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ENVIRONMENTAL RACISM RECONSIDERED

LYNN E. BLAIS*

The rallying cry of the environmental justice movement has been its leaders' claim that minority and poor communities throughout the United States have been forced to bear more than their share of the environmental burdens that accompany the toxic by-products of our industrialized society. In this article, Professor Lynn Blais argues that the literature generated by environmental justice advocates has failed to advance a coherent theory of why the current distribution of environmentally sensitive land uses, even if disproportionate, should be considered unfair. In making her argument, Professor Blais addresses two major claims made by those in the environmental justice movement: (1) that the political decision-making process distributes environmentally sensitive land uses in a manner that disproportionately impacts minority and poor communities because of distortions arising from race and class disempowerment, and (2) that market failures drive the placement of sites in such a manner that land uses disproportionately affect low-income or minority communities. The author develops a framework under which the political and market determinations leading to distribution can be understood to accurately reflect rational and legitimate private preferences and collective judgments. After evaluating possible market and political failures that could justify extensive interference with revealed preferences in the context of environmentally sensitive land uses, Professor Blais concludes that any disparate impacts that may exist are most likely attributable to the dramatic inequality of wealth that characterizes contemporary America. Finally, Professor Blais suggests that most of the reforms proposed by environmental justice advocates may leave poor and minority communities worse off, because the proposals fail to

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address the cultural conditions that constrain economic options for such communities and their residents.

I.	INTRODUCTION	77
II.	THE ENVIRONMENTAL JUSTICE DEBATE	83
	A. <i>The Siting of Environmentally Sensitive Land Uses</i>	84
	B. <i>The Enforcement of Environmental Protection Statutes</i>	87
	C. <i>Policy Initiatives and Proposed Reforms</i>	89
III.	PRIVATE PREFERENCES, COLLECTIVE JUDGMENTS, AND CHOICE	94
	A. <i>Markets, Politics, and Preferences</i>	94
	B. <i>Private Preferences, Collective Judgments, and Environmentally Sensitive Land Uses</i>	100
	1. <i>Risk, Rewards, and Rational Preferences in the Siting of Environmentally Sensitive Land Uses</i>	100
	2. <i>Rational Preferences Revisited: Winners, Losers, and Race</i>	104
	3. <i>Rational Preferences and Environmentally Sensitive Land Uses in Context</i>	108
	a. <i>Siting Decisions in the Past: Sumter County, Alabama</i>	108
	b. <i>Contemporary Siting Decisions: The Mescalero Apaches</i>	112
	c. <i>A Community Transformed: Richmond, California</i>	114
IV.	JUSTIFICATIONS FOR INTERFERING WITH PRIVATE PREFERENCES: REVIEWING THE THEORIES AND EVIDENCE	116
	A. <i>Interfering with Private Preferences to Adjust for Errors</i>	116
	1. <i>Imperfect Markets and Discrimination As a Market Failure</i>	116
	2. <i>Politics and Process Failures</i>	120
	a. <i>Underrepresentation</i>	121
	b. <i>Public Choice Theory and Limitations on the Legitimacy of the Representative Process</i>	127
	3. <i>Imperfect Information and Process Failures</i>	128
	B. <i>Interfering with Accurately Measured Preferences</i>	131
	1. <i>Removing Decisions from the Market or Political Spheres</i>	131

2. Guaranteed Minimums and Egalitarian Distribution.....	134
3. Unacceptable Risk of Harm to Self or Others	135
4. Risk and the Limits of Rationality.....	138
5. Endogenous Preferences and the Role of Social Policy	141
V. PRESCRIPTIONS	143
A. <i>Regulating Risks</i>	144
B. <i>Enhancing Opportunities for Participation</i>	147
C. <i>Compensated Sitings</i>	149
D. <i>The Problem with Prohibitions</i>	150
VI. CONCLUSION.....	151

I. INTRODUCTION

The civil rights movement has placed a new item on its agenda. In addition to their continued crusade against discrimination in the labor force, workplace, housing market, and education sector, civil rights leaders have turned their attention to the claim that racial minorities suffer a disproportionately high risk of being exposed to environmental hazards.¹ In particular, the environmental justice movement is premised on the belief that racism and classism improperly influence the distribution of environmental risks in the United States. Accordingly, advocates of environmental justice seek fundamental changes in the structure of environmental decision-making to eliminate this improper influence.

The origin of the environmental justice movement is often traced to the 1982 uprising in Afton, North Carolina.² Afton was a predominantly African-American low-income community with a disproportionately high rate of unemployment.³ When the State of

1. Lawyers and legal scholars entered the environmental justice debate long after professionals in other fields had turned their attention to these issues. See, e.g., Pat Bryant, *Toxics and Racial Justice*, 20 SOC. POL'Y 48 (1989); Robert D. Bullard, *Solid Waste Sites and the Black Houston Community*, 53 SOC. INQUIRY 273 (1983) [hereinafter Bullard, *Solid Waste Sites*]; David Kallick, *The Struggle for Community: Race, Class, and the Environment*, 21 SOC. POL'Y 18 (1990).

2. Professor Robert Bullard, an early leader in the quest for environmental justice, writes: "The environmental justice movement took shape out of the 1982 protests in Warren County, North Carolina." Robert D. Bullard, *Environmental Justice For All, in UNEQUAL PROTECTION: ENVIRONMENTAL JUSTICE AND COMMUNITIES OF COLOR* 5, 5 (Robert D. Bullard ed., 1994).

3. See ROBERT D. BULLARD, *DUMPING IN DIXIE: RACE, CLASS, AND ENVIRONMENTAL QUALITY* 36 (1990) [hereinafter BULLARD, *DUMPING IN DIXIE*].

North Carolina decided to dump 32,000 cubic yards of soil contaminated by polychlorinated biphenyls (PCBs) in a landfill in Afton,⁴ local and national civil rights leaders, African-American elected officials, environmental activists, and labor leaders orchestrated demonstrations opposing the site. More than 500 people were arrested during the demonstrations.⁵ The rallying cry of the protests was the perception that African-American and poor communities throughout the United States are made to bear a disproportionately high share of the burdens associated with the toxic by-products of our industrialized economy. Although generally credited with initiating the environmental justice movement, the civil disobedience in Afton did not succeed in keeping the unwanted landfill out of the city. The participants did, however, claim some success in limiting the uses of the landfill.⁶

The Afton uprising spawned a succession of studies undertaken to evaluate the assertion that hazardous waste sites are disproportionately located in minority and/or low-income communities.⁷ Most of those early studies purport to confirm these suspicions, concluding, in general, that both the racial composition and the average income level of communities are statistically significant predictors of the placement of environmentally sensitive land uses.⁸ The early studies, in turn, generated a spate of academic literature condemning the racism of environmental decision-making, and calling for legal and political responses to the inequitable distribution of environmentally sensitive land uses. The Clinton Administration responded by re-

4. Polychlorinated biphenyls are highly toxic compounds, and are members of the same chemical family as DDT and Dioxin. See Ken Geiser & Gerry Wanack, *PCBs and Warren County*, in UNEQUAL PROTECTION: ENVIRONMENTAL JUSTICE AND COMMUNITIES OF COLOR, *supra* note 2, at 44-46.

5. See COMMISSION REPORT FOR RACIAL JUSTICE, UNITED CHURCH OF CHRIST, TOXIC WASTES AND RACE IN THE UNITED STATES: A NATIONAL REPORT ON THE RACIAL AND SOCIO-ECONOMIC CHARACTERISTICS OF COMMUNITIES WITH HAZARDOUS WASTE SITES 2 (1987) [hereinafter CRJ REPORT].

6. See Charles Lee, *Toxic Waste and Race in the United States*, in RACE AND THE INCIDENCE OF ENVIRONMENTAL HAZARDS: A TIME FOR DISCOURSE 10, 12 (Bunyan Bryant & Paul Mohai eds., 1992).

7. See, e.g., CRJ REPORT, *supra* note 5; U.S. GENERAL ACCOUNTING OFFICE, SITING OF HAZARDOUS WASTE LANDFILLS AND THEIR CORRELATION WITH RACIAL AND ECONOMIC STATUS OF SURROUNDING COMMUNITIES (1983) [hereinafter GAO STUDY].

8. Many environmental racism/justice scholars refer to the challenged land uses as "locally undesirable land uses" or "LULUs." Because this Article questions the accuracy of the assumption that all of the challenged land uses are undesirable in every locality (particularly in the community in which they are located), I prefer the term "environmentally sensitive land use."

quiring federal agencies to consider the possibility of disproportionate siting of environmentally sensitive land uses in every decision in which the issue might be relevant.⁹ State and local governments also joined ranks, commissioning studies to reveal the racism, if any, in their environmental decision-making processes and pledging to ameliorate the discriminatory effects of prior decisions.¹⁰

The contemporary environmental justice movement is both broader and more narrow than the mischief that gave it birth. In its current form, its proponents challenge the allegedly disproportionate impact of a vast array of decisions in addition to those concerning the siting of environmental risks, the promulgation of environmental laws and regulations, and the enforcement of those laws (in particular, the speed with which federally mandated clean-ups are undertaken at toxic sites pursuant to CERCLA). For example, charges of environmental racism have been leveled at such issues as the continued availability of unsafe housing,¹¹ effects of occupational injury and illness on minorities,¹² and land use decisions concerning the placement of low-income housing, drug rehabilitation centers, group homes, prisons, and even farms.¹³ At the same time, however, many environmental equity advocates have downplayed the effect of income on exposure to environmental hazards, focusing most of their attention on perceived racial bias.¹⁴

9. In February 1994, President Clinton issued Executive Order 12,898 requiring all federal agencies to incorporate environmental justice concerns into their decision-making processes to the extent practicable and permitted by law. See Exec. Order No. 12,898, 3 C.F.R. 859 (1994), reprinted in 42 U.S.C.A. § 4321 (West 1994). For further discussion of the Executive Order, see *infra* text accompanying notes 69-71.

10. As of late 1995, "[m]ore than a dozen states either ha[d] passed legislation relating to the distribution of noxious facilities or ha[d] such legislation pending." Vicki Been, *Environmental Justice and Equity Issues*, in ZONING AND LAND USE CONTROLS § 25D.06[3] (R. Rohan ed., 1996) (summarizing the existing and proposed legislation) [hereinafter Been, *Environmental Justice*]; see also *infra* text accompanying notes 70-76.

11. See Donald E. Lively, *The Diminishing Relevance of Rights: Racial Disparities in the Distribution of Lead Exposure Risks*, 21 B.C. ENVTL. AFF. L. REV. 309 (1994); see also Luke R. Cole, *Empowerment as the Key to Environmental Protection: The Need for Environmental Poverty Law*, 19 ECOLOGY L.Q. 619, 622 (1992) ("[T]hat the poor suffer disproportionately from environmental hazards is confirmed in local and national studies of the impacts of toxics production and disposal, garbage dumps, air pollution, lead poisoning, pesticides, occupational hazards, noise pollution and rat bites.") (citations omitted) [hereinafter Cole, *Empowerment*].

12. See Beverly Hendrix Wright, *The Effects of Occupational Injury, Illness, and Disease on the Health Status of Black Americans*, in RACE AND THE INCIDENCE OF ENVIRONMENTAL HAZARDS 114 (Bunyan Bryant & Paul Mohai eds., 1992).

13. See Been, *Environmental Justice*, *supra* note 10, § 25D.02[2][c].

14. But see Cole, *Empowerment*, *supra* note 11, at 619, 622 ("[T]hat the poor suffer disproportionately from environmental hazards is confirmed in local and national studies

Professor Vicki Been has discussed one way in which the calls for environmental equity fail to advance a coherent concept of "fairness" in the context of siting environmentally sensitive land uses. In her 1993 article titled *What's Fairness Got to Do With It?*,¹⁵ Professor Been carefully examines each of the plausible theories of "fair" siting of environmentally sensitive land uses, and concludes that all of them "encounter significant philosophical and pragmatic objections."¹⁶ For example, calling for proportional geographic distribution of environmentally sensitive land uses among "neighborhoods" ignores the rights of the individuals in the neighborhood, some of whom will necessarily be closer to the challenged land use than will others, to "fair" distribution of environmentally sensitive land uses.¹⁷ Such a conception of fairness also embraces the implausible assumption that all land is equally suited to host an environmentally sensitive land use, or that we should ignore geological and geographical suitability in siting environmentally sensitive land uses. Clearly, no serious advances can be made in the attempt to pursue environmental equity until a conception of equitable distribution is crystallized.

This Article explores a different, but no less disabling, theoretical flaw in the call for environmental justice. While it is clear that many scholars and advocates argue that the current distribution of environmentally sensitive land uses is in some way "unfair" and that the distribution should be made "more fair," the literature presents no coherent theory about why the current distribution—even if disproportionate¹⁸—should be considered *unfair*. Viewed critically, the charge of environmental racism ultimately distills to one of three allegations. The most damning claim that advocates could be making is that the environmental decision-making process is regularly tainted by intentional discrimination against people of color or those in low-income brackets. The second possible claim might be that the political decision-making process, because of distortions relating to and

...").

