Fordham Urban Law Journal

Volume 21 | Number 3 Article 6

1994

# The Question of Risk: Incorporating Community Perceptions into Environmental Risk Assessments

James S. Freeman

Rachel D. Godsil

# THE QUESTION OF RISK: INCORPORATING COMMUNITY PERCEPTIONS INTO ENVIRONMENTAL RISK ASSESSMENTS

*James S. Freeman† and Rachel D. Godsil‡*

When community residents learn that their community has been chosen to host a polluting facility,[1] they wonder whether the facility poses a danger to their health and environment, and why their community has been chosen. The way government and private corporations have answered these questions in the past has led to many bitter, protracted struggles between residents, corporations and their government representatives and officials. It has also resulted in a significant level of citizen distrust.

The rise of the environmental justice movement has focused awareness on the disparate impact of polluting facilities on poor communities and communities of color, and the struggles by local residents to avoid the imposition of polluting facilities and to cope with the consequences of past sitings.[2] In the environmental justice context, the simple question of "why here?" is extremely weighty, going well beyond the interests of the facility owner and those who benefit from the facility's operation to critical issues of community health, self-determination, basic equity, and governmental legitimacy.

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† National Association for Public Interest Law Equal Justice Fellow, Environmental Justice Project, Brooklyn Legal Services, Corporation A, J.D., 1992, University of Michigan Law School. The Environmental Justice Project is supported by a grant from the New York Community Trust.

‡ Associate, Berle, Kass & Case, J.D., 1992, University of Michigan Law School. The authors wish to thank Mark S. Brownstein, Michael B. Gerrard, Professor James E. Krier and Foster Maer for their invaluable comments on early drafts of this Article.

1. In this Article, the term "polluting facilities" refers to any publicly or privately owned facilities that emit some level of pollution that may pose a substantial threat to the health and safety of the surrounding community. It includes not only obvious local unwanted land uses ("LULU's") such as nuclear, hazardous, medical, and solid waste facilities but chemical and petrochemical manufacturing, heavy metals refining and processing, and many other heavy industry facilities.

2. *See, e.g.*, Keith Schneider, *The Regulatory Thickets of Environmental Racism*, N.Y. TIMES, Dec. 19, 1993, § 4, at 5. (The use of Mr. Schneider's articles in this Article should not be viewed as an endorsement of the arguments presented in them, which many people in the environmental justice and mainstream environmental movements believe are misleading and biased toward industry.)

A critical component of the "why here?" question is the level of risk posed by a planned facility. The siting process[3] attempts to address this issue, often through health risk assessments performed either for the facility as a whole or for the various media (air, water, bioaccumulation) through which that risk may be transported to the surrounding community.[4] The local residents who might be affected by a project have their own opinions of the facility's risk which they have gained through news reports, anecdotal evidence and their own judgment. They attempt to communicate their opinions within the siting process, through the press and the political process. One of the central arguments underlying a contested siting decision is whose perception of risk is more accurate and legitimate. Statistically calculated environmental risk assessments are, according to conventional wisdom, scientific and precise determinations of the amount and probability of harm caused by a present or planned facility. According to this same conventional wisdom, private citizens' perceptions of risk are indeterminate, and are constituted from subjective attitudes and feelings.[5]

Whether scientific risk assessments provide accurate and trustworthy conclusions is one issue currently being debated in the sci-

3. The "siting process," for the purposes of this paper, includes the search for a desirable location by the owner of the projected facility, which may include preliminary meetings and discussions with local officials and administrative agencies, the administrative agency review process, and the political dialogue and decisionmaking surrounding both proceedings. Under this definition the siting process is a relatively new and still developing phenomenon. *See infra* note 15 (discussing the development of the siting process).

4. Some health risk assessments are performed for public relations purposes by the corporation seeking to site the facility; in other cases a government agency is required by law or regulation to perform a health risk assessment. *See, e.g.*, N.Y. ENVTL. CONSERV. LAW § 19-0321(4) (McKinney 1988 & Supp. 1994) (requiring a community health study and analysis of emissions prior to the operation of certain new solid waste incinerators); Environmental Justice Act of 1993, 103d Cong., 1st Sess., 139 Cong. Rec. S8107 (1993) (requiring health studies of the 100 most polluted counties nationwide).

5. Keith Schneider, *New View Calls Environmental Policy Misguided*, N.Y. TIMES, Mar. 21, 1993, at A1 ("in the last 15 years environmental policy has too often evolved largely in reaction to popular panics, not in response to sound scientific analyses") (Part I of a five-part series on environmental policy). *But see* Daniel Goleman, *Hidden Rules Often Distort Ideas of Risk*, N.Y. TIMES, Feb. 1, 1994, at C1, C10 (stressing the importance of balancing scientific and public perceptions of risk). For a strong critique of scientific risk assessments, and a discussion of the different perceptions of risk held by risk experts and the general public, see Clayton P. Gillette & James E. Krier, *Risk, Courts and Agencies*, 138 U. PA. L. REV. 1027, 1032-33 (1990); *see also* Donald T. Hornstein, *Reclaiming Environmental Law: A Normative Critique of Comparative Risk Analysis*, 92 COLUM. L. REV. 562 (1992).

entific and legal communities.[6] Whether government and business have adequately addressed public perceptions of risk through scientific methodologies is another issue. The intensity of local opposition to polluting facilities strongly suggests that public perceptions have not been successfully integrated into the official siting process. During the course of any given siting attempt, optimistic predictions and assurances of safety from corporations and government agencies contrast with news reports and accounts of past accidents, failures, and deliberate environmental crimes by corporations seeking to site polluting facilities.[7] The views of local residents contend against company press releases and government explanations. The consequences of this clash of perceptions has an impact not only on the siting process but on the larger issue of public trust in government and corporate decision-making. Certain neighborhoods have become notorious among environmental justice activists and in the media as toxic battlegrounds due to high concentrations of polluting facilities: Louisiana's "Cancer Alley"[8] along the Mississippi River between Baton Rouge and New Orleans; the "toxic doughnut" surrounding Chicago's South Side; South Central and East Los Angeles; West Harlem, the South Bronx and Greenpoint-Williamsburg in New York City; and other areas nationwide.[9] Plausible explanations for these conditions have not been forthcoming from the government agencies and private corporations that manage polluting facilities.

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6. *See* Goleman, *supra* note 5; Gillette & Krier, *supra* note 5, at 1062-64; Hornstein, *supra* note 5. There is a large and increasing number of articles on risk analysis, both within the context of environmental law and as regards public policy in general. Rather than trying to summarize all of them, the authors of this Article have chosen a few articles and applied them to the environmental justice context.

7. For reports on corporate crimes, see, for example, CHARLIE CRAY, GREENPEACE REPORT, TRASH INTO CASH: WMI'S ENVIRONMENTAL CRIMES AND MISDEEDS (1991); Eric Weltman, *Ogden Martin: Trash and Burn*, MULTINATIONAL MONITOR, July/Aug. 1993, at 25-26. For reports of accidents, see, for example, Janice Ellis, *CBS Airs Uranium Plant Controversy During "Eye on America" Segment*, GUARDIAN JOURNAL (Homer, LA), Jan. 28, 1993, at 1 (referring to "lethal accidents that have plagued" uranium enrichment plants and "the dismal safety records of the government's [uranium] enrichment plants").

8. LOUISIANA ADVISORY COMM. TO THE U.S. COMM'N ON CIVIL RIGHTS, THE BATTLE FOR ENVIRONMENTAL JUSTICE IN LOUISIANA . . . GOVERNMENT, INDUSTRY AND THE PEOPLE (Sept. 1993).

9. *See* Robert D. Bullard, *Introduction*, *in* CONFRONTING ENVIRONMENTAL RACISM: VOICES FROM THE GRASSROOTS 12 (Robert D. Bullard ed., 1993) [hereinafter CONFRONTING ENVIRONMENTAL RACISM].

The environmental justice movement has seen some successes.[10] After years of neglect, the federal government and several states are directing legislative and executive efforts towards reforming siting processes and remedying discriminatory enforcement of environmental regulations.[11] Community opposition in general has proved to be quite powerful in some instances. Since the passage of the Resource Conservation and Recovery Act in 1976, there has been only one new siting of a hazardous waste landfill and few new sitings of hazardous waste incinerators.[12] To a lesser extent, municipal solid waste and medical waste incinerators have also been successfully blocked or delayed.[13] However, certain factors behind these successes suggest that procedural reforms of the siting process, though sorely needed, may not provide a complete solution to disparate dumping unless they also address the conflict over the nature of risk and how it is measured.[14]

This Article discusses the issues of perception of risk and citizen involvement in environmentally sensitive siting decisions. Part I describes the different phases of the siting process, i.e., the various determinations made at certain points during the process, the factors that enter into these calculations, and the interests implicated in each. Part II discusses the gap between citizens' and government agencies' understanding of environmental problems: what constitutes an acceptable risk, how risk is measured, and who makes these decisions. Part III sets out ways in which community groups can more effectively incorporate their concerns into the sit-

10. *See infra* note 50 (discussing successful opposition to a hazardous waste incinerator).

