html (last visited Jan. 15, 2003).

mining and use of asbestos world-wide, without exception.[311] Both the Collegium Ramazzini and the ICOH endorsement cite U.S. mortality in excess of two hundred thousand and projected deaths worldwide into the millions.[312] Described as "the profound tragedy of the asbestos epidemic," both the ICOH and the Collegium Ramazzini lamented the fact that all past and projected future illness and deaths related to asbestos are entirely preventable.[313]

Despite the earlier positions of the ILO and the WHO, the ICOH based its call for an immediate ban on the mining and use of asbestos on the conclusion that "risks cannot be controlled by technology or by regulation of work practices."[314] Furthermore, even the strictest occupational exposure limits in the world for Chrysotile asbestos (0.1 f/cc, which is the ultimate target stated in the WHO Occupational Exposure Limit for Asbestos Report of 1989) is associated with an unacceptable increased risk of mortality from lung cancer, asbestosis, and mesothelioma.[315] Furthermore, the ICOH declaration explicitly reports that

> an international ban on mining and use of asbestos is necessary because country-by-country actions have shifted rather than eliminated the health risks of asbestos . . . Canada, Russia and other asbestos-exporting countries have developed major markets in the newly industrializing nations. Conditions of current asbestos use in developing countries now resemble those that existed in the industrialized countries before the dangers of asbestos were widely recognized.[316]

Unfortunately, industry cannot be expected to regulate itself, as "[m]ultinational asbestos corporations present a deplorable history of international exploitation."[317]

Due in part to the "demon of sovereignty," international agreements tend to evolve through patient practice and the gradual transformation and accumulation of international public opinion than by a discrete and coercive legislative-type procedure. Considering the expanding legitimacy and role of nongovernmental organizations in crafting and

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311. *Id.* "The Collegium Ramazzini is an international academic society that examines critical issues in occupational and environmental medicine. The Collegium is dedicated to the prevention of disease and the promotion of health . . . [c]omprised of 180 physicians and scientists from thirty countries . . . [t]he Collegium is independent of commercial interests."

312. *See id.*

313. *Id.*

314. *Id.*

315. *Id.*

316. *Id.*

317. *Id.*

implementing international agreements, the medical, scientific, and technical knowledge contributed by NGOs to the international dialog can transform the scope, nature, and direction of international conventions and normative behavior. However, the power to influence may also present a dark side.

Securing adequate, consonant, and zealous representation poses an endemic quandary inherent in any movement in which individuals arrogate some degree of personal responsibility and control to a representative class. Despite its origins as a grass roots movement and its character as a nonhierarchical, democratic, and egalitarian assemblage, environmental justice movements are not immune to subversion and ineffective or corrupt leadership.

Occupational medicine, health, and safety consultants launched a scathing diatribe against purportedly independent and objective international scientific organizations that have been infiltrated and co-opted by asbestos industry operatives.[318] In particular, some of the very organizations that ostensibly advocated on behalf of worker safety in promulgating recommended controls, procedures, and protocols for handling asbestos products, specifically the International Program on Chemical Safety (IPCS), the World Health Organization and the International Labor Office, issued findings and reports contaminated by the biased science and perspectives of asbestos industry operatives.[319] A collaborative creation of the WHO, the ILO, and the United Nations Environment Programme, the IPCS promulgated reports on Environmental Health Criteria with respect to asbestos and other natural mineral fibers and proposals for Reduction of Asbestos in the Environment.[320] The IPCS reports concluded that the use of Chrysotile asbestos under "adequate controls, sufficiently reduced risks to acceptable levels."[321] However, nowhere did the report acknowledge that "the asbestos industry was rapidly shifting to the developing nations, as asbestos use in Europe and North America plummeted."[322] Controls, much less "adequate controls," are virtually nonexistent in these developing countries.[323] Astonishingly, the meetings that generated the IPCS reports were conducted with financial assistance from various

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318. Giannasi & Thébaud-Mony, *supra* note 192, at 156.