15. Vicki Been, *What's Fairness Got to Do With It? Environmental Justice and the Siting of Locally Undesirable Land Uses*, 78 CORNELL L. REV. 1001 (1993) [hereinafter Been, *Fairness*].

16. *Id.* at 1006.

17. *See id.* at 1032.

18. Professor Richard Markovits suggests that the term "disproportionate" connotes a lack of fairness, and that a more appropriate word for my purposes would be "differential." While he may be correct, the environmental racism literature is so saturated with the phrase "disproportionate impact" that it has become, in a sense, a term of art in this context. Accordingly, this Article uses both the term "differential" and the phrase "disproportionate impact."

arising out of race and class disempowerment, regularly distributes environmentally sensitive land uses in a manner that disproportionately impacts minority and poor communities. Finally, environmental justice advocates may be arguing that market forces (themselves not untainted by discriminatory instincts and certainly affected by class differences) drive either the placement of environmentally sensitive land uses or the subsequent migration of low-income or minority residents in such a manner that those land uses disproportionately affect low-income or minority communities. Because decisions pertaining to the siting of environmentally sensitive land uses are made in circumstances in which the economic and political forces interact, scholars and advocates making the second or third allegation would generally have to incorporate components of both.

This Article addresses only the second and third types of environmental racism claim—including the various combinations of these two—for several reasons. First, political and private officials who make siting decisions are rarely accused of engaging in intentional, consistent race discrimination. Certainly, none of the empirical studies is able to demonstrate any such invidious discrimination, as the analyses suggest, at most, correlations between the location of environmentally sensitive uses and the size of the minority and/or poor population in a given community. Second, if intentional race-based discrimination existed and could be proved, the siting decisions clearly would be unconstitutional to the extent that they involve state action, and likely would be illegal to the extent that they do not. Finally, it appears that the most difficult legal and policy questions arise as a result of the allegations in the second and third categories.

Although the environmental racism movement conveys a simple story of discrimination, the reality of the siting of environmentally sensitive land uses is much more complex. At some point, and at some level, representatives of host communities make political and market-based determinations to permit the challenged sitings. In addition, the residents of these communities have made decisions either to remain in the community after the challenged use was sited, or, in many cases, to migrate to a community playing host to such a land use. In such circumstances, it is not clear why these preferences are more suspect than the myriad of others that emerge from the political and market system. Indeed, it is quite plausible that the communities and residents are better off, given the constrained positions from which they enter the market and/or the political process, with the challenged uses than they were without them. This possibility spawns

many complex questions: Does a careful analysis of the implicated market and political processes reveal systematic process failures that might be responsible for the inaccurate revelation of preferences? If so, should society regulate or manipulate the political process or the market to ameliorate the process failures in this context? If we can feel confident that the current distribution of benefits and burdens from environmentally sensitive uses *does* reflect the true preferences of the host communities and their residents, should society nonetheless reject those preferences? On what grounds? Finally, what are the costs of possible intervention strategies and who will/should bear those costs?

This Article lays the groundwork for a more rigorous evaluation of the market and political forces that may have resulted in the existing distribution of environmentally sensitive land uses, and the consequences of rejecting expressed preferences in this context. In Part II, I set the stage by providing a brief overview of the development of environmental equity literature. The early environmental justice movement drew credence from several influential studies, the results of which have now been called into question. Moreover, evidence is emerging that such demographic factors as income level, educational attainment, and propensity for political participation may be more significant predictors of the placement or expansion of environmentally sensitive land uses than is race. As a result, many of the early reform proposals appear to be tethered to an unrealistic understanding of the political and market forces underlying the current distribution of environmental burdens.

In light of the persistent uncertainty concerning the interplay of race, class, and the distribution of environmental burdens, I begin the inquiry into environmental justice anew in Part III. I first review the general theories under which we rely on the market and political process to allocate and distribute most resources in conformity with measured individual and community preferences. I then develop a basic theoretical framework under which a community decision to act as host for an environmentally sensitive land use, or a private determination to live near one, can be viewed as rational and informed, and the political and market determinations leading to the current distribution of environmentally sensitive land uses can be understood to accurately reflect rational and legitimate private preferences and collective judgments. In so doing, I differentiate among types of challenged uses, categorizing uses according to whether they merely involve unpleasant environmental impacts or potential hazards to human health, and whether they provide a concomitant benefit to the

community, such as an increased property tax base or potential jobs, or simply burden the community with no attendant benefit. I also differentiate among residents of host communities according to classifications that have more theoretical relevance to the issue of environmental burdens and benefits than does race. Such classifications include homeowner status and job status, among others. Finally, I provide three examples of siting decisions or community transformations that appear consistent with this theoretical framework.

In Part IV, I take a step back, asking whether conventional justifications for rejecting market and political choices undermine our confidence in the conclusions reached in Part III. In this section, I explore the possibility that extensive process failures, both market-based and political, might call into question the accuracy or acceptability of the choices underlying the distribution of environmentally sensitive land uses. In addition, I review the general circumstances in which allocative and distributive decisions are removed from the market or the political process entirely, and examines whether the choices underlying the current distribution of environmentally sensitive land uses conform to these circumstances. Ultimately, I conclude that while disquieting vestiges of social injustice remain in our society, no convincing argument has been made for rejecting measured preferences concerning environmentally sensitive land uses under these circumstances.

Finally, in Part V, I explain why many of the proposed or enacted environmental equity reforms will either be of questionable value to their intended beneficiaries or may actually make residents of potential host communities worse off than they would have been without the reforms.

II. THE ENVIRONMENTAL JUSTICE DEBATE

While environmental racism claims and the pleas of the many environmental justice advocates are obviously diverse, some generalizations are possible and useful. First, claims of environmental racism tend to focus on the siting of environmentally sensitive land uses and the distribution of other environmental risks,¹⁹ and, less frequently, on the disparate enforcement of environmental protection

19. See Vicki Been, *Analyzing Evidence of Environmental Justice*, 11 J. LAND USE & ENVTL. L. 1, 1 (1995) ("The movement . . . focuses on the distributional implications of the way in which our society seeks to manage environmental threats and improve and protect environmental quality.") [hereinafter Been, *Analyzing Evidence*].

statutes.²⁰ Second, pleas for environmental justice call, for the most part, for one or more of the following reforms: a prohibition on (or presumption against) the siting of environmentally sensitive land uses in areas that are host to more than their "proportionate" share of such facilities; enhancement of the information and participation options available to residents of potential host communities; increased support for grassroots organizational efforts in affected communities to resist additional sitings; and more equal environmental enforcement efforts across diverse communities.²¹

A. *The Siting of Environmentally Sensitive Land Uses*

The Afton uprising spawned a nationwide concern that minority and poor communities were being disproportionately affected by the placement of environmentally sensitive land uses. This concern, in turn, led researchers to study that claim more methodically.²² Many of these early studies appeared to substantiate the claims of disproportionate impact, lending "substantial credibility"²³ to the environmental justice movement. For example, a 1987 study by the Commission for Racial Justice (CRJ) found a significant correlation between the number of commercial hazardous waste facilities in a community (defined by zip code) and the percentage of minorities in the population of the community.²⁴ Similarly, a study performed by the General Accounting Office in 1983 found that the majority of

20. See Robert R. Kuehn, *Remedying the Unequal Enforcement of Environmental Laws*, 9 ST. JOHN'S J. LEGAL COMMENT. 625, 627-28 (1994); Marianne Lavelle & Marcia Coyle, *Unequal Protection: The Racial Divide in Environmental Law*, NAT'L L.J., Sept. 21, 1992, at S2.

21. For example, Alabama law prohibits the siting of more than one commercial hazardous waste treatment or disposal site in any county, see ALA. CODE § 22-30-5.1 (1990), while New York City's Fair Share Criteria specify that for certain types of environmentally sensitive land uses "undue concentration . . . is to be avoided." See New York City Planning Comm'n, *Criteria for the Location of City Facilities* art. 5.1 (Dec. 3, 1990). In addition, several states have considered or adopted legislation requiring environmental justice impact statements, which would include a discussion of the demographics of potential host communities. See Been, *Environmental Justice*, *supra* note 10, § 25D.06[3] (summarizing existing and proposed legislation aimed at environmental inequity). Scholars and activists have advocated shifting attention from legal strategies to grassroots organizing, as well as requiring enhanced opportunities for participation by affected communities. See, e.g., Luke Cole, *Macho Law Brains, Public Citizens, and Grassroots Activists: Three Models of Environmental Advocacy*, 14 VA. ENVTL. L. J. 687 (1995) (favoring grassroots activism); Bradford C. Mank, *Environmental Justice and Discriminatory Siting: Risk-Based Representation and Equitable Compensation*, 56 OHIO ST. L. J. 329 (1995) (advocating more extensive public participation in siting decisions).

22. See CRJ REPORT, *supra* note 5, at 23; GAO STUDY, *supra* note 7.

23. Been, *Analyzing Evidence*, *supra* note 19, at 2.

24. CRJ REPORT, *supra* note 5, at 13-14.

residents in the communities containing three of the four hazardous waste landfills in the EPA's Region IV were African-American.²⁵ Other studies appeared to confirm these findings.²⁶

However, recent scholarship has raised serious doubts about the validity of these early studies.²⁷ Moreover, the results of recent empirical work indicate that the evidence supporting claims of disproportionate impact is much weaker than the first wave of research suggested.²⁸ This new wave of more methodologically rigorous statistical analyses demonstrates that demographic data besides race, such as educational attainment, income level, and political participation, may be more significant predictors of the placement of environmentally sensitive land uses than is race.²⁹

In 1994 Professor Been attempted to close the analytic gap created by evaluating data from different time periods by re-creating two of the seminal empirical analyses using demographic data collected at approximately the time of the facility siting.³⁰ Her results provide some support for two distinct theories of the placement of environmentally sensitive land uses: that they are sited in neighborhoods that are disproportionately minority and that minority populations in host communities increase after sitings.³¹ Most importantly, her inquiry demonstrates that much more empirical work remains to be done.³²

That same year, researchers at the Social and Demographic Re-

25. GAO STUDY, *supra* note 7, at 1, 4. EPA's Region IV is comprised of Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee. The population of all four host census areas was quite small: the average population in 1980 was 752 and the total population was 3007. *Id.*

26. See Bullard, *Solid Waste Sites*, *supra* note 1, at 285-86; see also Paul Mohai & Bunyan Bryant, *Environmental Racism: Reviewing the Evidence*, in RACE AND THE INCIDENCE OF ENVIRONMENTAL HAZARDS: A TIME FOR DISCOURSE, *supra* note 6, at 166 (collecting and summarizing sixteen studies of the distribution of environmentally sensitive land uses).

27. See, e.g., Douglas L. Anderton et al., *Hazardous Waste Facilities: "Environmental Equity" Issues in Metropolitan Areas*, 18 EVALUATION REV. 123, 126-27 (1994); Vicki Been, *Locally Undesirable Land Uses In Minority Neighborhoods: Disproportionate Siting or Market Dynamics?*, 103 YALE L.J. 1383, 1384-87 (1994) [hereinafter Been, *Locally Undesirable Land Uses*]; Christopher Boerner & Thomas Lambert, *Environmental Injustice*, 118 PUB. INTEREST, Winter 1995, at 61, 65-68; Richard J. Lazarus, *Pursuing "Environmental Justice": The Distributional Effects of Environmental Protection*, 87 NW. U. L. REV. 787, 796 (1993).

28. See Been, *Locally Undesirable Land Uses*, *supra* note 27, at 1392-97.

29. See Been, *Analyzing Evidence*, *supra* note 19, at 5-6.

30. See Been, *Locally Undesirable Land Uses*, *supra* note 27, at 1398-1406.

31. See *id.* at 1404-06.

32. See *id.* at 1406.

search Institute (SADRI) at the University of Massachusetts published the results of an analysis demonstrating that variations in methodologies significantly affect the conclusions that can be drawn from the demographic data concerning host communities.³³ The SADRI study examined the social and demographic characteristics of communities hosting the same commercial hazardous waste facilities studied by the CRJ, using census tracts as the measure of community instead of zip code areas.³⁴ The conclusions reached in this analysis differ dramatically from those of the CRJ studies. In particular, these authors concluded that "for the 1990 data . . . there is no consistent, statistically significant national pattern of racial or ethnic discrimination in the location of commercial [hazardous waste facilities]."³⁵ The authors added that:

there is some statistical evidence . . . that the reason there are higher percentages of minorities near facilities in these regions is because minorities are more likely to be among those employed in industrial and precision manufacturing operations in those regions.³⁶

Professor Been subsequently published an evaluation and comparison of the SADRI and CRJ studies.³⁷ She first refined the data used in both the CRJ and the SADRI studies by cross-checking sources and comparing data bases to real facilities, and then subjected the demographic data to rigorous and extensive statistical analyses.³⁸ Ultimately, she concluded that the distribution of environmentally sensitive land uses "is not a simplistic PIBBY—'put it in Black's backyards.'"³⁹ Rather, it reflects "a much more ambiguous and complicated entanglement of class, race, educational attainment, occupational patterns, relationships between the metropolitan areas and rural or non-metropolitan cities, and possibly market dynamics."⁴⁰

Offering a new perspective on the issue, Professor James Hamilton's research suggests that the decision whether to expand a commercial hazardous waste facility correlates with the extent of po-

33. See Douglas A. Anderton et al., *Environmental Equity: Evaluating TSDF Siting Over the Past Two Decades*, WASTE AGE, July 1994, at 83, 92.