11. *See* Schneider, *supra* note 2; Marianne Lavelle, *Clinton Pushes on Race and Environment*, NAT'L. L.J., Dec. 6, 1993, at 1. For legislative reforms see, for example, Christopher Johnson, *Incineration Woes*, Z MAGAZINE, Oct. 1993, for a description of the Pollution Prevention and Incineration Alternatives Act of 1993, Environmental Justice Act of 1993, H.R. 2015, The Environmental Equal Rights Act of 1993, H.R. 1924, 103d Cong., 1st Sess. (1993); The Hazardous Waste Community Information Statement Act, S. REP. NO. 533, 103d Cong., 1st Sess. (1993).

12. Michael B. Gerrard, *Fear and Loathing in the Siting of Hazardous and Radioactive Waste Facilities: A Comprehensive Approach to a Misperceived Crisis*, 68 TUL. L. REV. 1047, 1052 (1994); *see also* Michael B. Gerrard, Whose Backyard, Whose Risk: Fear, Fairness and Efficiency in Toxic and Nuclear Waste Siting (forthcoming 1994). The hazardous waste incinerator located in East Liverpool, Ohio, is a significant exception. *See* Keith Schneider, *Clinton Will Not Fight Toxic-Waste Incinerator*, N.Y. TIMES, Mar. 18, 1993, at A20.

13. *See* Gerrard, *supra* note 12, at 1073-76; Bruce Frankel, *Raising a Stink Over Incinerator*, USA TODAY, Aug. 13, 1992, at 6A.

14. *See infra* part II.C.

ing process and argues that public officials should give greater weight to public perceptions of risk.

## I. The Siting Process

During the past century the siting process has evolved beyond a relatively simple procedure involving primarily the owner of the prospective facility and local government officials.[15] With the advent of zoning and land use, environmental review, and freedom of information and public disclosure laws,[16] the siting process has become a complex decisionmaking mechanism involving a broad range of interests and issues at the federal, state and local levels.

### A. The Initial Search

The siting process commences when a corporation or governmental body begins a search for a proper location for a new facility. The "proper location" is determined by a number of considerations deemed relevant by the facility's sponsors. These considerations generally relate to the physical requirements of the facility itself and to the costs of siting, constructing and operating the facility.[17]

The facility's physical requirements include a sufficiently sized plot of land suitable for building, proximity to roads, water or other transportation networks, proximity to the raw materials or wastes handled by the facility, proper zoning or compatibility with neighboring land uses, and availability of labor resources. These factors also clearly affect the costs of construction and operation, and by finding the site which best meets these considerations, a facility's proponents can minimize these costs. The siting process itself en-

15. Comprehensive zoning of land uses is a development of the early 20th Century: New York City established a zoning ordinance in 1916, and a local zoning ordinance was first upheld in Euclid v. Ambler, 272 U.S. 365, 397 (1926). *See generally* JOHN DELAFONS, LAND USE CONTROL IN THE UNITED STATES (2d ed. 1969). The environmental movement of the 1960's and 1970's brought a wave of environmental statutes that added new dimensions to the siting process; most importantly the National Environmental Policy Act, 42 U.S.C. §§ 4321-4347 (1988 & Supp. 1992) ("NEPA"), the Clean Air Act, 42 U.S.C. §§ 7401-7642 (1988 & Supp. 1992), the Clean Water Act, 33 U.S.C. § 1251 (1988 & Supp. 1992), and the Resource Conservation and Recovery Act, 16 U.S.C. §§ 3401-3473 (1988) ("RCRA").

16. The Freedom of Information Act, 5 U.S.C. § 552 (1988), and state public disclosure laws (for example, N.Y. PUB. OFF. LAW § 84 (McKinney 1988)), have affected the siting process by giving citizens' groups access to a wide range of information concerning governmental decisions, contracts, costs, and corporate financing and structure that would otherwise remain closed to the public.

17. This description assumes that corporations and governmental entities are economically rational actors who will look for a physically suitable site that is also the least expensive in both short and long term costs.

tails substantial expenditures of time and money through such activities as negotiating with local officials, obtaining permits, and gaining political approval for the project; all of which are necessary preconditions for building the facility.[18] A community that resists an attempt to site a facility may raise these costs by filing lawsuits, pushing for more exhaustive administrative review, and delaying or blocking local political approval.[19] Therefore, to the extent that a facility's backers can find a community that approves of the facility or cannot effectively resist it, they can minimize siting costs.[20]

One of the central allegations of the environmental justice movement is that corporations have targeted communities who are least able to resist the siting of polluting facilities. The growing body of evidence compiled through studies performed by the government, academics and civil rights organizations shows that poor communities and communities of color are disproportionately burdened by environmental hazards,[21] and that race is often a stronger indicator of environmental degradation than income level.[22] Internal corpo-

18. LOUIS BLUMBERG & ROBERT GOTTLIEB, WAR ON WASTE: CAN AMERICA WIN ITS BATTLE WITH GARBAGE? 147-48 (1989).

19. In Homer, Louisiana, for example, local opposition to a proposed uranium enrichment plant has helped raise costs by $3.5 million and helped delay the granting of licenses. *See* Joe Fisher, *Uranium Plant Cost Hits $31.7M*, SHREVEPORT TIMES, June 9, 1993, at 1.

20. BLUMBERG & GOTTLIEB, *supra* note 18, at 58-60.

21. *See* COMMISSION FOR RACIAL JUSTICE, UNITED CHURCH OF CHRIST, TOXIC WASTES AND RACE IN THE UNITED STATES 15-16 (1987); MICHAEL GREENBERG & RICHARD ANDERSON, HAZARDOUS WASTE SITES: THE CREDIBILITY GAP 158 (1984); U.S. GEN. ACCOUNTING OFFICE, SITING OF HAZARDOUS WASTE LANDFILL AND THEIR CORRELATION WITH RACIAL AND ECONOMIC STATUS OF SURROUNDING COMMUNITIES (1983); Richard J. Lazarus, *Pursuing Environmental Justice: The Distributional Effects of Environmental Protection*, 87 NW. U. L. REV. 787 (1992); Paul Mohai & Bunyan Bryant, *Environmental Injustice: Weighing Race and Class as Factors in the Distribution of Environmental Hazards*, 63 U. COLO. L. REV. 921, 925-27 (1982).

22. *See supra* note 21. *But see* Vicki Been, *What's Fairness Got to Do With It? Environmental Equity and the Siting of Locally Undesirable Land Uses*, 6 CORNELL L. REV. 1001 (1993) (arguing that the studies have not shown to what extent this disparity has been caused by discrimination at the time of siting as opposed to market forces after the fact). Regardless of the cause, though, communities do feel that they have been dumped on because of race or economic class, and these perceptions cannot be assuaged or dealt with fairly by simply pointing to market forces. For a survey of African-American residents of five communities with hazardous facilities, see ROBERT D. BULLARD, DUMPING IN DIXIE: RACE, CLASS AND ENVIRONMENTAL QUALITY 86-90 (1990) (reporting that 55% of respondents believed their community had been singled out; of these 55%, 63% believed it was on the basis of race, and 19% believed it was on the basis of poverty or political powerlessness). For accusations of racism in specific siting decisions, see, for example, Jim Clarke, *Citizens Group, LES Lock Horns Over Private Enrichment Proposal*, THE ENERGY DAILY, June 19, 1992, at 1

rate memos and at least one government study have suggested that communities with certain demographic populations are more attractive locations for polluting facilities because they lack the education or political clout needed to oppose effectively an unwanted land use.[23] There is a clear conflict between the backers of a polluting facility and the members of the community which has been chosen to host it. The host community will bear the brunt of costs in terms of health risks, lower property values and impacts on aesthetic qualities, while the benefits of the facility (for instance, the disposal of hazardous waste) will be accrued within a much larger area, perhaps nationwide.[24] Hence, certain communities are being sacrificed for a supposed wider public good.[25] When local residents suspect that factors beyond simple physical requirements and environmental compatibility have influenced the decision to place a polluting facility in their neighborhood, this conflict of interest is heightened. Perceptions of environmental racism or dumping on the poor lead to anger and psychological stress within the community.[26] Several commentators argue that corporations have deliberately or unconsciously concluded that race, average income, average education and other socio-economic characteristics can and should be considered in selecting a suitable site.[27] Environmental justice activists argue that these characteristics should not be relevant.[28]

("[F]olks in the black community are definitely outraged. They definitely think their community was picked as the point of least resistance."); Frankel, *supra* note 13 (South Bronx residents felt that a decision to site a medical waste incinerator in a heavily industrialized poor minority neighborhood "is a classic form of environmental racism.").