319. *Id.*

320. Barry Castleman & Ray Lemen, *Corporate Junk Science: Corporate Influence at International Science Organizations*, 4 INT'L J. OCCUPATIONAL & ENVTL. HEALTH 1 (1988).

321. *Id.*

322. *Id.*

323. *See* International Commission on Occupational Health, *Call for an International Ban on Asbestos*, *at* http://www.icoh.org.sg/eng/news/asbestos1.html (last visited Jan. 15, 2003).

industry organizations, and the reports themselves were edited by consultants of the Canadian asbestos industry.[324] Indeed, the conclusions contained in these documents were so stilted that the U.S. National Institute for Occupational Safety and Health (NIOSH) withdrew from further participation in IPCS activities.[325] Acting NIOSH director, Dr. Richard Lemen, expressed "deep concern about the apparent lack of objectivity . . . [which] initially arose when IPCS sponsored the development of a criteria document on Chrysotile asbestos which was written by individuals with known ties to the asbestos industry."[326]

Even such venerated institutions as the World Health Organization and allegedly proactive labor groups such as the International Labor Office have come under fire for catering to the vested interests of the asbestos industry.[327] After the WHO's International Agency for Research on Cancer (IARC) issued a clarion warning that all forms of asbestos were carcinogenic and no known levels of exposure existed below which an increased risk of cancer would not occur, the asbestos industry mobilized. Epidemiologists and psychologists associated with multinational asbestos corporations infiltrated the ranks of the World Health Organization and skewed the findings and conclusions reached in various WHO documents, including the 1989 report regarding an occupational exposure limit for asbestos.[328] Similarly, longtime Canadian asbestos industry medical representatives tainted the ILO Asbestos Convention, 1986, No. 162 and its associated Asbestos Recommendation, 1986, No. 172.[329] Only after strenuous and vehement protests by independent scientists, trade union organizations, environmental nongovernmental organizations, and agencies of the U.S. government, particularly NIOSH, were the misleading and unscientific reports of the IPCS, WHO, and ILO reappraised and withdrawn or halted.[330] If this pattern of infiltration, co-optation, and rehabilitation proves instructive, it emphasizes the absolute necessity of affected individuals to remain directly and intimately involved with the issues, concerns, and policies that primarily and significantly affect them. To advocate effectively, however, also requires collaboration with, and the support of, independent, informed, and technically expert individuals and organizations.

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324. *See generally* Castleman & Lemen, *supra* note 320.
325. *Id.* at 2-3.
326. *Id.* at 2.
327. *Id.* at 3-9.
328. *Id.* at 4-6.
329. *Id.* at 7.
330. *Id.* at 7-9.

E. International Treaties: A Community of States

If environmental justice, on local, regional, national, and international levels best functions from a participatory "bottom up" process, slowing or preventing a global race to the bottom also may be achieved by a supranational, "top down" approach.[331] Because, as a threshold matter, a global race requires elimination of cross-border trade barriers through agreements that facilitate investment in capital mobility and unfettered markets, the same mechanisms can be employed to transform a race to the bottom into governance from the top.[332] Immanuel Kant predicated a harmonious international order on the existence of common international standards, declaring that "because a . . . community prevails among the Earth's people, a transgression of rights in *one* place in the world is felt *everywhere*."[333] Global market facilitating trade agreements enable the type of mobility that now characterizes the global business environment and magnifies the cross-border effects of decisions made in a multinational corporation's home country.[334] As economic interdependence and cross-border externalities increase, so too does the need for cross-border governance.[335] Logically and equitably, then, multilateral economic cooperation agreements should include concurrent stipulations to protect individual rights to a safe and healthful work environment with fair and proportionate compensation schedules and working conditions.