34. See *id.* at 84, 86.

35. *Id.* at 90.

36. *Id.*

37. See Been, *Analyzing Evidence*, *supra* note 19, at 2-4.

38. See *id.* at 8-21.

39. See *id.* at 21.

40. *Id.*

litical participation in a community (measured primarily by actual voter turnout figures), but not with the race of the community's residents.⁴¹

B. *The Enforcement of Environmental Protection Statutes*

Even if environmentally sensitive land uses were sited in a fair and unobjectionable manner, poor and minority communities would have a legitimate basis for complaint if the environmental standards that apply to such land uses were less strictly enforced in their communities, causing poor and minority citizens to be exposed to an unacceptable level of environmental risk. This concern also animates the environmental justice movement.⁴² Ultimately, however, the empirical support for claims of disparate enforcement practices is as inconclusive as it is for claims of discriminatory siting.⁴³

The results of the seminal study on the issue of disparate enforcement were published by the National Law Journal (NLJ) in 1992.⁴⁴ The authors of that study examined virtually all of the civil enforcement cases resolved by the Environmental Protection Agency between 1985 and 1991, and concluded that in several enforcement areas significant disparities were correlated with the race of the host community. In particular, the NLJ study determined that the average penalties imposed for violations of federal environmental protection

41. See James T. Hamilton, *Testing for Environmental Racism: Prejudice, Profits, Political Power?*, 14 J. POL'Y ANALYSIS & MGMT. 107, 118 (1995). Unfortunately, Hamilton used zip codes to define communities for his study. See *id.* at 115. Because zip codes are drawn for the convenience of the postal service, they are not uniform in size or population. See *id.* at 114 n.3. Thus, it is difficult to draw meaningful conclusions from a study that defines communities by reference to zip codes.

While Hamilton's is the first attempt to empirically analyze the role of political participation in the siting decision, many scholars have suggested that environmentally sensitive land uses are placed in poor and minority communities because the residents lack political power. See Robert D. Bullard, *Anatomy of Environmental Racism and the Environmental Justice Movement*, in CONFRONTING ENVIRONMENTAL RACISM: VOICES FROM THE GRASSROOTS 15, 18 (Robert D. Bullard ed., 1993) ("Where then will incinerators or other polluting facilities be sited? [According to one industry report], the answer is low-income, disempowered neighborhoods with a high concentration of nonvoters. The ideal site, according [to] their report, has nothing to do with environmental soundness but everything to do with lack of social power.").

Of course, to note that a community is characterized by low voter turnout is not the same as articulating a theory of disempowerment. See *infra* text accompanying notes 184-217 for more discussion of the possibility that the current distribution of environmentally sensitive land uses is attributable to political disempowerment.

42. See, e.g., Lazarus, *supra* note 27, at 818-19.

43. For summaries of the major enforcement studies, see Been, *Environmental Justice*, *supra* note 10, § 25D.02[3]; Kuehn, *supra* note 20, at 627-38.

44. See Lavelle & Coyle, *supra* note 20, at S1-S12.

laws governing air, water, and hazardous waste pollution were 46% higher in white communities than in minority communities;⁴⁵ that penalties imposed under the Resource Conservation and Recovery Act for violations at sites located in communities having the largest percentage of non-minority residents were, on average, 500% higher than penalties at sites with the greatest percentage of minority residents;⁴⁶ that abandoned hazardous waste sites in minority communities take approximately 20% longer than sites in non-minority areas to be placed on the National Priorities List (NPL) for cleanup under the Superfund program;⁴⁷ and that preferred, permanent, and complete treatment methods were more likely to be selected at NPL sites in white communities, while the less permanent (and statutorily disfavored) option of containment was more often selected at minority sites.⁴⁸

As with the early empirical studies purporting to demonstrate race-based disparate impact from siting practices, the NLJ study has become the target of serious criticism based on methodological shortcomings.⁴⁹ Moreover, several subsequent empirical analyses call into question the conclusions of the NLJ study.⁵⁰ For example, Shreekant Gupta, George Van Houtven, and Maureen Cropper studied 110 NPL sites involving contaminated soil to determine whether EPA cleanup decisions were correlated with the race and/or income of host communities.⁵¹ After controlling for factors that might influence enforcement decisions (such as whether the site is in a rural or urban area,⁵² and the initial level of toxicity at a site), the authors found that neither the cleanup goal nor the choice of treatment options was correlated with the racial demographics of the host

45. See *id.* at S2.

46. See *id.* at S2, S4.

47. See *id.* at S2, S6.

48. See *id.*

49. See, e.g., THOMAS LAMBERT ET AL., A CRITIQUE OF ENVIRONMENTAL JUSTICE 4-7 (January 1996) (Vol. 8, No. 1) (White Paper for the National Legal Ctr. Policy Inst.); Mary Bryant, *Unequal Justice? Lies, Damn Lies, and Statistics Revisited*, SONREEL NEWS, Sept.-Oct. 1993, at 3.

50. See, e.g., John A. Hird, *Environmental Policy and Equity: The Case of Superfund*, 12 J. POL'Y ANALYSIS & MGMT. 323, 337 (1993) (finding that the pace of cleanup at NPL sites was unrelated to the racial and economic demographics of the host county).

51. Shreekant Gupta et al., *Do Benefits and Costs Matter in Environmental Regulation? An Analysis of EPA Decisions under Superfund*, in ANALYZING SUPERFUND: ECONOMICS, SCIENCE, & LAW 83, 88 (Richard L. Revesz & Richard B. Stewart eds., 1995).

52. This factor is a rough proxy for density of population, and, hence, exposure. See *id.* at 90.

community.⁵³ Even in those studies that identify some race or income-based disparities in enforcement of environmental protection statutes, the conclusions are much more tempered than those offered by the NLJ.⁵⁴ Thus, as with the complaint of inequitable siting practices, the case for disparate enforcement of environmental laws remains unproven.

C. Policy Initiatives and Proposed Reforms

Legal scholars responded to the early empirical analyses in force. In 1991, the *Kansas Journal of Law and Public Policy* hosted the first symposium on environmental justice and its inaugural issue was devoted to the publication of papers arising out of that symposium.⁵⁵ By late 1994, the number of law review articles and notes on the topic exceeded seventy,⁵⁶ and as of early 1995 seven law reviews had dedicated an entire symposium to the issue of environmental racism.⁵⁷ The field had become so saturated that in 1995 Professor Kenneth Manaster was able to publish an anthology of readings and commentaries on environmental justice.⁵⁸

Because so many articles on environmental racism were written at essentially the same time, there are many similarities among them. As an initial matter, most legal academics in this field base their as-

53. See *id.* at 105-06.

54. See CLEAN SITES, HAZARDOUS WASTE SITES AND THE RURAL POOR: A PRELIMINARY ASSESSMENT 48-51 (1990) (concluding that potential Superfund sites in rural poor communities were placed on the NPL at just half the rate of other potential sites, but that, once a site in such a community was placed on the NPL its cleanup progressed as quickly or more quickly than the cleanup at all sites); Rae Zimmerman, *Social Equity and Environmental Risk*, 13 RISK ANALYSIS 649, 660-63 (1993) (finding that the higher the percentage of African-American residents in communities hosting NPL sites, the less likely these sites would progress to the final pre-cleanup stage, but noting that progress appeared to be correlated primarily with time on the NPL, which was itself correlated with race).

A recent study of solid waste facilities in Virginia is exception to the prevalence of mixed results. That study revealed that facilities in communities in which more than half the population was African-American were inspected less frequently than other facilities and when violations of applicable environmental protection laws were found, the median length of compliance was longer in these communities. See JOINT LEGIS. AUDIT & REV. COMM'N, VA. GENERAL ASSEMBLY, SOLID WASTE FACILITY MANAGEMENT IN VIRGINIA: IMPACT ON MINORITY COMMUNITIES 76-80 (1995).

55. Symposium, *Environmental Equity in the 1990s: Pollution, Poverty, and Political Empowerment*, 1 KAN. J.L. & PUB. POL'Y 1 (1991).

56. For a review of the environmental racism literature, see Robert W. Collin, *Review of the Legal Literature on Environmental Racism, Environmental Equity, and Environmental Justice*, 9 J. ENVTL. L. & LITIG. 121 (1994).

57. See *id.* at 123 nn.4-7 (describing five published and two forthcoming symposia).

58. 1995 ENVIRONMENTAL PROTECTION AND JUSTICE (Kenneth A. Manaster ed.).

sertions of disproportionate impact on the conclusions drawn in early empirical studies that are now being questioned.⁵⁹ Moreover, while many environmental racism scholars challenge the equity of the existing distribution based on perceived process failures, none have advanced a coherent theory of these failures. For the most part, the literature simply refers to our country's history of disenfranchisement of minorities⁶⁰ and the continuing effects of discrimination in employment and housing markets.⁶¹

Reform proposals emerging from this first wave of legal scholarship take several forms. Most, however, are premised on the assumption that these process failures distort the measure of land use preferences of poor and minority communities. These proposals generally assume that if residents of minority and poor communities were not excluded from relevant decision-making processes they would not choose to host environmentally sensitive land uses, or if members of these communities did not face mobility constraints resulting from discriminatory housing and employment markets, they would avoid living in communities hosting such land uses. As a consequence, many reform proposals and initiatives are designed to enhance opportunities for residents to participate in siting decisions.⁶² The methods suggested for enhancing participatory options include: requiring siting authorities to provide more "user-friendly" information to potential host communities;⁶³ empowering residents of potential host communities to take advantage of existing opportunities to participate in environmental decision-making;⁶⁴ increasing opportunities for minorities to participate in environmental decision-

59. See *supra* notes 22-41 and accompanying text (discussing the various empirical studies).

60. See, e.g., Clarice E. Gaylord & Geraldine W. Twitty, *Protecting Endangered Communities*, 21 FORDHAM URB. L.J. 771, 771 (1994) ("Historically, [people of color and low-income communities] often lacked the essential resources necessary to oppose sitings of potentially hazardous facilities: money, organization, and political voice.").

61. See Ben, *Locally Undesirable Land Uses*, *supra* note 27, at 1388-90 (1994); Rachel D. Godsil, Note, *Remedying Environmental Racism*, 90 MICH. L. REV. 394, 398-99 (1991).

62. See Cole, *Empowerment*, *supra* note 11, at 661-67; Deeohn Ferris, *Communities of Color and Hazardous Waste Cleanup: Expanding Public Participation in the Federal Superfund Program*, 21 FORDHAM URB. L.J. 671, 674-77 (1994); Sheila Foster, *Race(ial) Matters: The Quest for Environmental Justice*, 20 ECOLOGY L.Q. 721, 751 (1993).

63. See Cole, *Empowerment*, *supra* note 11, at 675-77.

64. See Luke W. Cole, *Remedies for Environmental Racism: A View from the Field*, 90 MICH. L. REV. 1991, 1996-97 (1992) [hereinafter Cole, *Remedies for Environmental Racism*].

making;⁶⁵ and requiring authorities to negotiate a compensation package with host communities to offset the burdens of the facility.⁶⁶ However, because they are premised on the assumption that poor and minority communities would not rationally choose to host environmentally sensitive land uses, most process-based proposals appear ultimately to be intended to result in increased opposition to proposed sitings in minority communities.⁶⁷ Other proposed reforms bypass the procedural remedy, attempting simply to replicate what is perceived to be the "accurate" measure of the communities' preferences by prohibiting the siting of additional environmentally sensitive land uses in poor and minority communities.⁶⁸

The Clinton Administration accepted many of the environmental justice recommendations in early 1994, when President Clinton signed Executive Order 12,898 regarding "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations."⁶⁹ The Order requires every federal agency to make the achievement of 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."⁷⁰ More specifically, the Order requires agen-

65. See Lazarus, *supra* note 27, at 850-52.

66. See Vicki Been, *Compensated Siting Proposals: Is It Time to Pay Attention?*, 21 FORDHAM URB. L.J. 787, 788-92 (1994) (suggesting that compensated siting may be a sound policy option).

67. See Cole, *Empowerment*, *supra* note 11 *passim* (urging legal services attorneys to empower poor and minority communities to participate in the political decision-making process concerning environmentally sensitive land uses in order to stop the siting of such facilities in their communities and force industry to move from pollution control to pollution prevention); Foster, *supra* note 62, at 747 ("The grassroots activism that has dominated community-based efforts to seek environmental justice has been primarily outcome-focused. Activists seek to change the outcome of decisions made about the distribution of an environmental hazard through protests and other confrontational strategies.").