23. *See* Been, *supra* note 22, at 1002-03. For governmental studies, see BLUMBERG & GOTTLIEB, *supra* note 18, at 59.

24. *See* Rachel D. Godsil, *Remedying Environmental Racism*, 90 MICH. L. REV. 394 n.17 (1991).

25. *See* Bullard, *Introduction*, *in* CONFRONTING ENVIRONMENTAL RACISM, *supra* note 9, at 12 (discussing how certain communities of color have been turned into "human sacrifice zones"); *see also* Luke W. Cole, *Empowerment as the Key to Environmental Protection: The Need for Environmental Poverty Law*, 19 ECOLOGY L.Q. 619, 628-30 (1992) (analyzing reasons for inequity in the siting of polluting facilities).

26. *See* R. George Wright, *Hazardous Waste Disposal and the Problems of Stigmatic and Racial Injury*, 23 ARIZ. ST. L.J. 777, 787 (1991).

27. *See* Cole, *supra* note 25, at 628-30; Robert D. Bullard, *Anatomy of Environmental Racism and the Environmental Justice Movement*, *in* CONFRONTING ENVIRONMENTAL RACISM, *supra* note 9, at 17-19.

28. *See* Rev. Benjamin Chavis, Jr., *Foreword*, *in* CONFRONTING ENVIRONMENTAL RACISM, *supra* note 9, at 3-5. WMI and other corporations that manage polluting facilities strongly deny any suggestion of overt discriminatory intent in their siting decisions. *See* John J. Fried, *Pollution as Racial Insult*, PHILADELPHIA INQUIRER, June 27, 1993, at C1, C7 (quoting industry officials as saying that siting decisions were

## B. The Administrative Review Process

The administrative review process at first appears to offer a neutral check on internal corporate or governmental decisionmaking. Administrative agencies are charged with impartially regulating in the public interest, have expertise in the area at issue,[29] and are ostensibly removed from political pressure.[30] Polluting facilities typically require one or more permits and, in some cases, an environmental impact statement ("EIS") from regulatory agencies. An EIS is supposed to facilitate environmentally sensitive decision making by agencies by requiring a review of a project's environmental impacts, the local environment, and the options for controlling or limiting those impacts. Environmental controls are then imposed on the project through permits.

The concept of environmental review and the format of the EIS stems from the National Environmental Policy Act ("NEPA"),[31] which was passed in 1969 as a response to growing environmental concerns. The statutory purpose of NEPA is:

> To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man . . . .[32]

Further putative goals of NEPA are to:

> (2) assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
> (3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
> (4) . . . maintain, wherever possible, an environment which supports diversity and variety of individual choice . . . .[33]

Section 4332 of NEPA and the regulations implementing it developed the EIS as the means to carry out these purposes in all major

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"color-blind" and that charges of environmental racism were "unfair"); Keith Schneider, *Blacks Fighting Blacks on Plan for Dump Site*, N.Y. TIMES, Dec. 13, 1993, at A12 (stating that companies proposing to site hazardous waste dumps in poor, rural, predominantly African-American Noxubee County, Mississippi said there were scientific reasons for the county's selection).

29. *See* Gillette & Krier, *supra* note 5, at 1061.

30. *Id.* n.92.

31. 42 U.S.C. § 4321 (1988).

32. *Id.* (1993).

33. 42 U.S.C. § 4331.

federal actions having a significant impact on the environment.[34] During the preparation of an EIS, a government agency must consider a wide variety of technical characteristics in determining the potential environmental impacts of the proposed project.[35] NEPA also mandates consideration of adverse impacts on aesthetic and cultural values such as impacts on urban quality, historic properties or on public activities such as fishing or hiking.[36] NEPA further requires opportunities for public notice and comment on the EIS before it becomes final.[37] Many states have passed "little NEPA" statutes resulting in similar requirements for state projects.[38]

Further environmental review is imposed by permit requirements under federal laws such as the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act ("RCRA"),[39] and state analogues of these statutes.[40] Such permits are designed to prevent facilities from discharging pollutants at levels that are harmful to the public health.[41] Federal laws have given administrative agencies strong statutory mandates, and enormous amounts of administrative resources go into the preparation of each EIS or permit; thus, the administrative review process should act as a powerful curb against overly risky facilities and their disparate siting. Yet, this ideal is tarnished by a number of factors.

First, agencies are not immune to political influence, particularly in favor of the industries that they are set up to regulate.[42] Capture

34. 42 U.S.C. § 4332(2)(c) (1993); 40 C.F.R. § 1502.16 (1993).

35. 40 C.F.R. § 1502.16. A typical EIS runs into the hundreds of pages; the state EIS for the Brooklyn Navy Yard Incinerator is over 1,000 pages with appendices. *See* DEPARTMENT OF SANITATION, CITY OF NEW YORK, FINAL ENVIRONMENT IMPACT STATEMENT ON THE PROPOSED BROOKLYN NAVY YARD RESOURCE RECOVERY FACILITY (1985).

36. 40 C.F.R. § 1508.27(b).

37. 40 C.F.R. § 1502.19; *id.* § 1503.4(b).

38. *See, e.g.*, New York State Environmental Quality Review Act, N.Y. ENVTL. CONSERV. LAW §§ 8-0101 to 8-0117 (McKinney 1984 & Supp. 1994).

39. RCRA authorizes states to establish siting procedures for solid waste facilities. 42 U.S.C. §§ 6941-47 (1988). State programs must include provisions governing "permitting, compliance evaluation, enforcement, public participation, and sharing of information." 40 C.F.R. § 271.1(c) (1990).

40. *See, e.g.*, N.Y. ENVTL. CONSER. LAW § 17-0101 (McKinney 1993) (outlining New York's state analogue to the Federal Clean Water Act); *see also* Godsil, *supra* note 24, at 402-08 (describing state siting processes under the mandate of RCRA).

41. For example, the purpose of the Federal Clean Air Act is "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare . . . ." 42 U.S.C. § 7401(b)(1) (1993).

42. *See* Gillette & Krier, *supra* note 5, at 1064-70.

theory, as summarized by Professors Gillette and Krier,[43] argues that regulated industries will be able to organize and communicate their views to agencies more effectively than the many widespread numbers of citizens potentially affected by an agency action, thus biasing regulation in the industries' favor.[44] Regulated industries will also be able to expend more resources in providing data to agencies on environmental impacts, in part simply because industries possess much of the information about their own processes.[45] Aside from problems of institutional bias, the environmental review process itself is open to criticism.

Regarding NEPA and environmental review procedures, since the *Vermont Yankee* and *Stryker's Bay* decisions, NEPA has imposed only procedural duties on agencies rather than substantive ones. In other words, NEPA requires that environmental considerations be taken into account in government decisionmaking, but not that such considerations compel a particular decision.[46] A related but more severe criticism is that the EIS process has evolved to actually discourage pro-environmental review of agencies' decisions:

> Indeed, the legal and institutional machinery that insures *some* look, inadvertently — and most unfortunately — precludes the *hard* look that could and should influence agency decisions. To put the case very baldly: Agencies cannot be penetrating or creative when their analyses are directed and mobilized for primarily defensive purposes.[47]

The EIS process has often been used to justify an agency's decision and protect it from judicial scrutiny rather than to undertake a full and proper review of a project's environmental consequences. While some state NEPA analogues do have some substantive impact on agency decisionmaking,[48] the EIS process itself may still be applied defensively, i.e., to justify agency decisions after the fact

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43. *Id.* at 1065-68.

44. This argument applies in even greater force when a local government is the proponent of a facility or a class of facilities, and the lines of regulatory communication are from one governmental entity to another.

45. *See* Gillette & Krier, *supra* note 5, nn.110, 111.

46. Vermont Yankee Nuclear Power Corp. v. NRDC, 435 U.S. 519 (1978); Stryker's Bay Neighborhood Council, Inc. v. Karlen, 444 U.S. 223 (1980).