Through a side agreement, the parties to the North American Free Trade Agreement (NAFTA) established the North American Commission for Environmental Cooperation (NACEC) to address regional environmental concerns, to help prevent potential trade and environmental conflicts, and to promote the effective enforcement of environmental laws between the parties.[336] The North American Agreement on Environmental Cooperation (NAAEC) establishing the NACEC promotes an agenda of environmental protection, intergenerational equity, transparency, public participation, pollution prevention, and economically efficient policies to support the environmental goals and objectives of the NAFTA.[337] The parties to the agreement generally

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331. Spar & Yoffie, *supra* note 23, at 571-72.
332. *Id.* at 570.
333. Aceves, *supra* note 228, at 159.
334. *See* Spar & Yoffie, *supra* note 23, at 570-71.
335. *Id.* at 571-72.
336. *See* NAAEC, North American Commission for Environmental Cooperation, *at* http://www.cec.org/pubs_info_resources/law_treat_agree/naaec/download/Naaec-e.txt (last visited Jan. 15, 2003).
337. *Id.* art. 1.

commit to performing periodic surveys and reporting on the state of their respective environments, to developing further scientific research and technology with respect to environmental matters, to the promotion of economic instruments for the efficient achievement of environmental goals and to the development of educational programs in environmental matters.[338] Specifically, article 2(3) charges that each party to the agreement "shall consider prohibiting the export . . . of a pesticide or toxic substance whose use is [banned] within the [exporting p]arty's territory."[339] Further, "[w]hen a Party adopts measures prohibiting or severely restricting the use of a pesticide or toxic substance in its territory, it shall notify the other Parties of the measure."[340] However, the agreement also acknowledges the right of each party to establish its own domestic environmental protection consistent with its unique circumstances and conditions.[341]

Article 5 of the agreement requires that each party effectively enforce its environmental laws through adequate judicial, quasi-judicial, or administrative enforcement proceedings with the aim of achieving high levels of environmental protection and compliance with domestic environmental laws and regulations.[342] Subsection 3 of article 5 authorizes imposition of sanctions and remedies under the agreement against a party that violates its own environmental laws and regulations. Any sanctions shall, as appropriate:

> (a) take into consideration the nature and gravity of the violation, any economic benefit derived from the violation by the violator, the economic condition of the violator, and other relevant factors; and
> (b) include compliance agreements, fines, imprisonment, injunctions, the closure of facilities and the costs of containing or cleaning up pollution.[343]

Article 14 of the North American Agreement on Environmental Cooperation authorizes the NACEC secretariat to consider submissions from any person or nongovernmental organization asserting that a party to the NAAEC is failing to enforce its environmental laws effectively. With two-thirds approval of the environmental ministers of Canada, Mexico, and the United States (NACEC governing body), a process that

338. *Id.* art. 2.
339. *Id.* art. 2(3).
340. *Id.*
341. *Id.* art. 3.
342. *Id.* art. 5(2).
343. *Id.* art. 5(3)(a)-(b).

leads to further investigation of the matter and the publication of findings in a factual record can be launched, as provided by NAAEC article 15.[344]

Pursuant to article 14 of the NAAEC, the Academia Sonorense de Derechos Humanos, A.C., and Domingo Gutiérrez Mendívil filed a Submission on Enforcement Matters (SEM 98-005) with the NACEC, charging that the Cytrar hazardous waste landfill was impermissibly located within six kilometers from the town of Hermosillo Sonora, Mexico.[345] The complainant's submission alleged that the Cytrar facility's proximity to the city contravenes Mexican standards which require that hazardous waste landfills be sited no closer than twenty-five kilometers from human habitation.[346] Upon reviewing the submission and Mexico's response, the NACEC found that the site was authorized as a hazardous waste landfill in 1987, before the standard governing the siting of such facilities came into effect.[347] Therefore, the NACEC concluded that the development of a factual record was not warranted on the grounds that the law under which complainants sought recourse was not applicable to the environmental concerns raised by the submission at the time of the facility's siting.[348]

The ability of the North American Commission on Environmental Cooperation to impartially and effectively execute the mandate of the North American Agreement on Environmental Cooperation remains unresolved. Clearly, exponents of the environmental justice movement view NAFTA with contempt and suspicion. As Dr. Bullard bluntly stated, "[I]f we talk about respecting life and respecting people and respecting communities, if we do that we can end a lot of the international friction that results from the trans-boundary waste trades, and imbalances created as a result of NAFTA—people call it 'ShAFTA'"[349]