68. There are notable exceptions to the focus on opposition. Professor Dan Tarlock cogently argues that the environmental equity movement's focus on expanded civil rights based legal remedies and ardent adoption of the "Not in My Backyard" (NIMBY) approach to political activism is short-sighted and doomed to failure. See A. Dan Tarlock, *City Versus Countryside: Environmental Equity in Context*, 21 FORDHAM URB. L.J. 461, 465 (1994). Professor Tarlock urges environmental equity advocates to embrace a theory of sustainable development in order to protect environmental quality and still achieve the economic development that poor and minority communities—in particular, cities—urgently need.

69. Exec. Order No. 12,898, 3 C.F.R. 859 (1994), *reprinted in* 42 U.S.C.A. § 4321 (West 1994).

70. *Id.* § 1-101.

cies to conduct programs in a nondiscriminatory fashion,⁷¹ to include diverse segments of the population in health and environmental research, and to collect extensive data on environmental justice issues.⁷² Finally, the Order enhances the opportunities for public participation in environmental decision-making, particularly by minorities and the poor.⁷³ While Congress has considered many bills seeking to promote environmental justice since 1990, to date no federal legislative reforms have been enacted.⁷⁴

Environmental equity advocates have enjoyed somewhat greater success at the state and local level.⁷⁵ A few states and municipalities have adopted legislative reforms mirroring some of the academic proposals.⁷⁶ Alabama law, for example, prohibits the siting of more than one commercial hazardous waste treatment or disposal site per county.⁷⁷ The Fair Share Criteria adopted by the New York City Planning Commission specifies that "undue concentration of facilities providing similar services or serving a similar population is to be avoided."⁷⁸ And in North Carolina, counties and cities approving sites for solid waste landfills must "consider alternative sites and socioeconomic and demographic data . . . prior to selecting or approving a site for a new . . . landfill . . . that is located within one mile of an existing . . . landfill."⁷⁹

Many more states have considered such reforms. Bills introduced in several states would have required the preparation of

71. See *id.* § 2-2. This portion of the Order tracks the language of Title VI of the Civil Rights Act of 1964, which provides that "[n]o person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." 42 U.S.C. § 2000d (1994).

72. See 3 C.F.R. § 3-3.

73. The Order requires, among other things, that minorities and low-income citizens be permitted to become involved in the agencies' development of environmental justice strategies, and that agencies translate crucial documents involved in environmental decision-making for limited English speaking populations that might be affected by the decisions. See 3 C.F.R. § 5-5.

74. For a summary of the environmental equity bills considered in Congress, see Been, *Environmental Justice*, *supra* note 10, § 25D.06[2], 25D-125.

75. Professor Been has collected and evaluated state and federal legislative proposals and legislation. See Been, *Environmental Justice*, *supra* note 10, § 25D.06, 25D-121.

76. For a summary of state initiatives and proposals, see *id.* § 25D.06[3], 25D-130.

77. See *id.* § 25D.06[3][a][i] (citing ALA. CODE § 22-30-5.1(c)(1987)).

78. New York City Planning Comm'n, Criteria for the Location of City Facilities art. 5.1 (Dec. 3, 1990).

79. N.C. GEN. STAT. § 160A-325(a) (1994); see also N.C. GEN. STAT. § 153A-136(c) (1991) (requiring board of commissioners to consider alternative sites and to hold public hearing prior to approving a site for a new sanitary landfill).

environmental justice impact statements containing demographic information about proposed host communities.⁸⁰ Other proposed legislation sought to facilitate participation of economically disadvantaged communities in siting decisions.⁸¹ Such reform initiatives are likely to continue to be introduced in state legislatures.⁸²

In light of the weaknesses shared by the early empirical studies, and the more tempered conclusions of the more recent analyses, it seems prudent to reconsider the issue of environmental racism in general, and the advisability of proposed and adopted reforms in particular. That more recent empirical evidence indicating that class influences (such as job status and income level) are more significant in the distribution of environmentally sensitive land uses than are racial factors should not be surprising. The market allocates according to ability to pay: the more money one has, the more of any particular good—including a clean environment—one can afford to purchase. Moreover, people tend to live near their jobs, those that depend on public transportation even more so than others. Thus, people employed in environmentally sensitive industries will be more likely to live in or near a community that hosts such industries. Finally, the political process responds to people who have the time, money, education, and inclination to participate. The more one has of any or all of these, the more likely one is to have an effective voice in policy-making or enforcement decisions. Accordingly, we should ask ourselves the very difficult question whether the current distribution of environmentally sensitive land uses represents simply the revealed preferences of a society characterized by substantial and growing disparities in income and opportunities. As part of this new focus, we must be mindful that, in our society, class and race continue to interact in many disturbing ways.⁸³ Thus, while the cries of envi-

80. See, e.g., A.B. 2212, 1993-94 Reg. Sess. (Cal. 1993); H.R. 2349 § 1, 1993-94 Reg. Sess. (Minn. 1994).

81. S.B. 5742, 215th Gen. Ass., 1st Reg. Sess. (N.Y. 1993).

82. See Been, *Environmental Justice*, *supra* note 10, § 25D-130 ("More than a dozen states either have passed legislation relating to the distribution of noxious facilities or have such legislation pending. More are likely to consider such legislation soon, because members of the National Black Caucus of State Legislators are seeking to introduce environmental justice legislation in all fifty states during the 1995-96 legislative sessions.").

83. According to Census Bureau figures, the portion of all persons in the United States living below the poverty level hovered around 14% of the population between 1970 and 1992. See U.S. BUREAU OF THE CENSUS, STATISTICAL ABSTRACT OF THE U.S.: 1994, at 475 (1994). During that time, approximately 33% of African Americans and 26% of Hispanics lived below the poverty level, while only 11% of the white population did. See *id.* The median income for white families in 1992 was \$38,909; for African-American families it was \$21,161; and for Hispanic families it was \$23,901. See *id.* at 471.

ronmental "racism" may be exaggerated, the plaint of inequity may not be. It may just be misdirected.

III. PRIVATE PREFERENCES, COLLECTIVE JUDGMENTS, AND CHOICE

Our society relies on markets and the political process to allocate and distribute a vast array of society's goods and services, including many that are essential to health, welfare, and prosperity, and many that are risky or hazardous. In general, the market measures individual (or private) preferences through the very rough proxy of market choices and translates those preferences (choices) into allocative and distributive decisions.⁸⁴ The political process responds to the community's preferences, or, if you will, its collective judgments. Measures designed to interfere with the preferences revealed through these institutions generally demand substantial justification.

A. *Markets, Politics, and Preferences*

Most of society's scarce resources are allocated through some price-based mechanism, the vast majority of them in the marketplace. Traditional market-based allocation mechanisms are not reserved for those goods and services that are non-essential or luxuries. Food, housing, and access to medical care, perhaps three of the most fundamental components of health and welfare, are allocated and distributed primarily through market mechanisms.

A pure market mechanism for translating private preferences into allocative and distributive decisions functions deceptively simply. According to neoclassical economic theory, people are endowed with a relatively stable set of preferences concerning fundamental aspects of life, such as health, prestige, education, and personal satisfaction, as well as the capacity and inclination to act rationally in an effort to maximize their welfare with respect to these preferences.⁸⁵ Individuals and other economic actors, such as firms and families, then pursue this welfare-maximizing goal using such inputs as market

84. Allocative choices refer to determinations of how much of a particular good or service society will produce. The phrase distributive choices, on the other hand, refers to determinations of who has access to the goods and services produced. These are the two types of societal choices that Professors Calabresi and Bobbitt refer to as first order and second order decisions, respectively, in their influential book *Tragic Choices*. See GUIDO CALABRESI & PHILIP BOBBITT, *TRAGIC CHOICES* 19 (1978).

85. See Gary Becker, *The Economic Approach to Human Behavior*, in *RATIONAL CHOICE* 108, 110 (Jon Elster ed., 1986).

goods and services, time, and their own labor.⁸⁶ Markets coordinate the various actions of these economic entities: Prices and other market structures allocate the scarce resources in society to produce a certain combination of goods and services. Then the market distributes these goods and services consistent with the welfare-maximizing goals of the actors.⁸⁷

Allocative and distributive decisions typically occur in the context of conventional market transactions: “[O]ne person sells a commodity to another who is willing to pay for it.”⁸⁸ However, price-based allocative and distributive choices “are not restricted to material goods and wants, nor even to the market sector.”⁸⁹ The nonmarket sector employs “shadow” prices, in the form of foregone opportunities, to replicate the allocative and distributive functions of traditional markets. As Professor Lane explains:

Every good that is chosen has an *opportunity cost* measured by the values of the goods not chosen. . . . Thus, the pricing of goods in the market and the exchange orientation involved in market transactions are merely extensions of nonmarket acts, extensions to situations where the pricing and the exchanging are made more conscious.⁹⁰

Because its quantity is fixed, time is among the scarcest resources held by most people. Accordingly, many shadow prices are measured in terms of the time that each endeavor makes unavailable for other pursuits. For example, when a parent chooses to miss the evening news in order to read to her child, the parent expresses a determination that she values the time with her daughter more than time spent watching the news.⁹¹ Similarly, a citizen who chooses to spend time with his children rather than attend a rally protesting the siting of an environmentally sensitive land use expresses his preference for the former activity over the latter.

Of course, the fact that most goods and services are allocated through the market does not indicate that this institution is ideal or without fault. Indeed, many challenge the use of the words “choice”

86. *See id.*

87. *See id.*

88. Cass R. Sunstein, *Disrupting Voluntary Transactions*, in *MARKETS & JUSTICE: NOMOS XXXI* 279, 279 (John W. Chapman & J. Roland Pennock eds., 1989). Of course, “[t]he conventional market transaction takes many forms. . . . [T]he commodity may be a job, a part of the body, an artistic work, or an opportunity to advertise on television.” *Id.*

89. Becker, *supra* note 85, at 111.

90. Robert E. Lane, *Market Choice and Human Choice*, in *MARKETS & JUSTICE: NOMOS XXXI*, *supra* note 88, at 226, 240-241.

91. *See id.*

and "preference" to describe the motivations underlying market transactions entered into by segments of society that face significant constraints on their range of market options.⁹²

The challenges take two related forms. First, "choices" in the pure market context are measured by willingness to pay for a good or service, and willingness to pay is a function of ability to pay. Thus, market choices are defined and confined by the existing distribution of wealth.⁹³ In a society such as ours, marked by dramatic inequalities in wealth, it would be naive to consider these constrained market choices as autonomous or exogenous to those wealth constraints.⁹⁴ Second, the measure of willingness to pay is dependent on the initial allocation of legal entitlement.⁹⁵ In determining the market value of a clean environment, for example, we could ask residents of a potential host community how much they would pay to avoid the siting of an environmentally sensitive land use (which assumes that the developer is entitled to site the facility in the community and must be paid to refrain), or we could ask the developer how much she would pay to induce the citizens to permit the siting (which inversely assumes that the citizens have a right to be free from residential proximity to such

92. Robert Hale's early piece on the coercive aspects of private bargaining provides one of the first systemic challenges to the vision that *laissez faire* economics is a system premised on and promoting economic liberty. See Robert L. Hale, *Bargaining, Duress, and Economic Liberty*, 43 COLUM. L. REV. 603 *passim* (1943). Hale's insight has not lost its currency. See, e.g., THOMAS O. MCGARITY & SIDNEY A. SHAPIRO, WORKERS AT RISK: THE FAILED PROMISE OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION 271-72 (1993) (challenging the assumption that low-paid workers in hazardous industries make "free and unconstrained risk decisions" and suggesting that they "may be acting more out of desperation than of choice"); Cass R. Sunstein, *Preferences and Politics*, 20 PHIL. & PUB. AFF. 3, 19-24 (arguing that poverty is perhaps the most severe obstacle to the development of preferences and beliefs) [hereinafter Sunstein, *Preferences and Politics*].

93. Of course, preferences (and, hence, choices) are influenced by much more than just the initial allocation of wealth. "[P]references are shifting and endogenous rather than exogenous, and as a result are a function of current information, consumption patterns, legal rules, and general social pressures." Sunstein, *Preferences and Politics*, *supra* note 92, at 10. See generally JON ELSTER, SOUR GRAPES: STUDIES IN THE SUBVERSION OF RATIONALITY 143-48 (1983) (arguing that social classes make different kinds of errors about social causality because they occupy different positions in the economic structure).

94. As Professors Calabresi and Bobbitt explained: "The willingness of a poor man, confronting a tragic situation, to choose money instead of the tragically scarce resources always represents an unquiet indictment of society's distribution of wealth." CALABRESI & BOBBITT, *supra* note 84, at 33. Market choices are also influenced by a host of social clues and constructs. For more on the problem of endogenous preferences, see *infra* text accompanying notes 261-65.