47. Bardach & Pugliaresi, *The Environmental Impact Statement vs. The Real World*, 49 PUB. INTEREST 22, 24 (1977).

48. *See, e.g.*, Jackson v. New York State Urban Development Corp., 67 N.Y.2d 400, 414 (1986) (SEQRA [the New York equivalent of NEPA] "imposes far more 'action-forcing' or 'substantive' requirements on state and local decisionmakers than NEPA imposes on their federal counterparts" (citation omitted)).

rather than to fulfill the statutory purpose. Moreover, any EIS or permit proceeding by necessity and design focuses on a single project or a specific portion of one; it does not consider cumulative impacts from existing as well as projected sources of pollution. Until recently agencies have not considered patterns of multiple siting decisions over time in a single community.[49]

Finally, although the EIS and permit processes normally include opportunities for public hearings and public comment on proposed projects, the proceedings remain technocratic. The average citizen is overwhelmed with hundreds of pages of documents written in jargon that is often hard to understand, even for those with some technical training.[50] Conversely, both the corporate or governmental sponsors of a facility and the agency officials in charge of administrative review are trained in the technical aspects of environmental review. A common background and language tends to foster greater sympathy between these two groups, at the expense of public participants who are viewed as "ignorant" or "untrained."[51]

This critique raises questions as to whether NEPA and similar state environmental review laws have lived up to the promise implicit in their stated purposes of protecting public health and the environment. It also points out the limitations of the traditional siting process. Federal, state and local legislatures have advanced reforms in siting procedures that are aimed at remedying discrimi-

49. *See* Kleppe v. Sierra Club, 427 U.S. 340, 410 n.20 (1976) (an agency need not "consider the possible environmental impacts of [actions not proposed by the agency] when preparing the impact statement on proposed actions"). Some courts have read the Supreme Court's language so broadly that they do not require an agency to consider in an Environmental Assessment the cumulative environmental effects of actions over which the agency has no power. *See* Ringsred v. City of Duluth, 828 F.2d 1305, 1308-09 (8th Cir. 1987). *But see* NEW YORK, N.Y., CHARTER §§ 203-4 (1990) ("fair share criteria" that requires the consideration of cumulative impacts upon a host community).

50. *See supra* text accompanying note 32 (discussing the average length of an EIS). One recent environmental justice case concerning a hazardous waste incinerator centered on an Environmental Impact Report (EIR) that was over 1,000 pages long and available only in English, although almost 40% of the local residents were monolingual in Spanish. A California state court overturned the County's approval of the facility in part because of its exclusion of Spanish-speakers from the public comment process. El Pueblo para el Aire y Agua Limpio v. County of Kings, 22 Envtl. L. Rep. (Envtl. L. Inst.) 20,357 (Cal. Super. Ct. 1991). Chemical Waste Management, the facility's sponsor, later withdrew its application to construct the incinerator in Kettleman Hills citing "changing market conditions and the company's evolving business objectives." *Hazardous Waste: Company Withdraws Application To Build Incinerator*, 24 Env't Rep. (BNA) at 881 (Sept. 17, 1993).

51. *See* Gillette & Krier, *supra* note 5, at 1086.

natory siting.[52] The Federal EPA is also addressing environmental justice issues through its newly created National Environmental Justice Advisory Council, and through EPA administrator Carol Browner's pledge to focus on environmental justice issues.[53] At present, however, the gap between the purpose and practice of NEPA and the failure of environmental agencies to regulate fairly so as to protect public health and the environment has created a dissonance between the law stated and its operation in the real world. This dissonance has only been intensified when the environmental review process confounds or fails to respond adequately to a community's perceptions and fears.

### C. The Political Process

The political process has been the arena for most of the successes of environmental justice activists in recent years. In some instances, communities engaging in mass political organizing and demonstrating have caused corporations to look elsewhere for host communities or local governments to reverse decisions to build facilities.[54] There are several reasons for the relative efficacy of political strategies. The political process purports to allow citizens to express their views to decisionmakers who are responsive to public sentiment and are able to communicate with the public on its own terms. Politics offers local community groups opportunities to build support for their position through collective action and organizing—building "people power."[55] This is a sharp contrast to the autocracy of corporate decisionmaking or the technocracy of the administrative process. These successes should not, however, compel the conclusion that the political process is unbiased or that the siting process is not in need of reform.

The political process is not a separate procedure from the facility owner's search for sites and the administrative review process; political considerations intrude on every aspect of the siting pro-

52. *See* Johnson, *supra* note 11; NEW YORK, N.Y., CHARTER §§ 203-4 (1990) (the "fair share criteria").

53. *See* Lavelle, *supra* note 11 (discussing the Council's investigation of whether the EPA violated Title VI of the Civil Rights Act of 1964 by discriminating against minority neighborhoods in Louisiana and Mississippi in its permitting and enforcement programs).

54. *See supra* notes 12-13, 19-20 and accompanying text.

55. *See* Cole, *supra* note 25 (discussing why environmental justice issues are fundamentally political problems, and the advantages to working within the political process rather than in the courts or administrative proceedings).

cess.[56] The opposition or support of local or federal politicians may influence an owner's selection of a particular site, through public relations and media efforts, tax breaks, relationships with a particular industry, or other incentives.[57] Politics may also intrude upon administrative procedures through the decisions of political appointees who head agencies, policy decisions by lawmakers that affect an agency's scope of authority or funding, or simply through traditional lines of communication between different branches of government.[58] These influences operate most directly within the political process itself.

Polluting facilities are either owned and operated by a private corporation or are owned publicly, although even in the latter case they are probably built and/or operated by private corporations. In either case, the political deck is stacked against the community or neighborhood slated to host the facility. Through perfectly legal means, such as campaign contributions, employment opportunities, lobbying and information campaigns,[59] as well as through illegal means,[60] corporations have the ability to influence local elected officials in the same way they influence the administrative process. For instance, in the fight over the Brooklyn Navy Yard Incinerator, former Deputy Mayor Norman Steisel's ties to the incinerator industry as a former lobbyist and financial underwriter made his pro-incinerator stance suspect in the eyes of environmental activists.[61]

Corporations are established to take coordinated action. By contrast, local citizens trying to oppose a project face greater difficulties in organizing and communicating their concerns than the

56. *See generally*, Michel Gelobter, *Defining Urban Environmental Justice*, 21 FORDHAM URB. L.J. 841 (1994).

57. In the Homer, Louisiana uranium enrichment plant controversy, U.S. Senator Bennett Johnston played an active role on behalf of the plant's proponents, particularly as Chair of the Senate Energy Committee. *See* Clarke, *supra* note 22; Ellis, *supra* note 7; Peter Shinkle, *Ex-Johnston Aide Involved in Push for New Plant*, SHREVEPORT ST. TIMES, Aug. 21, 1990, at 1.

58. *See supra* note 54 and accompanying text. For the impact of political decisions on the administrative process, see, for example, Keith Schneider, *Clinton Will Not Fight Toxic-Waste Incinerator*, N.Y. TIMES, Mar. 18, 1993, at A20 (discussing the Clinton administration's decision to allow a hazardous waste incinerator in East Liverpool, Ohio to begin operation, despite an earlier promise by the Vice President to block it and speculating that the Clintons, White House Chief of Staff Thomas McLarty, and EPA Administrator Carol Browner may have had conflicts of interest vis-a-vis the incinerator and its financial backers).

59. *See* Gillette & Krier, *supra* note 5, at 1066.

60. *See* Weltman, *supra* note 7 (discussing instances of bribery or other illegal influence).

61. Matthew Reiss, *Norman Steisel and the Art of the Done Deal: Garbage Broker*, VILLAGE VOICE, Nov. 26, 1991, at 30, 32.

private corporations and government agencies who are backing the project.[62] To be effective, citizens from different classes, backgrounds and professions must come together to discuss the issues, agree on a common strategy, and take time out from their regular activities to implement a strategy to counter the small group of experts whose full time job is to get the facility sited and built. The difficulties inherent in this public organization are particularly acute if the community is politically disenfranchised, fragmented, or has only minimal representation at the decisionmaking level.[63]

Similarly, the economic benefits from building a new corporate facility to its financial backers are readily monetized. The facility's ostensible benefits to society, whether in producing goods or disposing of wastes, begin to accrue as soon as it begins operation. In contrast, the potential negative health impacts of a polluting facility are latent, i.e., they are not likely to appear for several decades. Such impacts are spread out among the residents of the surrounding community and are by their very nature probabalistic; precise estimates are practically impossible.[64] Gillette and Krier point out that risk managers, including politicians, will tend to choose courses that produce immediate, measurable benefits over those that prevent a potential harm at some point in the future, because such benefits are more easily communicable to superiors (or to voters) and offer more tangible proof of accomplishment.[65] Corporations will often cite the local economic benefits produced by a facility in terms of jobs and tax revenues when lobbying for political approval.[66]

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62. Gillette & Krier, *supra* note 5, at 1065-68. Gillette & Krier focus their analysis on risks that are dispersed throughout a wide area or nationally. However, their conclusion that corporations are more able than the general public to organize and communicate their views also applies to risks that are imposed on relatively homogeneous, small town populations.