However, the NAAEC on its face at least guarantees transparency, due process of law, fair, open, and equitable judicial, quasi-judicial, and administrative proceedings, and a process by which aggrieved individuals and nongovernmental organizations may submit complaints on enforcement matters.[350] Of course, historically, lack of adequate enforcement has proven as great a problem as lack of effective laws and

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344. *See Cytrar I*, NACEC, SEM-98-005 (Aug. 11, 998), *at* http://www.cec.org/citizen/submissions/details/index.cfm?varlan=English&ID=51.

345. *Id.*

346. *Id.*

347. *Id.*

348. *Id.*

349. Bullard, *supra* note 7.

350. NAAEC, *supra* note 336, arts. 7, 14.

regulations themselves. The mere existence and availability of a process does not necessarily guarantee its effective administration. Thus, the individuals and groups that pursue environmental justice agendas must employ, test, and challenge the mechanisms afforded by the NAAEC to ameliorate the disparate imposition of environmental risks and contravention of the domestic laws of the member countries.

In contrast, the patriarch of international trade agreements, the General Agreement on Tariffs and Trade (GATT), operates in a notoriously clandestine manner.[351] Though seldom employed to support "obstructionist" tactics, article XX(b) of the GATT permits the imposition of trade restrictive measures to protect human, animal, or plant life or health. Though difficult to ascertain due to the secrecy with which the WTO Dispute Settlement Panel operates, its support of French Decree 96-1133, banning the importation and use of Chrysotile and all Chrysotile containing products as of January 1, 1997, apparently sanctioned the French prohibition pursuant to article XX(b).[352] If so, "it would be the first time a dispute panel has used this provision to settle an international trade disagreement."[353]

Some believe that the French-Canadian asbestos dispute qualifies as the most significant expansion of the WTO's reach into areas of human health and workers' safety, which were once exclusively reserved as the province of sovereign states.[354] Ironically, many feel that the WTO action reduces the right to health to a technical exercise that shifts consideration of health matters from "the political arena to that of scientific and technocratic expertise, beyond all democratic control."[355] If true, such a specter proves quite troubling. The WTO's legendary lack of transparency and autocratic governance of international trade matters philosophically violates the most fundamental precepts of liberal democracies. Moreover, in its specific application in the Canada-France asbestos dispute, the WTO decision perpetuates the disproportionate treatment of North-South issues. Indeed, the decision could be considered a pyrrhic victory for Canada.

At present, Asian countries consume sixty-five percent of Canadian Chrysotile; Morocco, Tunisia, and Algeria, all former French colonies, are also good customers.[356] Thus, the gravamen of Canada's opposition to

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351. *The WTO Speaks: Chrysotile Is Bad for You!*, *supra* note 193.
352. *Id.*
353. *Id.*
354. *See id.*
355. *Id.*
356. *See id.*

the French ban focused on its vital markets in the developing world. Nevertheless, in spite of the potential relevance of the WTO decision to asbestos use in the Third World, the terms of the decision excluded testimony regarding the technical infeasibility of controlled use of asbestos-containing materials in Asia, Africa, and Latin America, "where uncontrolled use is the norm."[357]

By comparison, the NAAEC seems to offer a much more egalitarian, democratic process less susceptible to industry, governmental, and special interest capture. By providing equal access to individuals and nongovernmental organizations, as well as to states themselves, the NAAEC provides a forum for vindication of individual and communal rights by and on behalf of grassroots movements. The transparency of the process affords a concomitant opportunity for evaluation and critical analysis necessary to establish and maintain any democratic system.