95. These two points are related because most legal entitlements, ultimately, can be reduced to a form of wealth.

a facility and must be paid to accept the siting).⁹⁶

Largely as a result of these damning criticisms of our reliance on the market to measure preferences concerning the allocation and distribution of important resources, our society has adopted substantial constraints on the harsh consequences of the market system. Governmental policies regarding taxes, subsidies, transfer payments, regulations, and prohibitions either directly or indirectly affect the allocation and distribution of many market goods. These policies are adopted through the political process, primarily on the basis of majority rule (or by representatives elected by a majority of the voters), and the minority is generally bound by the preferences of the majority or its representatives.⁹⁷

The machinations of the political process are not as simple, even in theory, as the operation of the market. Indeed, two competing conceptions of the political process have reemerged within the past decade. Public choice theory views the political process much like the market, and assumes that "government is merely a mechanism for combining private preferences into a social decision."⁹⁸ As with market theory, the heart of the economic model of political activity is the assumption that participants are motivated by self-interest.⁹⁹ In a representative democracy the principal policymaker is the legislator. Accordingly, public choice theory posits that the self-interest of legislators will ultimately determine legislative choices. Assuming that legislators are primarily interested in re-election, they will advance policies that further that end, although public choice theorists have different views on how legislators accomplish this. Some public choice scholars contend that legislators attempt to maximize their appeal to their constituents, who vote according to their own self-interest. Others recognize the power of interest groups—and lobbying, financial support, and publicity—in the political process. These

96. See MCGARITY & SHAPIRO, *supra* note 92, at 273-75; Ronald Dworkin, *Is Wealth A Value?*, in *A MATTER OF PRINCIPLE* 237, 237-54 (1985).

97. This is obviously a simplification. Many decisions made in the political arena are delegated to administrative agencies, or implemented by executive order. In addition, there are notable exceptions to the general use of majority rule. Nonetheless, it is probably accurate to say that most decisions affecting the siting of environmentally sensitive land uses are made by officials who are responsible, directly or indirectly, to a majority of the voters.

98. DANIEL A. FARBER & PHILIP P. FRICKEY, *LAW AND PUBLIC CHOICE* 44 (1991).

99. See *id.* at 22; Frank I. Michelman, *Political Markets and Community Self-Determination: Competing Judicial Models of Local Government Legitimacy*, 53 *IND. L.J.* 145, 148 (1977-78) (describing the public choice model, in which "[t]he legislature is conceived as a market-like arena").

public choice theorists view politics as dominated by a few small groups seeking to benefit themselves at the expense of others.¹⁰⁰

Civic republicanism, on the other hand, eschews the individualistic assumptions of the public choice model. Instead, republicans view legislatures as forums for public deliberation and civic virtue. Under this conception:

[P]olitical life is more than the use of government to further the ends of private life, as it is in liberalism. Rather, politics is a distinct and in some respects superior sphere. By participating in public life, citizens rise above their merely private concerns to join in a common enterprise. They put aside their own interests and enter a public-spirited dialogue about the common good. Once found, the public interest disciplines their private pursuits.¹⁰¹

Drawing conclusions about which model of the political process most accurately describes our current political environment is beyond the scope of this paper. For my purpose, however, it is important to note that under either conception of collective decision-making (that is, whether participants are seeking to advance their purely private self-interest or some view of the public good), the role of the political process is, ultimately, to translate private preferences into social choices.¹⁰² Accordingly, the impact on the formation of preferences caused by inequitable distributions of wealth and other entitlements will be evidenced in the political arena as well as in the marketplace,¹⁰³ and the judgments reached there may be no less suspect than those expressed by market choices. Moreover, the difficulty in meas-

100. Professor Cass Sunstein argues that our Constitution embodies a norm that rejects the understanding that the purpose of politics is to aggregate or to trade off private interests. See Cass R. Sunstein, *Naked Preferences and the Constitution*, 84 COLUM. L. REV. 1689, 1694-97 (1984). He admits, however, that if such a norm exists it is substantially under-enforced. See Cass R. Sunstein, *Legal Interference with Private Preferences*, 53 U. CHI. L. REV. 1129, 1134 (1986) [hereinafter Sunstein, *Legal Interference*].

101. FARBER & FRICKEY, *supra* note 98, at 44.

102. Of course, the private preference may be a "second order preference" to adopt a policy designed to affect, alter, or reject, existing preferences.

103. As with market choices, preferences expressed through the political system may be influenced by a host of factors in addition to the distribution of wealth, such as existing legal rules and perceptions and misperceptions about available options. As Professor Sunstein argues in his recent work on the First Amendment:

What people now prefer and believe may be a product of insufficient information, limited opportunities, legal constraints, or unjust background conditions. People may think as they do simply because they have not been provided with sufficient information and opportunities.

CASS R. SUNSTEIN, *DEMOCRACY AND THE PROBLEM OF FREE SPEECH* 19 (1993) (footnote omitted) [hereinafter SUNSTEIN, *DEMOCRACY*].

uring public preferences and translating those preferences into social policy should temper our enthusiasm for turning to social policy to correct market flaws.

Notwithstanding these acknowledged limitations of our mechanisms for measuring private preferences, American society, for the most part, treats such preferences as the basis for social choice.¹⁰⁴ This is true in large part because we are committed to the belief that individuals know what is in their best interest and can reflect that knowledge through market and political choice. Liberty-based objections to social interference with private preferences contend that autonomy is best served by self-sovereignty, and that the government ought not to be in the business of evaluating whether a person's choices best serve her interests. Utilitarians and law and economics scholars argue that revealed preferences provide the best measure of individual welfare (or utility), and that maximizing individual welfare (or utility) is the best way to maximize social welfare. In that context, it is argued that interfering with private preferences directly undermines the efficient allocation of resources. Other scholars emphasize the persistence of private preferences, and contend that, in general, legal interference with such preferences will be futile because the preferences will manifest themselves in other ways.¹⁰⁵

While circumstances exist, of course, in which the liberty, efficiency, and/or futility arguments give way to other goals, such circumstances are rare and demand substantial justification.¹⁰⁶ In a very limited set of circumstances, society has determined that particular decisions should be removed from the political process or the market system altogether.¹⁰⁷ More commonly, we may consign the allocation and distribution of particular resources to these spheres, while at the same time adjusting those processes, or the preferences

104. Cf. Sunstein, *Legal Interference*, *supra* note 100, at 1131-32 (discussing the autonomy and futility objections to interfering with private preferences).

105. See *id.* at 1132.

106. See *id.* at 1131-32.

107. See Margaret Jane Radin, *Market-Inalienability*, 100 HARV. L. REV. 1849, 1891 & n.153 (1987). It is difficult to remove allocative decisions from *both* the market and political spheres. Ultimately, society must make a choice about how much of any resource it wishes to produce, and few alternative mechanisms can accomplish this. While it is possible that some important distributive determinations will be made by alternative mechanisms (such as merit, queuing, lottery, or failure consciously to decide), these mechanisms themselves have shortcomings and rarely can satisfactorily replace the more accepted institutions of the market and political system. See CALABRESI & BOBBITT, *supra* note 84, at 41-50 (discussing the distribution of scarce resources by lottery or the customary approach); see also JON ELSTER, LOCAL JUSTICE 67-134 (1992) (discussing the various principles under which scarce resources and necessary burdens are distributed).

expressed through them, when demonstrated process failures undermine our confidence in the accuracy of the preferences they reveal. Additionally, society may reject even accurately measured private preferences. This generally occurs when society concludes that certain preferences are illegitimate or unacceptably harmful to self or others. More recently, however, it has been suggested that society should feel increasingly free to interfere with accurately measured private preferences in circumstances where those preferences do not represent truly autonomous choices.¹⁰⁸ The task facing the environmental justice movement is to demonstrate that decisions resulting in the current distribution of environmentally sensitive land uses implicate one or more of the generally accepted justifications for rejecting choices expressed in the market or political arena.

B. Private Preferences, Collective Judgments, and Environmentally Sensitive Land Uses

Before we undertake that task, however, it seems that we should at least explore the possibility that these processes have functioned well, and that the distribution of environmentally sensitive land uses reflects the accurately measured, unobjectionable preferences of host and non-host communities.

1. Risk, Rewards, and Rational Preferences in the Siting of Environmentally Sensitive Land Uses

It is not difficult to construct a theoretical framework in which the choice to live in a community that hosts an environmentally sensitive land use is neither irrational nor otherwise objectionable. To do so, we must distinguish between: (1) the type and significance of the risks associated with different categories of environmentally sensitive land uses; (2) the type and significance of the benefits associated with these land uses; and (3) the groups of people among which the risks and benefits will be distributed.

Because the risks of challenged land uses are the focal point of environmental racism literature, I will begin there. The EPA categorizes the risks posed by environmental issues it regulates into four domains: human cancer risks, human non-cancer health risks, wel-

108. See, e.g., Sunstein, *Legal Interference*, *supra* note 100, at 1145-58. See generally Robin L. West, *Taking Preferences Seriously*, 64 TUL. L. REV. 659 (1990) (arguing for paternalistic judicial interference with private preferences based on a sympathetic understanding of private actors' true best interests).

fare risks, and ecological risks.¹⁰⁹ Humans face these same categories of risks in almost all of their activities, and making decisions concerning risky activities is something we all do in daily life. For example, smoking cigarettes presents a measurable risk of decreased life expectancy, and many of us choose not to smoke as a consequence of those health risks. Our risk-related decisions are often made without conscious deliberation. For instance, each automobile trip to the supermarket also presents a risk of injury or death, but most of us choose to run off to the store without giving much thought to that risk.

Individuals making lifestyle choices and government officials establishing policy undertake essentially the same analysis in evaluating risk. In our private lives, determining the seriousness of a risk involves an identification of the risky behavior or substance, an estimate of the probability that exposure to the substance or behavior will lead to harm, an estimate of our frequency or probability of exposure to the substance or behavior, and an assessment of the seriousness of the harm that will result if exposure in fact leads to harm. Official risk assessment mimics these inquiries. Under federal guidelines, risk can be expressed as a function of the probability of exposure to the harmful agent(s) associated with the facility, the probability of suffering an adverse impact if exposed, and the type and likely severity of the possible adverse impact, should it occur.¹¹⁰

Whether evaluated by a policy-making body or by individual residents of a proposed host community, the risk posed by a particular environmentally sensitive land use necessarily will fall along a

109. See U.S. ENVTL. PROTECTION AGENCY, UNFINISHED BUSINESS: A COMPARATIVE ASSESSMENT OF ENVIRONMENTAL PROBLEMS, OVERVIEW REPORT (1987) [hereinafter UNFINISHED BUSINESS]. For many environmentally sensitive land uses, the possible adverse impacts are not related to human health. The phrase "environmental impact" can encompass a broad range of effects on the human environment, such as aesthetic, cultural, historical, and socio-economic impacts, in addition to pure health impacts. This use of the phrase is consistent with most federal environmental statutes, such as the National Environmental Policy Act (NEPA), as well as with the broad range of uses challenged as locally undesirable by the literature and social activist groups. See NEPA, 42 U.S.C. § 4331(b) (1994) (evidencing a broad conception of the term "environment"); 40 C.F.R. § 1508.8(b) (1995) (interpreting the phrase "environmental impacts" in NEPA to include "ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health [impacts], whether direct, indirect, or cumulative").

110. See, e.g., Guidelines for Carcinogen Risk Assessment, 51 Fed. Reg. 33,992 (1986); Guidelines for Estimating Exposures, 51 Fed. Reg. 34,042 (1986); OFFICE OF EMERGENCY AND REMEDIAL RESPONSE, U.S. ENVTL. PROTECTION AGENCY, RISK ASSESSMENT GUIDANCE FOR SUPERFUND: VOLUME I HUMAN HEALTH EVALUATION MANUAL (PART A) INTERIM FINAL (EPA/540/1-89/002) (1989).

continuum: At one end will be those environmentally sensitive land uses that have a low probability of a relatively minor adverse effect,¹¹¹ at the other end will be those facilities that have a high probability of a catastrophic outcome. In between will be the entire range of facilities that have a measurable risk of some level of harm.¹¹²

In contrast to the possible harms associated with residential proximity to environmentally sensitive land uses, many such uses offer benefits to residents of the host community.¹¹³ Such benefits may include increased job opportunities, increased property tax revenues, sharing of user fees, infusion of money into the local economy through increased demand for services, the building and maintenance of infrastructure, and even the environmental benefits of shifting from older to newer technology for industrial production or waste disposal. Therefore, challenged land uses should be divided between those that provide some benefit to the host community and those that provide little or no such benefit.

By distinguishing among types of environmentally sensitive land uses according to risk of harm and benefits offered, a useful inquiry into the impact of challenged land uses would arrange all possible uses along a four-squared matrix: Those that pose little health risk and offer some or significant benefits, those that pose little health risk and offer little or no benefits, those that are potentially hazardous but offer some or significant benefits and those that are potentially hazardous and offer little or no benefits. A rational indi-

111. The probability of the adverse impact occurring is determined by multiplying the probability of exposure by the probability of harm if exposed, as long as the probabilities are independent. In most cases involving environmentally sensitive land uses, it seems unlikely that these two probabilities would be correlated.