63. Communities targeted for environmentally hazardous facilities are disproportionately poor and/or communities of color, and face considerable obstacles to effective political action. *See* Godsil, *supra* note 24, at 400. Communities may also be fragmented by class or ethnic divisions. *See* Rachel D. Godsil & James S. Freeman, *Jobs, Trees and Autonomy: The Convergence of Environmental Justice and Community Economic Development*, MD. J. CONTEMP. LEGAL STUD. — (forthcoming 1994). Finally, a community may be well organized and represented, but if it elects only one or two representatives to the city or state body responsible for a siting decision, its ability to influence the political process may still be small.

64. Gillette & Krier, *supra* note 5, at 1039-40; *see also* Hornstein, *supra* note 5, at 569-75. For a discussion of the limits to "scientific" statistical risk assessments, see Gillette & Krier, *supra* note 5, at 1062-64.

65. *See* Gillette & Krier, *supra* note 5, at 1040-41.

66. *See* Ellis, *supra* note 7 (quoting the president of a proposed facility as saying, "we think we're the best thing that's going to happen in that community for many

If the project is publicly sponsored, by the time a community learns it has been targeted, its elected and administrative officials have already made at least a preliminary decision that the facility is necessary and that their community is a likely location for it. The community must then persuade their representatives to deviate from an ordained course of action, often after a considerable amount of time and effort has already been expended in the planning process. Publicly owned polluting facilities, such as incinerators or sewage treatment plants, are capital intensive projects that require massive financial backing, typically through state or municipal bonds.[67] The financial institutions underwriting the bonds for the facility and the law firms negotiating the transaction therefore stand to gain large fees from the project's approval and, for the sake of their own profits, may campaign for a facility through the political process by the methods used by corporate proponents of a facility.[68]

This outline of the disparity in political power assumes that the targeted community is relatively cohesive and politically organized and has sufficient resources to make its concerns known in the political process. Many communities targeted for polluting facilities, however, are poor and/or communities of color. In these com-

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years," referring to the plant's potential impact on the depressed local economy); Schneider, *supra* note 28 (stating that supporters of a hazardous waste landfill were attracted by offers of jobs and contracts to minority businesses). For evidence that such benefits tend to be exaggerated or illusory, see Gerrard, *supra* note 12, at 1099-1100 (stating that off site waste disposal facilities generally create little in terms of jobs or tax revenues); Schneider, *supra* note 2 (According to Pat Bryant, executive director of the Gulf Coast Tenants Organization, "[w]e bear a disproportionate cost in terms of health from plants in our communities, and for the most part we are not included in the jobs that are available.").

67. The Brooklyn Navy Yard incinerator is officially estimated to cost $450 million. *See* Dennis Hevesi, *State Approves the Brooklyn Navy Yard Incinerator*, N.Y. TIMES, Sept. 12, 1993, at A47 (reporting that NYPIRG has estimated the total costs of construction and operation over the life of the facility at over $1 billion); Interview with Arthur Kell, New York Public Interest Research Group (Nov. 22, 1993). The cost of the Homer uranium enrichment plant is estimated at $800 million. *See* Fried, *supra* note 28, at C7.

68. Former Deputy Mayor Steisel's ties to the New York bond industry, through past employment and campaign contributions, were also a sore point for anti-incineration activists. *See* Reiss, *supra* note 61; *see also* Jeff Bailey, *Up in Smoke: Fading Garbage Crisis Leaves Incinerators Competing for Trash*, WALL ST. J., Aug. 11, 1993, at A1 (discussing how engineering consultants, investment bankers and bond lawyers "profited handsomely from fees connected to bond underwritings to finance incinerators").

munities, the effects of racism, coupled with the lack of money, time and political power, further exacerbate the disparity.[69]

The foregoing description of the siting process outlines the conflicts and the disparities in access and resources that can result in siting decisions which are biased against targeted communities; even where the community ultimately succeeds in opposing a facility, the current process forces it to expend considerable resources fighting an unwanted, and sometimes unnecessary, facility.[70] These conflicts also result in a dispute over the perceived level of risk posed by polluting facilities, and how risk is measured within the decisionmaking process. The next part of this Article argues that the conflict over perception is similarly biased against local communities.

## II. Perceptions of Risk

Each conflict over the siting of a polluting facility generates opposing conceptions of its risk which are debated during the siting process. The ability to provide information on risk and to portray that information as accurate and dependable is crucial to influencing the process. Where disagreement over the siting itself produces a conflict of intent, disagreement over the level of risk produces a conflict of perception. The siting conflicts outlined in Section I are distinct from the risk perception debate.

Just as environmental justice issues cross the boundaries of traditional environmental concerns to encompass questions of democracy and local autonomy, the battle over risk perception is part of a larger, ongoing debate over corporate and governmental accountability and over the methods used to assess public risk. Therefore, events outside the environmental justice context have an impact on the public's perception of environmental risk and the trustworthiness of corporate and governmental decisions regarding such risks. Many people do not trust corporate or governmental decisions concerning the risks of polluting facilities for reasons that go well beyond the specific issues involved in a given siting dispute.

Certain historical events such as the Vietnam War and the Watergate cover-up, the Iran-Contra scandal, and the savings and loan debacle are examples of government deception that have eroded the public's confidence in governmental veracity. Closer to

69. *See* Godsil & Freeman, *supra* note 63 (discussing the difficulties faced by the poor and communities of color in organizing to act upon environmental issues).

70. *See* Bailey, *supra* note 68 (reporting how many solid waste incinerators became bad investments as costs rose and the waste stream declined in the late 1980s).

the environmental justice context, Three Mile Island, the extent of pollution at the Department of Energy's bomb-making facility at Rocky Flats, Colorado,[71] and the recent controversy over government tests of radioactive substances[72] are instances where government reluctance to admit the severity of public risks increased public resistance to the technology—in this case, nuclear weapons and power plants—responsible for those risks. As former Secretary of the Interior Stewart Udall stated: "The Government's paid a huge price for that approach. It's caused the public distrust that runs so deep now."[73]

Other historical incidents have demonstrated corporate tendencies to downplay or cover up the extent of public risk in order to avoid liability. The Ford Pinto recall,[74] the asbestos litigation against Johns-Manville, the Dalkon Shield controversy and other product liability lawsuits have either demonstrated evidence or alleged that some corporations have willfully withheld information on the risk posed by their products, despite clear evidence of adverse impacts on consumers. Accidents and violations of environmental laws occurring at polluting facilities are becoming increasingly well known,[75] and directly relate to the environmental

71. *See* Gerrard, *supra* note 12, at 1162.

72. *See* Keith Schneider, *Redressing the Harms of the Nuclear Age May Not Be Cheap*, N.Y. TIMES, Jan. 9, 1994, at E2.

73. *Id.* at E3.

74. *See* Grimshaw v. Ford Motor Co., 119 Cal. App. 3d 757 (Ct. of App. 1981).

75. SAN DIEGO DIST. ATTORNEY'S OFFICE, FINAL REPORT: WASTE MANAGEMENT, INC. (Mar. 1992); *see also* Weltman, *supra* note 7 and Ellis, supra *note* 7 for other reports on corporate malfeasance. The San Diego District Attorney's report has become well known within environmental justice circles. It concludes:

> Waste Management, Inc.'s, methods of doing business and history of civil and criminal violations has established a predictable pattern which has been fairly consistent over a significant number of years. The history of the company presents of a combination of environmental and anti-trust violations and public corruption cases which must be viewed with considerable concern. Waste Management has been capable of absorbing enormous fines and other sanctions levied against it while still maintaining a high earnings ratio. We do not know whether these sanctions has had any punitive effect on the company or have merely been considered as additional operating expenses.
>
> We have reviewed recent practices and problems and our concerns have not diminished. The company's recent business practices and violations do not appear to be different from the past. We have been unable to determine whether Waste Management's history, as reflected by this report, has ben due to a failure of proper management, or has been the result of deliberate corporate policy. Whatever the case, the company's history requires extreme caution by the San Diego County Board of Supervisors or any other governmental entity contemplating any contractual or business relationship with Waste Management.

SAN DIEGO DIST. ATTORNEY'S OFFICE, *supra*, at 57.

justice movement's attack on the motives and values of polluting industries. These events do not take place in a vacuum, but contribute to the public's general sense of the truth of government or corporate statements before a specific siting controversy ever begins. Within the siting process itself, additional factors add to the conflict over risk perception.