Other writers propose less direct treaty arrangements to regulate the conduct of transnational corporations in an effort to combat the global race to the bottom phenomenon. Proposed codes of conduct for transnational corporations advocate four potential regulatory models to curtail regulatory opportunism in the Third World.[358] Generally, the "home country legal standard" approach, the "highest safety standard" approach, the "state of the art" approach, and the "uniform level of risk" approach, each strive to guarantee universal standards and levels of risk as ultimate objectives.[359]

In its barest essence, the "home country legal standard" approach requires that transnational corporations adopt their home country regulatory standards in their operations throughout the world.[360] Such a standard is easily ascertainable, morally clear, practicable from a managerial standpoint, and eliminates double standards based on geographical location.[361] However, the approach is only so good as the regulations in the home country from which the multinational corporation operates.[362] In many cases, technologies and occupational exposure levels to certain industrial chemicals are inadequately regulated or not addressed at all.[363] Moreover, such an approach does not inspire

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357. *Id.*

358. Harris Gleckman, *Proposed Requirement for Transnational Corporations to Disclose Information on Product and Process Hazardous*, 7 B.U. INT'L L.J. 89 (1988).

359. *See id.* at 101-06.

360. *See id.* at 101-02.

361. *Id.* at 102.

362. *See id.* at 103.

363. *See id.* at 102.

innovative regulatory approaches and, indeed, may act as a disincentive, as countries seek to protect their native corporations from the competitive advantages of companies based in countries with relatively lax standards.[364]

The "highest safety standard" approach requires corporations to adhere to the highest engineering standards of any country in which they operate anywhere in the world, whether home or abroad.[365] Many of the benefits are analogous to those provided by the home country legal standard.[366] Additionally, with increased proliferation of multinational market penetration, the highest standard approach may prompt a greater harmonization of standards among companies originating from different home countries. Notably, however, the highest safety standard approach suffers many of the same drawbacks as the home country approach.[367]

The "state of the art" approach, imposes a best available technology type of standard that all but eliminates the variability between home and host country regulations and among transnational corporations.[368] The state of the art proposal promotes objective, technological standards that should be easy to ascertain and measure for compliance.[369] However, it may also inspire a sort of technological lethargy, in which the industries developing the "state of the art" may not aggressively pursue innovative safety technologies.[370] Additionally, with respect to the asbestos industry in particular, corporate self regulation may well lack impartiality and objectivity in administration, if not formulation.[371]

The "uniform level of risk" approach describes a harm based attempt to provide consistency of any standard used in accepting a risk or hazard, regardless of geographical location or point of origin.[372] Essentially, by following a uniform level of risk analysis, "[t]ransnational corporations should ensure that any user of a given technology can have access to safety features that result in the identical level of risk to all users."[373] Such a method would obviously eliminate the disparate impact of risks across international borders and provide consistent risk levels for any given production process or technology.[374] However, unlike the

364. *See id.*
365. *Id.* at 103.
366. *Id.*
367. *Id.* at 103-04.
368. *Id.* at 104.
369. *Id.*
370. *See id.* at 104-05.
371. *See id.*; *see also* Giannasi & Thébaud-Mony, *supra* note 192, at 3-4.
372. Gleckman, *supra* note 358, at 105.
373. *Id.*
374. *See id.*

preceding suggestions, such a technique would be exceedingly difficult to ascertain and apply in the real world and on a practical level.[375] Specifically, local economic, technical, and geographical distinctions may render impossible or, at least economically infeasible, any efforts to achieve a uniform level of risk.

Of all the proposals, the most significant aspects from an environmental justice perspective derive from the common objective to eliminate the disproportionality of risk based upon regulatory differentials in developed and developing countries. Other suggestions for transnational codes of conduct include required information sharing regarding potential environmental effects of proposed activities and applicable regulations in the country of origin.[376] Regardless of standards designed to mitigate or equalize potential harm across international boundaries, required information sharing is equally crucial to the vitality of environmental justice groups. Without information concerning the hazards of transnational corporate activity, communities cannot become involved in a meaningful way in assessing the potential risks and lodging their opposition.