112. Interestingly, the demonstrated adverse health effects attributable to proximity to hazardous waste treatment, storage and disposal facilities rank very low in comparison to other health risks, most of which—like smoking, poor diet, and lack of exercise—are at least in part attributable to voluntary lifestyle choices. See STEPHEN BREYER, *BREAKING THE VICIOUS CIRCLE: TOWARD EFFECTIVE RISK REGULATION* 6-7 (1993) (noting that pollution and industrial products may account for less than 3% of all cancer deaths in a year while cigarette smoking may be responsible for as many as 30%).

113. Most environmentally sensitive land uses confer benefits and burdens on a broader group of people than those living in the host communities. For instance, consumers benefit from the industrial production that generates hazardous wastes, and residents of a utility's service area build industries and entire communities using the electricity generated by coal-fired or nuclear power plants. On the other hand, many of the burdens of environmentally sensitive land uses are exported from the host community. For example, coal-fired power plants emit toxins that fall on other areas as acid rain, hazardous waste incinerators spew ashes which may themselves be hazardous waste, and groundwater migration from a landfill may contaminate a river that flows through many communities. See Peter Huber, *Electricity and the Environment: In Search of a Regulatory Authority*, 100 HARV. L. REV. 1002, 1032-35 (1987).

vidual's preference for the placement of an environmentally sensitive land use would certainly be influenced by where the proposed use falls in this matrix. Similarly, a well-functioning community considering whether to host an environmentally sensitive land use must evaluate the potential risks and benefits of the proposed facility according to the criteria outlined above. As Professor Bradford Mank suggests, "[e]nvironmental justice proponents are undoubtedly genuinely concerned about the risk of [environmentally sensitive land uses] . . . but local residents may be making the right choice in accepting relatively minor risks in exchange for concrete benefits."¹¹⁴

Assigning any given environmentally sensitive land use to a particular position in our matrix will be neither easy nor uncontroversial. As an initial matter, formal risk assessment theory is not without its critics. Risk assessment is controversial in part because it attempts to calculate expected losses in the face of substantial uncertainties:

To critics mindful of the risk-uncertainty distinction, even calling the enterprise "risk" assessment seems to be stretching the point; to them, it is one thing to calculate the expected value of a \$5 bet on red in roulette, but it is a far more contingent, uncertainty-ridden exercise to calculate the expected number of leukemia cases due to airborne traces of benzene or the environmental effects of an oil spill.¹¹⁵

In addition, even if one accepts the importance of risk assessment as a positive tool of policy making, much has been made recently of the deficiencies of comparative risk analysis as a normative undertaking. Professor Donald Hornstein persuasively argues that the EPA's attempt to elevate comparative risk analysis to a science and to establish it as the only rational determinant of environmental decision-making has seriously distorted the difficult normative dimensions of contemporary environmental disputes by undervaluing moral components of risk assessment.¹¹⁶

However, society ultimately must adopt some mechanism for comparing risks and making choices. To the extent that the science of risk assessment is imprecise and involves controversial normative

114. Bradford C. Mank, *Environmental Justice and Discriminatory Siting: Risk-Based Representation and Equitable Compensation*, 56 OHIO ST. L.J. 329, 401 (1995).

115. Donald T. Hornstein, *Reclaiming Environmental Law: A Normative Critique of Comparative Risk Analysis*, 92 COLUM. L. REV. 562, 572 (1992) (explaining the theoretical limitations of comparative risk analysis as a tool for establishing environmental protection policy.)

116. *See id.* at 584-633.

judgments, it can be argued that we should leave such choices to individuals as much as is possible. Certainly, individuals make risk comparisons on a daily basis. Indeed, the principal criticisms of comparative risk analysis involve its failure to accommodate the observed peculiarities of human responses to perceived risks.¹¹⁷ Accordingly, whatever criticisms are being leveled at current risk comparison techniques should not undermine our confidence in the accuracy of private preferences—revealed by individual market decisions—to trade the perceived risks of an environmentally sensitive land use for the perceived benefits.

At the same time, all communities must, and regularly do, make land-use decisions that involve trade-offs between risks and potential benefits, and to say that the task is difficult does not make it go away. Indeed, the primary purpose of the political process is to make collective normative judgments. If a community's process for comparing risks and benefits fails to capture all of the considerations believed to be relevant to its residents, a cogent argument can be made for a more inclusive process.¹¹⁸ That argument, however, does not condemn the comparative risk enterprise, nor does it suggest that the results of past risk assessments are systematically biased against any particular group.

2. Rational Preferences Revisited: Winners, Losers, and Race

Citizens of affluent states and communities regularly exchange tax concessions and other benefits to serve as the location of new facilities for major enterprises, expecting to recoup their concessions through increased employment and tax revenues. For example, Aus-

117. See *id.* at 592-615; see also Richard H. Pildes & Cass R. Sunstein, *Reinventing the Regulatory State*, 62 U. CHI. L. REV. 1, 46-64 (1995) (discussing common critiques of cost-benefit analysis and exploring the divergence between expert and lay assessments of risk).

118. Drawing on extensive social science research in the area of risk and psychology, Professors Pildes and Sunstein identify the following "salient contextual features" that lay people incorporate into their evaluations of risk:

- (1) the catastrophic nature of the risk;
- (2) whether the risk is uncontrollable;
- (3) whether the risk involves irretrievable or permanent losses;
- (4) the social conditions under which a particular risk is generated and managed, a point that connects to issues of consent, voluntariness and democratic control;
- (5) how equitably distributed the danger is or how concentrated on identifiable, innocent, or traditionally disadvantaged victims, which ties to both notions of community and moral ideals;
- (6) how well understood the risk process in question is, a point that bears on the psychological disturbance produced by different risks;
- (7) whether the risk would be faced by future generations; and
- (8) how familiar the risk is.

Pildes & Sunstein, *supra* note 117, at 57.

tin and other central Texas communities routinely offer tax incentives to high-tech industrial enterprises to entice them to locate production facilities in central Texas instead of Silicon Valley. In 1993, Round Rock, Texas attracted a major Dell Computer expansion by offering lucrative tax abatements, while Austin won a national competition for Samsung Electronics in 1996 by offering tax abatements under a new city policy.¹¹⁹ Samsung will build a \$1.3 billion memory chip plant in northeast Austin.¹²⁰ While the community members may debate among themselves whether such concessions are worth the benefits, outsiders rarely question whether the community ought to be permitted to make the exchange.¹²¹

For predominantly poor and/or minority communities, there may be no excess revenue to accommodate offers of tax breaks, or any other carrots to dangle before the desired industry. These communities can trade only what they have, and many have offered the willingness to accept risk. To be persuasive in their claims of inequity, environmental racism scholars must demonstrate why we should permit (and perhaps even encourage) the former exchange and prohibit the latter.

As noted above, risk assessment is an inexact enterprise, and much disagreement will surround official and individual evaluations of the benefits and burdens of any environmentally sensitive land use. In addition, even the most aspirational portrayals of civic decision-making do not claim universal satisfaction with the outcomes of the process. Indeed, virtually all political decisions result in winners and losers, or at least perceptions of winning and losing. In the case of environmentally sensitive land uses, the losers will be those that disagree with the decisionmaker's determination that the benefits of a

119. See Dylan Rivera & Kirk Ladendorf, *Williamson Cities Want Chip on Their Shoulder*, AUSTIN AMERICAN STATESMAN, Aug. 13, 1996, at A1.

120. See *id.*

121. Of course, society's willingness to accept such competition is not without logical limits. Such bargains may implicate a form of the collective action problem referred to as the prisoners' dilemma, in which the strategic pursuit of individual self-interest by each actor results in an outcome that is suboptimal for both. See Daniel A. Farber & Philip P. Frickey, *The Jurisprudence of Public Choice*, 65 TEX. L. REV. 873, 906-07 (1987). Particularly in the context of environmental protection, federal regulation is understood to play an important role in ensuring that such collective action problems do not result in suboptimally lax pollution control standards. See e.g., Richard B. Stewart, *Pyramids of Sacrifice? Problems of Federalism in Mandating State Implementation of National Environmental Policy*, 86 YALE L.J. 1196, 1212 (1977). For an interesting challenge to this conventional wisdom, see Richard L. Revesz, *Rehabilitating Interstate Competition: Rethinking the "Race-to-the-Bottom": Rationale for Federal Environmental Regulation*, 67 N.Y.U. L. REV. 1210 (1992).

proposed use outweigh the burdens. This disagreement may stem from a divergent perception of the risk posed by the proposed land use, such that the dissenting members of the community believe that the facility falls in a different box of the benefit/burden matrix, (i.e., where the burden outweighs the benefit).¹²² On the other hand, the disagreement may reflect a rejection of the matrix altogether if the dissenting members of the community are unwilling to weigh the particular type of risk posed by the challenged use against the kind of benefits (usually pecuniary) offered in return.¹²³

Moreover, risks and benefits are not distributed evenly among residents of host communities. As discussed above, some members of host communities may enjoy a net benefit from residential proximity to the environmentally sensitive land uses. However, in any community that hosts an environmentally sensitive land use, some residents will bear burdens that outweigh their individual benefits.

Advocates for environmental equity would have us believe that the winners and losers from the current distribution of environmentally sensitive land uses divide along race lines. This assertion is based simply on the composition of the host communities: If host communities are disproportionately made up of minorities, then minorities must be disproportionately burdened. Perhaps environmental equity advocates intend to claim that, within predominantly minority or poor communities, the poor and/or minority residents in general rationally would prefer *not* to exchange the risk associated with a challenged use for the potential benefits because they systematically disagree with the majority's assessment of the risks and benefits. Or, environmental equity advocates may be claiming that the minority and poor residents within host communities generally bear more of the risk and receive less of the benefit of challenged land uses.

To support this contention, environmental equity advocates must demonstrate that minority members of host communities are less likely to be among the group of residents benefited by the environmentally sensitive land uses and more likely to be among those made worse off. This proof would require them to disaggregate affected residents into relevant categories and assess the impact of the benefits and burdens of the challenged land uses within each cate-

122. For a summary of research regarding the manner in which lay risk assessments may differ systematically from expert risk assessments, see Pildes & Sunstein, *supra* note 117, at 55-64.

123. See BULLARD, *DUMPING IN DIXIE*, *supra* note 3, at 91 (rejecting compensatory siting schemes as an unacceptable form of job blackmail).

gory. For example, if introducing the challenged land use into the community causes a decrease in property values in the community, current homeowners will be adversely affected, while prospective homeowners will be made better off.¹²⁴ The effect on rental property will depend on the structure of the rental market in the community. If the siting of the challenged land use brings an influx of prospective tenants, rents are likely to increase and landlords will benefit at the expense of current and future tenants. On the other hand, if the decrease in property values causes current tenants to become homeowners and demand for rental residents does not increase as a result of the siting, then landlords may face decreasing rents.

Job status prior to the siting will also be relevant to an evaluation of the benefits and burdens brought by environmentally sensitive land uses. While the introduction of jobs into a community is good for the community in general,¹²⁵ a resident who already has a good job is likely to benefit less, and less directly, than one who gains needed employment with the new facility. One's status as a taxpayer and consumer of public services will also determine the extent to which the introduction of the challenged use is beneficial. If the challenged land use contributes to the tax base, taxpayers may benefit from decreased rates, and/or users of public services may benefit from increased or enhanced services. Conversely, some communities provide tax concessions to lure challenged uses, in which case taxpayers will be subsidizing benefits to others. Finally, one's health status in general, or degree of susceptibility to the environmental hazard presented by the challenged use in particular, will be relevant to a

124. Studies indicate that proximity to inactive hazardous waste sites has a negative effect on house values. See, e.g., Katherine A. Kiel, *Measuring the Impact of the Discovery and Cleaning of Identified Hazardous Waste Sites on House Values*, 71 LAND ECON. 428, 428-29 (1995). If property values fall as a result of the placement of an environmentally sensitive land use, poor homeowners are likely to be hardest hit, since their homes often are their primary asset. In addition, there may well be home-related losses that are not monetizable. For example, neighborhood character and cohesion may be destroyed by the introduction of an environmentally sensitive land use and the resulting flight of those who can afford to leave. The negative impact on home values, however, is likely to be a consequence of the inactive status of the waste site, since an inactive site is unlikely to offer any community benefits. Further study is needed to determine whether active environmentally sensitive land uses typically reduce the values of houses nearby.

125. New jobs add income to the community, stimulating business and adding to tax revenues. In addition, the introduction of a significant number of new jobs may impose upward pressure on local wage rates. See Christopher Boerner & Thomas Lambert, *Environmental Injustice*, 118 PUB. INTEREST, Winter 1995, at 61, 74-75 (discussing the NAACP's support for the construction of an incinerator and solid waste landfill in Brooksville, Mississippi, in part because the facility was expected to alter the area's low wage scale).

determination of whether one is benefited or burdened by the siting. The very young, the very old, and the infirm may bear a greater portion of the burden of the siting than the healthy residents of the host community.