### A. The Preliminary Debate Over Risk

When a corporation or governmental entity has selected a specific site for a polluting project, it will often begin a public information campaign to persuade the local community to agree to the siting. In Homer, Louisiana, for example, sponsors of a proposed uranium enrichment plant distributed a videotape on the facility to residents and even paid for a delegation of local citizens to tour enrichment plants in Europe. In predominantly African-American Noxubee County, Mississippi, Hughes-Federated hired an officer in the local N.A.A.C.P. as a consultant to support its proposed toxic waste dump.[76] The key goal of these campaigns is to persuade people that the facility does not threaten the community's health and safety. Unpersuaded community members are usually accused of being "ignorant" or "superstitious."[77] Given the heightened concern over discriminatory siting, company officials are quick to deny that race or class was a factor in a siting decision.[78] However, the histories of similar facilities may lead to genuine fears over public health. In addition, a town's demographics may support a perception of racism. When this occurs, attempts to deny or dismiss the fears and perceptions of local residents as ignorant or mistaken leads to increased mistrust of a facility's sponsors and resistance to the siting.

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76. For a description of the Homer, Louisiana controversy, see Ellis, *supra* note 7. For Noxubee County, see Schneider, *supra* note 28. *See also* BLUMBERG & GOTTLIEB, *supra* note 18, at 58-60, for a brief overview of how and why public relations campaigns became an integral part of the siting process.

77. In the Homer uranium plant controversy, a local bank president and supporter of the plant said, "Many of those who are opposed (to the plant) do not have their foundation in fact. They have it in superstition and unfounded fears in my opinion." Ellis, *supra* note 7; *see also* Gillette & Krier, *supra* note 5, n.138.

78. *See, e.g.*, Schneider, *supra* note 28 (stating that sponsors of the dump noted the geology of the county as a reason for siting the dump in Noxubee County, although that geology was virtually identical in 13 other Mississippi counties, and Noxubee had the highest percentage of black residents); *see also* Godsil & Freeman, *supra* note 63.

## B. Measuring Risk in the Administrative Review Process

At the start of any administrative review, the proponents of a facility already have an advantage over the local community in access to the government agency. Corporate, local government and administrative agency professionals share a common background of education and training in environmental, public health and statistical risk assessment disciplines. They are familiar with each others' terms and methodologies, and are likely to cross over between corporate, government and agency employers during the course of their careers.[79] Although the local residents fighting a project lack the training and the professional background of their opponents or the overseers of the administrative process, they may develop considerable expertise during a siting controversy. Local residents, however, are more likely to be perceived as untrained outsiders than corporate professionals, regardless of their knowledge.

This disparity in backgrounds also leads to a disagreement over a crucial but often neglected question: "what does 'risk' *mean*?"[80] As described by Gillette and Krier, public risk perceptions include factors not captured in the statistical measurement of risk, which is measured as expected mortality, or anticipated deaths resulting from the risk over a specific period of time.[81] Lay persons, however, are concerned not only with the raw probability of a risk, but with its nature and origin: whether a risk results from voluntary or involuntary exposure; is difficult to quantify or has a long latency period before adverse effects appear; has irreversible consequences or catastrophic potential; or is manmade or naturally caused.[82] Gillette and Krier point out that these factors implicate deeper public concerns about autonomy and equality. For instance, voluntariness concerns individual freedom of choice: people generally are more amenable to risks they choose to take rather than risks imposed by

79. BLUMBERG & GOTTLIEB, *supra* note 18, at 72 (discussing the "revolving door that developed between public agencies and the waste-to-energy industry"); *see also supra* note 58 (discussing common background of experts).

80. Gillette & Krier, *supra* note 5, at 1071; Goleman, *supra* note 5.

81. Gillette & Krier state that experts tend to see risk in terms of expected annual fatalities, whereas public perceptions of risk are "*n*-dimensional," that is, they take into account many other factors besides the single factor of probability of deaths. Moreover, experts view statistically equal chances of death as identical—i.e., 1,000 expected deaths in a single accident each year are the same as 1,000 expected deaths spread out over the year, or 10,000 expected deaths once every ten years—whereas the public sees vital differences between these cases. Gillette & Krier, *supra* note 5, at 1071-74; *see also* Hornstein, *supra* note 5, at 597.

82. Gillette & Krier, *supra* note 5, at 1071-73.

outside actors.[83] The factors of scientific uncertainty and latency inhibit informed choice, which is a necessary component of rational decisionmaking. In addition, these factors impede the identification and implementation of preventive and remedial measures for risk exposure.[84] Michel Gerrard adopts a similar taxonomy of public attitudes towards risk in his discussion of dread, intrusion and trust.[85] He defines dread as a general cultural attitude towards certain substances or events as inherently risky, and points to hazardous and radioactive wastes as prime examples of substances that induce public dread.[86] Intrusion is the lack of control over the imposition of a risk and the outside or foreign nature of that risk[87]—a quality very close to Gillette and Krier's focus on voluntariness and autonomy. Finally, Gerrard points out that public perceptions of risk and consequent opposition to risk is partly a function of the level of public trust in the institution(s) responsible for creating and/or locating that risk.[88]

Such differences in perceptions and measurements of risk cause disagreement between experts and lay persons over what constitutes an acceptable risk. If the corporate and government experts support statistical risk assessments and reflexively dismiss public perceptions as flawed or uninformed,[89] a biased and incompletely informed decision will result. Further, conclusions based on methodologies with which residents are unfamiliar or fundamentally disagree will fail to gain public trust. Gillette and Krier conclude:

> The problem comes down to competing rationalities. Admit this, and it unarguably follows that the choice of approach [to risk assessment] is an ethical and political one that technical experts have neither the knowledge nor the authority to dictate, because the issue transcends technocratic expertise.[90]

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83. *Id.* at 1076-77; Goleman, *supra* note 5.

84. Gillette & Krier, *supra* note 5, at 1076-77.

85. Gerrard, *supra* note 12, at 1155-63.

86. *Id.* at 209-12; Hornstein, *supra* note 5, at 615.

87. Gerrard, *supra* note 12, at 1158-61.

88. *Id.* at 1164-65.

89. For a discussion of the reasons why experts might be so attached to statistical risk assessment, see Gillette & Krier, *supra* note 5, at 1084-85.

90. *Id.* at 1085. Hornstein similarly concludes: "Comparative risk analysis gives an undeserved assurance of scientific legitimacy to the inescapably collective (and political) process of establishing social policies and priorities on environmental problems." Hornstein, *supra* note 5, at 630.

### C. Public Perceptions of Risk in the Political Process

As discussed in Part I, the political process is probably the most favorable forum for community residents to voice their concerns regarding a proposed facility. Success in the political arena, however, is not an endorsement of the present siting process. If the intense opposition to polluting facilities inspires large-scale political organizing and activity,[91] it strongly suggests that many of the technocratic administrative siting processes do not adequately deal with controversial issues in siting. Although successful oppositions demonstrate that public risk perceptions can have a political impact on the siting process, local communities should not have to endure a hostile siting process and laborious organizing efforts to have their concerns addressed. Gerrard suggests that community opposition is at its strongest and most effective when the opposed facility has high factors of dread and intrusion, as is the case with hazardous waste incinerators or nuclear waste storage sites.[92] This may explain why proponents of technocratic environmental law argue that environmental risk issues should not be determined by the public's "subjective fears and aversions."[93]

Successful community oppositions do not guarantee that all communities will be effective in incorporating their concerns over risk and preventing disparate siting. Without the influence to push its agenda, a community's opinion will not gain favor in the political process. Elected officials may prefer the artificial exactitude of a

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91. *See, e.g.*, CONFRONTING ENVIRONMENTAL RACISM, *supra* note 9, at 3 (citing the fact that at a demonstration protesting a PCB waste landfill siting in predominantly African-American Warren County, North Carolina, over five hundred protestors were arrested).

92. *See* Gerrard, *supra* note 12, at 1158; BLUMBERG & GOTTLIEB, *supra* note 18, at 74.

93. *See* Schneider, *supra* note 5. In some circumstances, public fears and aversions should not determine policy decisions. For example, public outcry over crime often prompts anti-crime legislation, such as mandatory minimum sentences for drug crimes, that is counterproductive and unjust. *See generally* John M. Walker Jr., *Loosening the Administrative Handcuffs: Discretion and Responsibility Under the Guidelines*, 59 BROOK. L. REV. 551, 552 & n.10 (1993) (noting that many judges believe that the mandatory minimum penalty statutes enacted by Congress are "draconian, conducive to sentencing disparity and, when applied to non-violent offenders, wasteful of scarce prison space").

However, the authors agree with Gerrard's distinction between opposition to waste disposal facilities and opposition to housing and social service facilities. Gerrard contends that battles against disposal facilities often have "significantly positive environmental impacts, not only for the particular sites, but for society at large, because they spur sounder, less wasteful modes of production. In contrast, opposition to housing and social service facilities has overwhelmingly negative consequences for society." Michael B. Gerrard, *The Victims of NIMBY*, 21 FORDHAM URB. L. J. 495, 522 (1994).

scientific risk assessment prepared by a corporation or agency to the diffuse views of certain constituents as a basis for decisionmaking.[94] Further, local officials may be more influenced by promises of short-term economic gains or, in the case of incinerator facilities, a perceived lasting solution to the garbage crisis, than by the fears and doubts of local residents. The political process is currently the most effective method of achieving environmental justice. However, political efforts to reform the siting process must address the methods and ideologies of environmental risk assessment as well as the mechanics of the siting process.