The effectiveness of such community involvement cannot be underestimated. For instance, when the community of Cork, Ireland, learned of Raybestos-Manhattan's plans to build a plant to produce asbestos-containing disc brakes for export, they organized and staged protests.[377] Community opposition escalated to the point that the plant closed.[378] Even though Raybestos-Manhattan met all applicable standards and obtained governmental approval, community action, not any technological or harm-based standard, secured the community's objective. Therefore, as with environmental and occupational safety and health provisions embedded in trade agreements, any proposal for a uniform transnational corporate code of conduct must include provisions requiring accurate, adequate, and meaningful dissemination of information to local governments and communities alike, and, ideally, provide an open and transparent forum to assert their interests and concerns.

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375. *Id.* at 105-06.

376. Berrie, *supra* note 180, at 286; *see also Code of Conduct on Transnational Corporations* (Tentative Draft), U.N. ESCOR, 43rd Sess., at 1, U.N. Doc. E/1988/39/Add. (1988).

377. Berrie, *supra* note 180, at 287; *see also* Castleman, *supra* note 216, at 78.

378. Berrie, *supra* note 180, at 287.

F. A Proposed Foreign Environmental Policies Act

Following the Reagan administration's abrogation of earlier efforts to apply the National Environmental Policy Act (NEPA) to all major federal actions having environmental impacts abroad, proponents of the effort advocated a Foreign Environmental Practices Act (FEPA).[379] Unlike its domestic counterpart, FEPA would hold all U.S. owned or controlled firms and their agents accountable to applicable U.S. standards for any conduct having an environmental impact in a foreign country, abdicating the necessity of "major federal action."[380] While not relieving U.S. based corporations from the obligation to comply with host country regulatory standards, FEPA would essentially authorize civil actions and criminal prosecutions against firms, their officers, and agents for failure to comply with germane U.S. standards which cause harm to the environments of foreign host countries.[381]

The precise terms and full scope and parameters of the proposed FEPA are well beyond the ambit of the immediate discussion. However, one general and one specific observation especially pertain to the environmental justice agenda. First, by seeking to apply U.S. health, safety, and environmental regulations extraterritorially, FEPA would stem U.S. based corporations' participation in the global race to the bottom by eliminating disparate regulatory incentives to relocate hazardous industry.

On a tactical level, proponents of FEPA acknowledge that "[b]etter regulation, whether by host nations, their citizens, or U.S. citizens, depends on understanding the operations and environmental impact of foreign facilities."[382] An intrinsic element of a proposed FEPA incorporates U.S. pollution control and environmental statute provisions "requiring foreign facilities to disclose to host nations the likely environmental and health impacts of existing operations and planned developments."[383] At a minimal level, and of particular import to the environmental justice movement, adequate information and notification are absolutely essential to preserve indigenous populations' abilities to advocate and protect themselves from the potential adverse impacts of certain industries and attendant environmental health risks.[384]

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379. *See* Neff, *supra* note 2, at 493-94.
380. *Id.* at 494.
381. *Id.*
382. *Id.* at 517.
383. *Id.*
384. *See id.*

G. The Overseas Private Investment Corporation

The Overseas Private Investment Corporation (OPIC) functions as an agency of the U.S. government "to mobilize and facilitate the participation of United States private capital and skills in the economic and social development of less-developed countries and areas, and countries in transition from nonmarket to market economies."[385] To accomplish its mission, OPIC assists prospective U.S. development by insuring overseas investments against political risks, providing financing to businesses in foreign countries through loans and loan guarantees, and by facilitating access to private investment funds to provide equity to businesses seeking to locate overseas.[386] According to its own estimates, OPIC has supported capital investments worth approximately $138 billion, generating $636 billion in U.S. exports and helping create 250,000 American jobs.[387]

As a major facilitator of private investment and development in the Third World and emerging market economies, OPIC also provides a unique opportunity to impose environmental and occupational and safety standards on transnational corporate activity. As a threshold matter, OPIC screens all applications for assistance to determine whether its support of the proposed project violates any categorical prohibitions required by statute or policy.[388] Assuming the project does not transgress a categorical prohibition, the submission is further reviewed to determine the degree of environmental assessment required, which depends upon the amount of environmental impact anticipated.[389] Projects that threaten major environmental impact undergo a sixty day period of public notice and comment before any final OPIC commitment to the project.[390] No application for a project threatening major environmental impact can be processed without undergoing the public disclosure and review procedure.[391] As of 1985, all such environmentally sensitive projects have also been subject to host government notification.[392]

Throughout the term of the OPIC loan agreement or insurance contract, the agency continually monitors project compliance with

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385. *See* Overseas Private Investment Corporation, *What Is OPIC?*, *at* http://www.opic.gov/whatisOPIC/whatis3.htm (last visited Jan. 15, 2003).