To be sure, race and, more likely, income may be statistically correlated with the broader version of several of these categories, such as employment status, homeownership status, occupation, and even susceptibility to environmental risks.¹²⁶ However, this correlation does not easily translate onto the grid of affected citizens in a host community. For example, if the decision to site an environmentally sensitive land use in a community decreases property values, current homeowners are hurt and prospective home buyers are made better off. It is not self-evident which category is more likely to be disproportionately poor or minority (or more disproportionately poor or minority than other members of the host community). Similarly, if rents decline after the siting, then the rental population will benefit at the expense of landlords. Accordingly, in order to draw conclusions about the distribution of the burdens of environmentally sensitive land use, we must carefully assess the multifarious impacts and benefits of the facility and compare this assessment to the particularized demographic characteristics of the host community.

3. Rational Preferences and Environmentally Sensitive Land Uses in Context

Several examples of siting determinations, past and present, as well as post-siting community transformations offer support for the theory that communities and individuals might rationally determine that residential proximity to environmentally sensitive land uses is in their best interests.

a. Siting Decisions in the Past: Sumter County, Alabama

A facility often held up as the leading example of discriminatory siting or environmental racism is Chemical Waste Management Corporation's Emelle hazardous waste treatment, storage, and land disposal facility in Sumter County, Alabama. African-Americans account for 69% of the residents of Sumter County, and for 90% of

126. For a discussion of the possibility that vulnerable population groups sensitive to the health effects of exposure to environmental pollution are disproportionately comprised of minorities, see Samara R. Swanston, *Race, Gender, Age, and Disproportionate Impact: What Can We Do About the Failure to Protect the Most Vulnerable?*, 21 *FORDHAM URB. L.J.* 577, 588-601 (1994).

the residents who live in poverty.¹²⁷ Environmental racism scholars allege that the facility was “foisted on the Emelle community without their input”¹²⁸ because “[n]o blacks held public office or sat on governing bodies, including the state legislature, county commission, or industrial development board (an agency that promotes industrial operation in the county) from predominantly black Sumter County.”¹²⁹ Moreover, these scholars question the safety of the facility, citing a history of EPA and state enforcement actions which resulted in fines and suspension of shipments of wastes to the state.¹³⁰

However, the story of Sumter County and Chemical Waste Management is much more complex.¹³¹ Formerly a rich farming and cotton-producing region (its heritage from the plantation system of slavery), for decades before the Emelle plant was built in 1978, Sumter County struggled against the decline of its agricultural economic base. “[F]armers were forced off their land, and others chose to sell their land for non-farm uses.”¹³² Between 1940 and 1980, the population of Sumter County declined more than 40%.¹³³ Its remaining residents faced an extremely high incidence of poverty, alarming rates of illiteracy, and infant mortality rates that were among the highest in the state.¹³⁴ With no hope that the agricultural economy could be revitalized, the opportunity to host an industry that would bring jobs and tax revenues may well have looked attractive to Sumter County residents.

While environmental racism scholars would have us believe otherwise, it is unlikely that Sumter County was chosen as the location for the Emelle plant because its residents were poor and black. Prior to Chemical Waste Management’s decision to purchase the Emelle

127. See BULLARD, *DUMPING IN DIXIE*, *supra* note 3, at 69.

128. Robert B. Wiygul et al., *Environmental Justice in Rural Communities*, 96 W. VA. L. REV. 405, 411 n.16 (1993-94).

129. BULLARD, *DUMPING IN DIXIE*, *supra* note 3, at 70.

130. See *id.* at 72-73; see also Conner Bailey & Charles E. Faupel, *Environmentalism and Civil Rights in Sumter County, Alabama*, in RACE AND THE INCIDENCE OF ENVIRONMENTAL HAZARDS, A TIME FOR DISCOURSE, *supra* note 6, at 128, 140-46 (describing in detail the demographics and economy of Sumter County).

131. Professor Bradford Mank offers some of this detail in his recent article proposing risk-based representation and equitable compensation as solutions to the environmental racism debate. See Mank, *supra* note 114, at 398-400.

132. BULLARD, *DUMPING IN DIXIE*, *supra* note 3, at 69.

133. See *id.*

134. See *Environmental Justice: Hearings Before the Subcomm. on Civil and Constitutional Rights of the House Comm. on the Judiciary*, 103d Cong., 76-77 (1993) [hereinafter *House Hearings*] (statement of Charles J. McDermott, Director of Government Affairs, Waste Management, Inc.)

site, the Environmental Protection Agency had identified it as one of the ten most protective sites in the nation for disposal of hazardous waste.¹³⁵ The site's suitability was based on such factors as rural location and access to appropriate transportation systems.¹³⁶ More important, the geologic conditions of Sumter county make it ideally suitable to the land disposal of hazardous wastes. "[Sumter County is] located atop the 'Selma chalk formation,' several hundred square miles of dense, natural chalk 700 feet deep. The EPA concluded that this chalk formation provided an ideal barrier between any disposal activities and the nearest aquifer feeding a drinking water source"¹³⁷ Finally, the low precipitation rates in that region of Alabama would further decrease the possible risk of groundwater contamination.¹³⁸

Moreover, it is not at all clear that the presence of the Emelle facility has been burdensome to its host community. While it may be true, as Professor Bullard claims, that "[t]he Emelle hazardous-waste site has not brought about an economic renaissance to this poor blackbelt community,"¹³⁹ the benefits are tangible. The facility employs over 400 people, 60% of whom live in Sumter County, and has an annual payroll of \$10 million.¹⁴⁰ State law provides that a portion of the hazardous waste excise tax collected at the Emelle facility be committed to Sumter County, with a minimum annual guarantee of

135. *See id.*

136. "Sumter County is rural but not isolated, served by Interstate 59, an active railroad, and the recently opened Tennessee-Tombigbee Waterway." Bailey & Faupel, *supra* note 130, at 142.

137. *House Hearings, supra* note 134, at 76-77 (statement of Charles J. McDermott, Director of Government Affairs, Waste Management, Inc.).

138. *See id.*

139. BULLARD, *DUMPING IN DIXIE, supra* note 3, at 71.

140. *See* Bailey & Faupel, *supra* note 130, at 143 (citing the number of employees); *House Hearings, supra* note 134, at 77 (statement of Charles J. McDermott, Director of Government Affairs, Waste Management, Inc.) (citing population and payroll studies). It is not clear how many of these employees lived in Sumter County before the landfill was opened, and how many moved to the community to accept jobs. To the extent the employees arrived after the siting, their migration supports the theory that some people will choose to live near certain environmentally sensitive land uses to take advantage of benefits generated by the proximity of these facilities, such as jobs, increased tax revenues, and better public services. In addition, the introduction of four hundred jobs into a local economy stimulates that economy to the benefit of the community as a whole, not just those members who are employed by the new industry. Bailey and Faupel estimate that Chemical Waste Management's operations had an annual impact of \$25.4 million on Sumter County's economy between 1985 and 1989. Even Professor Bullard concedes that CWM is the largest employer in Sumter County. *See* BULLARD, *DUMPING IN DIXIE, supra* note 3, at 71; *see also* Bailey & Faupel, *supra* note 130, at 143 (outlining the economic impact of CWM on Sumter County).

\$4.2 million.¹⁴¹ Since the landfill was opened in 1977, this increased tax revenue has been used to build infrastructure, enhance educational opportunities for the children of the county, and improve the deliverance of health care services.¹⁴² These services have reversed the percentages of illiteracy and infant mortality.¹⁴³

In contrast to the measurable benefits discussed above, the concerns about increased health risks resulting from the facility are largely conjectural. Professor Bullard points out that Chemical Waste Management was fined by the Alabama Department of Environmental Management in 1983 for failing to complete a lining system, and by state and federal officials in 1984 "for poor management procedures, PCB problems, and [an] inadequate ground-water monitoring system at the site."¹⁴⁴ In addition, in 1985 the EPA temporarily suspended shipment of Superfund wastes to the site after tests revealed possible groundwater contamination. However, "[t]he ban later was lifted after further tests were made."¹⁴⁵ While all citizens should be concerned with any failure to comply with environmental protection standards and regulations, these particular instances of noncompliance by Chemical Waste Management's Emelle facility do not indicate that residents of Sumter County were being exposed to hazardous wastes. The fines cited by Bullard appear to involve inadequate procedures; none resulted from evidence of environmental contamination. Without more information, it appears that the waste receipt suspension was based on test results that could not be replicated, or that were proven false. Even if we assume that some leakage was associated with these instances of noncompliance, the only evidence suggesting that the hazardous waste reached the groundwater deposits 700 feet below the Selma chalk formation appears to have been vulnerable to the results of further tests. Recall that the EPA identified the Sumter County area as one of the ten counties most suited to the land disposal of hazardous wastes. It is precisely because accidents happen that hazardous waste treatment,

141. McDermott, *House Hearings, supra* note 134, at 77 (statement of Charles J. McDermott, Director of Government Affairs, Waste Management, Inc.).

142. *See id.*; BULLARD, *DUMPING IN DIXIE, supra* note 3, at 71.

143. *See House Hearings, supra* note 134, at 77 (statement of Charles J. McDermott, Director of Government Affairs, Waste Management, Inc.). The benefits brought by the landfill are not only pecuniary. CWM purchased 3200 acres upon which the landfill is located. *See Bailey & Faupel, supra* note 130, at 143. Of these, only 300 are actually devoted to landfill operations. The remainder serves as a buffer zone and is managed as a wildlife preserve. *See id.* at 143 n.2.

144. BULLARD, *DUMPING IN DIXIE, supra* note 3, at 72.

145. *Id.*

storage, and disposal facilities should be located in the safest possible areas.

The economic transformation of Sumter County, from a declining agricultural community to a more stable industrial one, indicates that land uses which may be considered undesirable by some communities may in fact provide benefits to the host communities which outweigh their burdens. These benefits may be particularly attractive to those without jobs, social services, or adequate educational opportunities for their children.

b. Contemporary Siting Decisions: The Mescalero Apaches

One could argue that the siting of the Chemical Waste Management plant in Emelle, Alabama can be explained in large part by the exclusion of Sumter County residents from the decision-making process that led to the placement of the facility. If so, the validity of the preferences measured by that political action would be suspect. In recent years, however, several environmentally sensitive land uses have been expressly invited or actively solicited by residents of poor and/or minority communities. The Mescalero Apaches of southern New Mexico are one such community.

In 1995, that community voted to permit storage of high-level radioactive wastes in their community in anticipation of a lucrative payoff in jobs, tax revenues, and exaction fees. High-level radioactive wastes contain the raw materials necessary for the manufacture of nuclear weapons. Nearly all of these wastes are generated by two enterprises—the production of electricity by nuclear power plants and the manufacture of nuclear weapons—and both of these activities are declining in frequency and intensity.¹⁴⁶ No new nuclear power plant has been ordered since 1979, the year of the accident at Three Mile Island.¹⁴⁷ In addition, since the end of the Cold War, domestic manufacture of nuclear weapons has virtually stopped.¹⁴⁸ Nonetheless, nuclear power plants generate approximately 1,900 tons of spent fuel each year, for which no interim storage facility designed for long-term disposal exists.¹⁴⁹ As a result, this highly radioactive material is stored in temporary on-site facilities at the reactor where it was

146. See MICHAEL B. GERRARD, *WHOSE BACKYARD, WHOSE RISK: FEAR AND FAIRNESS IN TOXIC AND NUCLEAR WASTE SITING* 25 (1994) [hereinafter GERRARD, *WHOSE BACKYARD*].

147. See *id.*

148. See *id.*

149. See *id.* at 30.

used.¹⁵⁰ Having abandoned the prospects of reprocessing the fuel in the 1970s, the United States now faces a high-level radioactive waste disposal crisis.¹⁵¹

Since 1982, the Department of Energy has been attempting to locate a suitable site for permanent deep geologic disposal of the country's high-level radioactive waste.¹⁵² Although Yucca Mountain, Nevada was identified as the future site of the disposal facility, the State of Nevada "then began a long campaign of litigation, raising many serious technical questions about the site and considerably delaying the project."¹⁵³ Accordingly, no permanent storage facility is expected to be available for disposal of high-level radioactive waste until 2010 at the earliest, and perhaps not until 2020.¹⁵⁴

Until the permanent facility opens, operators of the nation's nuclear power plants are seeking a more stable facility for the temporary storage of their spent fuel rods. The United States initially planned to fund and build a Monitored Retrievable Storage (MRS) facility to store spent fuel temporarily and prepare it for placement in the permanent disposal facility.¹⁵⁵ However, in the face of mounting controversy about any such facility, Congress withheld the money for federal involvement in the program in 1993. Since then, private utilities have sought volunteer communities to host a MRS facility funded and operated by the utilities.¹⁵⁶

On March 10, 1995, the Mescalero Apaches voted to permit their tribal leaders to enter into an agreement with approximately thirty utility companies to provide storage for the companies' high-level radioactive waste until the Yucca Mountain permanent disposal fa-

150. As of 1991, 9546 cubic meters of spent fuel was stored on-site at commercial reactors. *See id.* at 29-30.

151. The liquid residue from the manufacture of plutonium for warheads is now stored in 177 underground tanks at the Hanford Reservation in southern Washington state. "Several of the tanks are leaking, and sixteen times between 1987 and 1991 they released toxic gases." *Id.* at 27-28.