## III. Overcoming Citizen Distrust and Incorporating Citizen Perception of Risk

Gerrard has argued that the "practice of trying to preempt local control and force disposal facilities on unwilling communities is much like the medieval practice of bleeding the sick: it is exquisitely counterproductive."[95] Gerrard has proposed a national siting procedure for hazardous waste facilities that is based upon the idea that facilities should only be sited in communities that have genuinely chosen—through a referendum—to host them.[96] This process would vitiate many of the flaws in the current system since a community's risk perception would be determinative. If a corporation failed to persuade the majority of a community that the facility posed an acceptable level of risk, and the community did not trust the government regulatory structures, the community could reject the facility at the voting booth. Gerrard also argues that where a majority of the community approves a facility, those community members in strong opposition to it should be bought out by the facility sponsor.[97]

In the absence of comprehensive reform, it is in the government's interest to ameliorate some of the flaws in the existing procedures. Under the current system, government attempts to permit hazardous land uses usually meet with vociferous community opposition. This results in an expensive and protracted battle, and more importantly, causes greater distrust and enmity toward the government. When government incorporates citizens' risk perceptions, and hence respects a community veto, peaceful sitings may

94. *See supra* note 62 and accompanying text (discussing the preference of risk managers for courses of action that produce tangible benefits).

95. Gerrard, *supra* note 12, at 1170.

96. *Id.* at 1223-24.

97. *Id.*

occur. Only when a community is a full participant in the siting process—and not merely viewed as a hurdle to overcome through manipulation or coercion—can a siting be equitable and thus, successful. Until government takes a proactive role in ensuring full community participation, communities must continue to subvert attempts to shut them out of the siting process.

### A. Counteracting Corporate Misinformation Campaigns

Facility sponsors present the proposed facility in its rosiest light—often using euphemisms and jargon to mask the nature of the project.[98] Corporations hire sophisticated consulting firms known for effectively "neutralizing" popular sentiment,[99] and may also hire community leaders as "consultants" which both nullifies the community leader as a threat to the project and puts a familiar face in front of the proposed and potentially frightening project.[100]

Many community groups have responded and must continue to respond by unmasking jargon, ignoring euphemisms and exposing situations in which community leaders have been co-opted.[101] On the national level, Citizens Clearinghouse for Hazardous Waste, a citizens group, is compiling a "Dictionary of Linguistic Detoxification" which gives alternative definitions for technical terms to expose misleading jargon and euphemisms.[102]

A second tactic available to community groups is investigating the facility sponsor. By connecting with other communities that have dealt with the sponsor and with national environmental or citizen groups, community groups can learn whether the facility sponsor has complied with environmental regulations, anti-trust laws or securities and corporate regulations. The Freedom of Information Act[103] and its state corollaries[104] can also be utilized for this purpose. Under these laws, federal and state agencies are obligated to provide all non-exempt information in their possession relating to a corporation. Exposing a facility sponsor's history of violating environmental laws or price-fixing charges can be power-

98. *See generally* BLUMBERG & GOTTLIEB, *supra* note 18, at 58.
99. *Id.*
100. *See* Schneider, *supra* note 28.
101. BLUMBERG & GOTTLIEB, *supra* note 18, at 73.
102. One example suggested at the Citizens Clearinghouse for Hazardous Wastes, Inc. conference on incineration and used by Gillette & Krier is "body count" as a substitute for "risk assessment." *See* Stop Incineration Network Letter from CCHW (on file with authors); Gillette & Krier, *supra* note 5, at 1072.
103. *See supra* note 16.
104. *Id.*

ful ammunition to counteract the sponsor's public relations campaign for its facility. The level of distrust many local residents feel toward corporations will only be exacerbated when campaigns of misinformation and cooptation are exposed; facility sponsors who fail to present their proposals honestly cannot be trusted to operate a facility safely and effectively. Corporations may find that they will be more successful in siting facilities that involve some level of risk if they minimize their attempts to obfuscate.

Communities have disseminated information about proposed facilities and their corporate sponsors through a variety of media, such as public radio, community newsletters, and even door-to-door campaigns.[105] Once a community group has learned about the facility sponsor and disarmed the corporate public relations campaign, it may choose to challenge the siting in the administrative review process.

## B. Administrative Review and Public Hearings

During the administrative review period, agencies must change their manner for dealing with community risk perceptions. In the absence of governmental reform on this issue, communities must begin to challenge the hegemony of technocratic risk assessment. Critics of risk assessment contend that it is "voodoo science"[106] and simply a "way of justifying a project already favored by both industry proponents and policy-makers."[107] Risk assessment, however, is not invalid if undertaken cautiously, with a realistic sense of its limitations, and with the full inclusion of the community residents' multi-dimensional risk perceptions. Government agencies' acceptance of a meaningful community role in the risk assessment process will add validity to the process and make the resulting decisions less suspect.

### *1. Public Hearings*

Citizen participation in the primary administrative review period can occur in numerous ways. First, public hearings and opportunities for community members to testify or present questions on proposed facilities should be made a part of all environmentally

105. *See* Robert D. Bullard, *Anatomy of Environmental Racism and the Environmental Justice Movement*, *in* CONFRONTING ENVIRONMENTAL RACISM, *supra* note 9, at 33-35.

106. Robert W. Collin & William Harris, Sr., *Race and Waste in Two Virginia Communities*, *in* CONFRONTING ENVIRONMENTAL RACISM, *supra* note 9, at 103.

107. *Id.*

sensitive siting decisions. Public hearings allow community members to hear the facility sponsor's arguments and data, and allow residents to present their data or to explain their reasons for opposing the project. A public hearing is an excellent forum for agency officials to listen to community residents' risk perceptions. As discussed in Part II, a number of state hazardous waste siting programs recognize the importance of local participation and require public hearings or create special siting boards that include both experts and local representatives.[108]

If no official public hearing is held, a community group may want to organize an unofficial public hearing. This type of guerrilla theater can both publicize the lack of an official public hearing and be a source of information for the public and other community residents not directly involved in the organizing group. The unofficial public hearing can be an effective organizing technique and a means to garner media attention on a siting issue.[109]

### 2. *Notice and Comment*

When completing an EIS, or the corollary to an EIS in other siting procedures, agency officials are well-served by directly confronting community members' risk perceptions. If community members have indicated that a particular facility presents an unacceptable level of risk or that a sponsor is irresponsible and untrustworthy, agency officials should address these perceptions fully in the siting decision. Approving a facility in the face of vociferous community protests ignites opposition and will likely lead to more aggressive actions to oppose it, such as civil disobedience and lawsuits.[110]

The administrative review period provides for citizen participation during the notice and comment period for the draft EIS.[111] Thus, if the agency has not dealt with public perceptions of risk, community groups can alert the agency of its failure. While an EIS is generally long and technical, community experts who master the technical language often emerge during the siting process and are

108. For a discussion of state hazardous waste management programs, see Godsil, *supra* note 24, at 402-08.

109. *See generally* Lucie E. White, *Mobilization on the Margins of a Lawsuit: Making Space for Clients to Speak*, 16 N.Y.U. REV. L. & SOC. CHANGE 535, 547 (1988).

110. At the CCHW Conference on Incineration, held on October 18, 1993, many community leaders stated that they were convinced that corporations and government officials respond only to civil disobedience and negative media attention.

111. For NEPA, see 40 C.F.R. § 1502.19; for states, see, e.g., N.Y. ENVTL. CONSERV. LAW §§ 8-109 (4), (6).

willing to wade through the EIS.[112] Lawyers and other experts who work for community groups can assist local residents in EIS interpretation by explaining terminology and answering questions. Luke Cole suggests the EIS can be an organizing technique whereby local residents gather in small groups with an attorney or expert to educate themselves, examine the EIS and write comments for inclusion in the official record.[113] Other means of influencing agency officials and local politicians involved in the siting process include holding unofficial town meetings, staging press conferences and establishing newsletters to disseminate information.

The goal during this process is to assess the arguments made and data presented by facility supporters. If the community decides that the arguments are weak and the data insufficient to quell its fears and concerns, it must argue that position publicly and use any opportunity to communicate with agency decisionmakers. The agency's goal is similar: to assess the arguments made by both sides to determine whether the project serves the community's best interests. Even if the technical arguments favoring the project are sound, the intense and genuine concern of community residents should prevail, lest the community feel compelled to up the ante by filing a lawsuit or engaging in demonstrations, protests and civil disobedience.