386. *Id.*

387. *Id.*

388. *See* Overseas Private Investment Corporation, *Environmental Handbook*, *at* http://www.opic.gov/frameset-a.htm (last visited Jan. 15, 2003).

389. *Id.*

390. *Id.*

391. *Id.*

392. *Id.*

contractually imposed environmental conditions.[393] In addition to categorical prohibitions, OPIC will decline support for a project on environmental grounds if the applicant fails to provide a satisfactory environmental impact assessment and/or an initial environmental audit under appropriate circumstances, or, if the project will, in OPIC's estimation, cause significant degradation of a national park or similarly protected area, the destruction or significant degradation of the habitat of an endangered species, and/or other "unreasonable or major environmental health or safety hazards."[394]

Much of the OPIC environmental regulatory process operates from a command-and-control model. By deciding which projects to fund or insure, the agency necessarily participates in the development and siting of potential environmental health and safety risks. Thus, the extent to which OPIC exerts an environmental and health and safety agenda may determine the volume and concentration of hazards, which inherently implicates environmental justice concerns if those hazards are sited disproportionately based on race, class, and/or economic status.

But that merely represents one pole of the environmental justice dialectic. The other derives from community involvement. Thus, to even qualify as a tool in the environmental justice arsenal, OPIC's environmental assessment decisionmaking must allow public participation through a transparent process. According to its own "public consultation and disclosure" statement, "OPIC recognizes the added value that interested and well-informed members of the public, particularly locally affected people in the host country, can bring to the environmental assessment process."[395] Accordingly, OPIC often provides host country and international nongovernmental organizations access to relevant information and seeks the involvement and participation of stakeholders at an early stage of the environmental assessment process.[396] For particularly environmentally sensitive projects, OPIC not only solicits public consultation, it must also inform the host country of all substantive regulations and guidelines that would apply to the project if it were undertaken by the World Bank, as well as of substantive U.S. regulatory requirements that would apply if the project were performed in the United States.[397] At a minimum, all OPIC subsidized projects must at least comply with host country regulations and obtain all necessary

393. *Id.*
394. *Id.*
395. *Id.*
396. *Id.*
397. *Id.*

permits and certifications, though such will not conclusively prove compliance in the event of a challenge.[398]

Ultimately, OPIC has tremendous potential to influence, positively or negatively, the global race to the bottom. By funding and/or insuring overseas development, OPIC could certainly stimulate the race by providing development capital and eliminating or minimizing political risks in unstable countries. Indeed, less politically stable countries often exhibit the greatest degree of institutional corruption and willingness to accept hazardous waste and industry to the detriment of its own citizens.[399]

Through the environmental assessment process, however, the agency also enjoys great opportunity to require public disclosure of potential risks, provide for public participation through notice and comment, to incorporate necessary regulatory requirements to protect health and safety and the environment, and to monitor compliance with those stipulations. As a result, OPIC can be a powerful agent either to foster or to limit the global race to the bottom. To the extent it permits and considers in good faith the participation of affected individuals and nongovernmental organizations through the notice and comment phase, it also provides a potentially invaluable forum, not only to advocate environmental justice concerns, but to also provide a uniquely diametric benefit—safe, clean development in the developing world.