Despite the best efforts of community members, the final EIS may be insufficient. At that point, the community may wish to file a lawsuit with the help of a local legal services attorney or an outside environmental or civil rights organization.[114] The bases upon which a lawsuit may be filed include procedural violations, such as inadequate opportunity for notice and comment, a failure to address public and agency comments,[115] or failure to make the EIS available in a language the majority of community members speak.[116] A lawsuit may also be filed on the ground that the facility

112. BLUMBERG & GOTTLIEB, *supra* note 18, at 77 (neighborhood groups led the fights against incineration often "led by housewives and other residents who lacked professional expertise, and who were quickly obliged to master the technical jargon, complex regulations, and the arcane world of health risk analysis . . . ") (citing William Glaberson, *Coping in the Age of NIMBY*, N.Y. TIMES, June 19, 1988).

113. *See* Cole, *supra* note 25, at 675-79.

114. *Id.* at 673-82.

115. *See, e.g.,* Greenpeace U.S.A. v. Evans, 688 F. Supp. 579, 584-85 (W.D. Wash. 1987) (finding administrative record deficient because agency's memorandum decision not to prepare EA or RIS did not address public and agency comments).

116. *See* El Pueblo para el Aire y Agua Limpio v. County of Kings, 22 Envtl. L. Rep. (Envtl. L. Inst.) 20,357 (Cal. Super. Ct. 1991).

failed to meet one or more of the necessary permit criteria, or that the agency failed to consider substantive challenges to the proposal or did not adequately discuss the environmental impact of the proposed action on the area.[117] A successful challenge to an EIS means that the agency will be required to complete an adequate EIS that remedies the procedural deficiencies and complies with the substantive requirement that the agency "adequately considered and disclosed the environmental impacts of its actions" and made a decision that was not "arbitrary or capricious."[118] Reworking an EIS may not lead to a different decision, but it gives a community time to organize and build support and raises the costs of going ahead with the facility. Because many facilities are built in response to a projected need, such as expected waste volume, or for a target market, a delay may also allow a change in the market to render the facility obsolete or unnecessary.[119]

* * *

State procedures to include public participation in the siting process do not by themselves overcome either public fear of certain facilities or public distrust of government. Certain waste management procedures that industry and government have supported create greater risks than originally expected.[120] Moreover, public distrust of government regarding environmental protection has built up over years and will take time to ameliorate.

### C. Federal Action and Its Role in Waste Management

The federal government has a significant role to play in overcoming public distrust and ensuring environmental protection. After twenty years of environmental regulation, the federal government has failed to meet many of the goals outlined in the federal environmental laws enacted in the 1960s and '70s.[121] More significantly, however, many poor people and people of color involved in the environmental justice movement feel that environmental laws have been enforced to their detriment; they feel a

117. *See, e.g.*, Marble Mountain Audubon Soc'y v. Rice, 914 F.2d 179, 182 (9th Cir. 1990) (stating that agency did not discuss environmental effects of action on area).

118. Baltimore Gas & Electric Co. v. Natural Resources Defense Council, Inc., 462 U.S. 87, 97-98 (1983).

119. *See supra* note 19 and accompanying text (discussing how citizens' groups can raise siting costs through delays).

120. *See, e.g.*, *Test Burn Data Show Dioxin Emissions Higher Than Expected From WTI Incinerator*, 24 Envtl. Rep. (BNA) 346 (June 25, 1993).

121. Barry Commoner, *A Reporter at Large: The Environment*, THE NEW YORKER, June 15, 1987, at 46.

greater level of protection has been provided for white, affluent neighborhoods than their own.[122] Thus, the federal government must actively seek to regain its legitimacy as protector of the environment on behalf of all citizens.

The federal government is taking steps in these directions. It is recognizing the potential for racism or bias and public distrust of government regarding waste disposal generally.[123] The federal government is also becoming aware of the effect that distrust of government has on the effectiveness of government waste disposal programs.[124]

The government has recognized that even vigorously monitored and regulated hazardous waste management requirements do not solve long term hazardous waste problems. As a result, the EPA has established a "temporary capacity freeze" for hazardous waste incinerators and has asserted source reduction as its primary goal.[125]

Second, the White House is chairing an interagency task force on environmental justice and has signed an executive order requiring "each Federal agency [to] make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."[126] The order requires each federal agency to develop an environmental justice strategy to:

> (1) promote enforcement of all health and environmental statutes in areas with minority populations and low-income populations;
>
> (2) ensure greater public participation;

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122. Cole, *supra* note 25, at 641-54; *see also* U.S. GEN. ACCOUNTING OFFICE, SITING OF HAZARDOUS WASTE LANDFILL AND THEIR CORRELATION WITH RACIAL AND ECONOMIC STATUS OF SURROUNDING COMMUNITIES (1983).

123. *See supra* text accompanying notes 52 (discussing the formation of EPA's Environmental Justice Advisory Council and federal investigations of discriminatory enforcement of environmental laws) and 69 (discussing the Department of Energy's new willingness to redress harms from past nuclear programs).

124. *See* 24 Env't Rep. (BNA) No. 10, at 416 (July, 1993) (discussing Department of Energy conclusion that the public distrusts its handling of radioactive waste and report recommending means to garner public trust).

125. U.S. ENVTL. PROTECTION AGENCY, DRAFT STRATEGY FOR COMBUSTION OF HAZARDOUS WASTE IN INCINERATORS AND BOILERS: INTERIM FINAL GUIDANCE ON WASTE MINIMIZATION FOR HAZARDOUS WASTE GENERATORS (May 18, 1993) (reprinted in 24 Env't Rep. (BNA) No. 3, at 157 (May 21, 1993)).

126. Exec. Order No. 12,898, 59 Fed. Reg. 7,629, § 1-101 (1994).

(3) improve research and data collection relating to the health of and environment of minority populations and low-income populations; and

(4) identify differential patterns of consumption of natural resources among minority populations and low-income populations.[127]

The EPA's office of Civil Rights is also investigating possible discrimination against financially disadvantaged and minority communities in violation of Title VI of the Civil Rights Act of 1964 in Iberville Parish, Louisiana and Noxubee County, Mississippi.[128] The EPA's investigation of these two communities will focus on whether race was a factor in Mississippi's and Louisiana's efforts to permit a hazardous waste project in poor and primarily African-American communities, and also, whether the dumps would expose the population to disproportionately high health and environmental risks.[129] The EPA is thus investigating the disparate impact, as well as possible discriminatory intent, that poor and minority communities face in relation to waste disposal facilities.

* * *

It will, of course, take more than a committee, an executive order, and a few investigations to reassure financially disadvantaged people and people of color that the federal government is regulating on their behalf, and that environmental laws are not disparately enforced. Moreover, the impetus for the current actions are years of effort by community groups, civil rights organizations and grassroots environmental groups.[130] Environmental justice advocates recognize that they must keep the pressure on; the federal government, if it intends to take the issue seriously and regain citizens' trust, must respond. The EPA, however, despite their environmental justice investigations, continues to rely heavily upon traditional risk assessment methodologies.[131] For the federal government to effect meaningful change in the siting process and waste management generally, it must do more to incorporate citizens' risk perceptions into its risk calculations and its regulations.

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127. *Id.*

128. *See* Schneider, *supra* note 28.

129. *Id.* (regarding Mississippi); Lavelle, *supra* note 11.

130. *See generally* Dorceta E. Taylor, *Environmentalism and the Politics of Inclusion*, *in* CONFRONTING ENVIRONMENTAL RACISM, *supra* note 9, at 53.

131. *See* Goleman, *supra* note 5.

## IV. Conclusion

No changes in the siting process can eliminate conflicts over the proper location of hazardous facilities or ensure agreement over acceptable levels of risk; people will always have reasonable disagreements on these questions. Nor will reform eliminate the disparities in economic and political power between large corporations and government entities on the one hand and small towns or neighborhoods on the other. However, the recognition that disagreements over risk are reasonable, and that public perceptions are entitled to as much deference as expert assessments will help lessen the friction and mistrust that is a hallmark of the siting process. Giving local communities more autonomy over siting decisions may appear to raise substantial barriers to siting hazardous or unwanted facilities, but Gerrard suggests this may not be the case if communities are given substantial incentives to accept facilities and states are given substantial incentives to help facilities be sited equitably.[132] Indeed, local control over siting may lower siting costs by reducing the local opposition generated by feelings of lack of control and mistrust of outside corporate or governmental decisionmakers. Most importantly, such reforms will go a long way towards restoring the dignity and rights of democratic participation that many local communities have lost through the effects of past and present siting decisions that failed to consider their particular perceptions and situations.

132. *See* Gerrard, *supra* note 12, at 1176-80.