H. Export Administration Act

Tucked into Title 50 of the United States Code governing war and national defense, the Export Administration Act accords the executive branch authority to regulate exports that may adversely affect national security.[400] Expressly instituted as a safeguard against export of sensitive military technology, the act also adopts a somewhat more expansive view of matters affecting national security. The act acknowledges the foreign policy interest in controlling "exports of goods and substances hazardous to the public health and the environment which are banned or severely restricted for use in the United States, and which, if exported could affect the international reputation of the United States as a responsible trading partner."[401] The act further promulgates the policy of the United States

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398. *Id.*

399. *See* Ibrahim Wani, *Poverty, Governance, the Rule of Law, and International Environmentalism: A Critique of the Basel Convention on Hazardous Wastes*, 1 KAN. J.L. & PUB. POL'Y 37, 39 (Summer 1991).

400. *See* 50 U.S.C. §§ 2401-2405 (1999).

401. *Id.* § 2401(10).

> to control the exports of goods and substances banned or severely restricted for use in the United States in order to foster public health and safety and to prevent injury to the foreign policy of the United States, as well as the credibility of the United States as a responsible trading partner.[402]

To regulate the national policy concerns regarding the exports of banned or restricted goods and substances, section 2403 provides for the issuance of export licenses and authorizes the President to impose export controls.[403] Notably, the act proscribes imposition of controls on exports of goods or technology otherwise available from other countries without restrictions, unless the President determines that the absence of such controls will have a detrimental effect on foreign policy or national security.[404]

Since 1971, the United States has banned the use of asbestos-containing materials in many consumer goods and rigorously and stringently regulated the manner and conditions of asbestos use in occupational settings. Furthermore, the vast weight of international scientific and medical evidence confirms that asbestos is a known carcinogen and presents a substantial risk of other serious, irreversible, and lethal illnesses. Indeed, in the Canada-France asbestos dispute, the WTO Dispute Settlement Panel upheld the French ban on asbestos use on health and safety grounds. The existence of strict domestic regulation and significant international condemnation of asbestos use should provide sufficient grounds for the President to strictly control or prohibit the exportation of asbestos-containing materials, industries, and processes under the Export Administration Act.

VIII. CONCLUSION

Above any disputation and rhetoric, it remains abundantly clear that a global race to the bottom exists, at least relative to certain especially pernicious industries. Empirical data proves that subsequent to significant regulation in the industrialized world, the asbestos industry relocated processing and production facilities to the developing world. Concurrently, lesser developed countries that supported asbestos industries reactively shifted exports of asbestos-containing materials from industrialized nations to Third World trading partners. The relocation and reorientation of the asbestos trade and attendant dislocation of associated risks was driven, accelerated, and magnified by

402. *Id.* § 2402(13).
403. *Id.* § 2403.
404. *Id.* § 2403(c).

transnational corporations assisted by trade facilitating multilateral agreements. Ultimately, the disproportionate health risks and projections of devastating future asbestos mortality result from deliberate business decisions made by transnational companies operating in the industrialized world to export a lethal trade to the Third World.

Against this sinister backdrop, an international community comprising individuals, nongovernmental organizations and intergovernmental organizations, as well as nation-states, emerged exposing the pattern of deceit and misinformation perpetrated by the asbestos industry and interested governments, scientists, and lawyers. Regardless of whatever domestic or international legal instruments may aid their struggle, in the end, environmental justice advocacy, to be effective, depends upon the movement itself. As one scholar emphatically declared, "It is more important to build a movement correctly than to have a 'correct' analysis or a 'correct' set of demands."[405] Extolling a "bottom up" organizational approach, Professor Hahnel advocates the "'Lilliput strategy' where each constituency struggles to tie its own string to contain the 'Gulliver' of global capital knowing (correctly) how weak and vulnerable that single string is without the added strength of tens of thousands of similar strings."[406] International efforts to ban the use of asbestos and eliminate the disproportionate siting of hazardous asbestos industries in the Third World will require networks of informed, affected individuals assisted by impartial medical and technical consultants or NGOs, with access to public and transparent fora to advocate their concerns and interests. The requisite approaches and the intrinsic interests echo the very origins, heart, and soul of the environmental justice movement.

405. Hahnel, *supra* note 1, at 41.
406. *Id.* at 42.