152. The Nuclear Waste Policy Act of 1982 required the Department of Energy (DOE) to recommend to the president three potential sites for future study. *See* 42 U.S.C. § 10132(b)(1)(B) (1994). The DOE recommended Yucca Mountain, Nevada; Deaf Smith County, Texas; and Hanford, Washington. Before the study could be completed, however, Congress directed the Department to locate the permanent storage facility at Yucca Mountain. *See* Omnibus Budget Reconciliation Act of 1987, 42 U.S.C. § 10172(a) (1994).

153. *See* GERRARD, WHOSE BACKYARD, *supra* note 146, at 30.

154. *See id.*

155. *See* Nuclear Waste Policy Act of 1982, 42 U.S.C. §§ 10161-69 (1982).

156. *See* GERRARD, WHOSE BACKYARD, *supra* note 146, at 31.

cility is opened.¹⁵⁷ The vote came one month after the tribe rejected its leaders' proposal to engage in such negotiations, and followed intense lobbying concerning the risks and benefits of the placement of a temporary storage facility on tribal lands.¹⁵⁸ Opponents (including New Mexico state leaders) fear radioactive contamination, and wonder what will happen to the site if the United States fails to open a permanent disposal facility.¹⁵⁹ Tribal leaders claim that "environmentalists and other outsiders had earlier misled the people into forgoing high-tech jobs and millions of dollars for schools and social services."¹⁶⁰ The Mescalero tribe expects to receive \$250 million in direct and indirect benefits to store the waste until the federal facility is completed.¹⁶¹

c. A Community Transformed: Richmond, California

Richmond, California, has a population of approximately 80,000 and lies just northeast of San Francisco. Richmond and its vicinity host a variety of industrial, petrochemical, and chemical manufacturing facilities. These facilities generate, transport, and store vast quantities of hazardous materials, and emit or discharge substantial amounts of pollutants regulated by the EPA and the California Air Quality Control Board.¹⁶² While Richmond is a racially diverse community, a majority of its residents are members of minority groups. According to 1980 census information, approximately 48% of Richmond residents were African-American and 40% were white.¹⁶³ Hispanics, who were not separately counted in the 1980 census, comprised approximately 10% of the population of Richmond.¹⁶⁴ Thus, according to the criteria used by most environmental racism scholars, Richmond provides another example of disproportionate impact from the siting of environmentally sensitive land uses.

157. See George Johnson, *Nuclear Waste Dump Gets Tribe's Approval in Re-vote*, N.Y. TIMES, March 11, 1995, at 6.

158. See *id.*

159. See *id.* Some opponents also allege that tribal leaders may have been bribed to engage in coercive efforts to change the results of the vote. See *id.* These allegations, if true, would eliminate any claim that the results of the vote represent the preferences of the Mescalero Nation.

160. *Id.*

161. See *id.*

162. See CITIZENS FOR A BETTER ENVIRONMENT, RICHMOND AT RISK: COMMUNITY DEMOGRAPHICS AND TOXIC HAZARDS FROM INDUSTRIAL POLLUTERS 45-84 (1989) [hereinafter RICHMOND AT RISK].

163. See *id.* at 25-26.

164. See *id.*

Richmond, however, was not a pristine minority community invaded by noxious industrial land uses. On the contrary, industry grew in Richmond and lured its residents with the promise of jobs. Indeed, one of the earliest industrial plants to locate in Richmond was Vulcan Powder Works, which located there in 1878 because it was suitably unpopulated.¹⁶⁵ Other explosives companies followed suit, moving to Richmond to produce dynamite and nitroglycerin for the Bay Area's numerous construction projects.¹⁶⁶

The decision by the Santa Fe Railroad to make Richmond the terminal point for its transcontinental line in 1900, combined with Richmond's large deep-water port, attracted many other major manufacturing facilities to the area in the early part of the century.¹⁶⁷ Standard Oil opened the second largest refinery in the world in Richmond in 1902, and Western Pipe and Steel Company arrived soon thereafter.¹⁶⁸ Richmond's industrial base continued to grow during the first half of the twentieth century.

It wasn't until World War II, however, that the population of Richmond boomed. During the war, Kaiser Shipyard became one of the largest wartime production facilities, producing ships at the rate of one per day and employing 100,000 workers at the peak of its war effort.¹⁶⁹ "The migration of workers to the Kaiser Shipyards caused Richmond's population to explode from a pre-war total of 23,642 to more than 100,000. Much of the city's current racial composition can be traced to this boom period when many southern Blacks left their farms seeking wartime employment."¹⁷⁰

While Richmond's industrial base continues to grow, as existing companies expand operations and others arrive to take advantage of its large labor pool and transportation facilities, the fact that most of its residents are minorities appears to be directly attributable to individual choices to seek employment in a highly industrialized area. Nonetheless, some environmental equity advocates rely on communities like Richmond to provide evidence of the injustice of the existing distribution of environmentally sensitive land uses.¹⁷¹

165. See *id.* at 20-21.

166. See *id.*

167. See *id.*

168. See *id.*

169. See *id.*

170. *Id.* at 22.

171. See Charles Lee, *Developing the Vision of Environmental Justice: A Paradigm for Achieving Healthy and Sustainable Communities*, 14 VA. ENV'T'L. L.J. 571, 575 (1995); see also Jane Kay, *California's Endangered Communities of Color*, in UNEQUAL PRO-

IV. JUSTIFICATIONS FOR INTERFERING WITH PRIVATE PREFERENCES: REVIEWING THE THEORIES AND EVIDENCE

As noted above, private preferences generally serve as the basis for social choice, and these preferences are usually measured by market choices or political actions. In some circumstances, however, society makes a collective judgment to remove certain allocative or distributive determinations from the market or political process altogether, or interferes with choices that are perceived to result from systemic process failure.

A. *Interfering with Private Preferences to Adjust for Errors*

Of the circumstances in which a liberal society will interfere with private preferences, its determination to correct for process failures is perhaps the least controversial. Environmental justice advocates may argue that the market and political processes used to distribute environmentally sensitive land uses and the housing nearby are so flawed that the preferences they measure lose any credible claim to accuracy or legitimacy. In such an instance, the argument would continue, society must either correct the process failures or adjust its response to the measured preferences.

1. Imperfect Markets and Discrimination As a Market Failure

To command unlimited confidence in the welfare-maximizing nature of private exchanges, the market must operate competitively, without transactions costs, and market actors must engage in rational decision-making based on full information concerning available goods and services. However, when defects in the free operation of the market distort or limit the choices from which individuals seek to maximize welfare, we cannot be certain that their choices in fact do further that goal. Because perfectly competitive conditions rarely exist, collective judgments are necessary to remedy endemic process failures such as the exercise of monopoly or oligopoly power, the inability of markets efficiently to distribute public goods and services, the unavoidable existence of transaction costs, strategic bargaining and collective action problems, and so forth. At the same time, the political process is subject to process failures itself. Accordingly, environmental equity scholars might justify proposals to alter the existing distribution of environmentally sensitive land uses or amend the processes by which they are distributed by demonstrating signifi-

TECTION: ENVIRONMENTAL JUSTICE AND COMMUNITIES OF COLOR, *supra* note 2, at 155, 165-68 (using Richmond as an example of disproportionate exposure).

cant and exceptional process failures in one or both of these arenas.

Markets may misallocate resources and fail to distribute commodities to best suit private preferences for many reasons. Perhaps the most common causes of market failure are imperfect competition and distortions arising from government policies. Few if any markets are both free of government intervention and perfectly competitive in the manner that pure neoclassical economics posits as a prerequisite for the efficient allocation and distribution of resources. In most contexts, however, market defects are considered *de minimis* and thought not to distort unduly the preferences measured by the system.

Housing markets suffer from both defects in the extreme. The market for residential property is intrusively regulated in a patchwork pattern reflecting the divergent influences of federal, state, local, and private restrictions on private market transactions.¹⁷² For example, the federal income tax system favors home ownership over rental, thereby distorting the relative prices of and allocation of resources between the two uses.¹⁷³ Zoning measures such as density restrictions, large-lot and minimum floor area requirements, and limitations on multi-family dwellings restrict residential mobility and permit wealthy communities to externalize costs of development and prosperity.¹⁷⁴ Finally, privately enforced deed restrictions, planned communities, and cooperative living arrangements further undermine our confidence in the allocative efficiency of housing market transactions.

In addition, the market for residential housing is plagued by forces undermining the fluid trend toward general equilibrium that characterizes perfectly competitive markets. Perfectly competitive markets rely on the existence of many producers offering customers perfect (or at least close to perfect) substitutes for goods and services.¹⁷⁵ Mr. Filburn's wheat, for example, was indistinguishable from wheat grown and sold on the market.¹⁷⁶ Accordingly, his private con-

172. For an overview of the types of imperfections that generally affect housing markets, see Molly McUsic, Note, *Reassessing Rent Control: Its Economic Impact in a Gentrifying Housing Market*, 101 HARV. L. REV. 1835, 1849-50 (1988).

173. *See id.* at 1849.

174. *See id.* at 1850; *see also* Richard Thompson Ford, *The Boundaries of Race: Political Geography in Legal Analysis*, 107 HARV. L. REV. 1841, 1870-71 (1994) (discussing the consequences and legal treatment of exclusionary zoning policies); *Developments in the Law—Zoning*, 91 HARV. L. REV. 1427, 1626-27 (1978).

175. *See* KARL E. CASE & RAY C. FAIR, *PRINCIPLES OF MICROECONOMICS* 62-63 (2d ed. 1992) (describing necessary characteristics of a perfectly competitive market).

176. *See Wickard v. Filburn*, 317 U.S. 111, 133 (1942).

sumption of his home-grown wheat decreased market demand for wheat by the amount consumed.¹⁷⁷ In such a market, producers are price takers, and no single supplier has control over price or competition.¹⁷⁸ More than perhaps any other commodity, housing stock (including the amenities associated with living in particular neighborhoods and communities) is heterogeneous, and close substitutes are difficult to find. In the housing market, then, suppliers may capture monopoly profits, or be plagued by monopsony rent-seeking. Moreover, perfectly competitive markets attain allocative efficiency only if consumers have full information about the goods and services available on the market.¹⁷⁹ Housing markets are characterized by incomplete or misleading information concerning fundamental yield, and, accordingly, our confidence in the allocative efficiency of private housing transactions is undermined.¹⁸⁰

These general market defects can be found in all housing markets to some degree. Moreover, the distortions affect buyers differentially by income class, not by race. Thus, poorer home buyers have fewer choices from among the available stock, and their inability to pay prevents them from purchasing a vast amount of that stock. The common wisdom, then, that the poor live near environmentally sensitive land uses because that property is less expensive is perfectly consistent with this understanding of the housing market. It would, however, be perfectly consistent with a perfectly competitive market as well. The difference is a matter of degree, not of kind.

On the other hand, little reason exists to believe that the general absence of competitive market conditions distorts the distribution of housing choices such that members of minority groups are more likely to live near environmentally sensitive land uses. If any characteristic of the market for residential property could distort the distribution of residential proximity to environmental land uses toward minorities, it would be race-based discrimination.

Environmental racism scholars emphasize the role that discrimination in the housing market plays in distorting the translation of preferences into market choices. For example, Professor Bullard asserts that:

[i]nstitutional barriers such as housing discrimination, red-

177. *See id.* at 128 (“[I]t supplies a need of the man who grew it which would otherwise be reflected by purchases in the open market. Home-grown wheat in this sense competes with wheat in commerce.”).

178. *CASE & FAIR*, *supra* note 175, at 62.

179. *See id.* at 351.

180. *See McUsic*, *supra* note 172, at 1850.

lining by banks, and residential segregation prevent African Americans from buying their way out of health-threatening physical environments. The ability of an individual to escape a health-threatening physical environment usually correlates with income. However, racial barriers complicate this process for millions of African Americans. An African American who has an income of \$50,000 is as residentially segregated as an African American on welfare.¹⁸¹

Indeed, ample evidence exists to support allegations of continued racial discrimination in the housing market. In particular, discrimination in the residential leasing market, and redlining (the practice of restricting the availability of mortgage money in minority communities) are well documented as contemporary phenomena.¹⁸² It seems indisputable that minorities seeking housing have access to a smaller portion of the available stock than do their non-minority counterparts and, therefore, face impediments to mobility not encountered by whites.¹⁸³

The evidence of decreased residential mobility, however, does not lead inexorably to any particular conclusion about the desirability of the existing distribution of environmentally sensitive land uses. In particular, to the extent that individual minorities may prefer to migrate to communities hosting environmentally sensitive land uses to take advantage of the jobs or other benefits offered by a challenged facility, decreased mobility attributable to discrimination in the housing market may decrease the correlation between minority population and the location of such land uses.

The ultimate effect of racial discrimination in the housing market is merely to exacerbate the class issues discussed above. To the extent that minorities are limited in their choice of residential prop-

181. Robert D. Bullard, *Anatomy of Environmental Racism*, in TOXIC STRUGGLES: THE THEORY AND PRACTICE OF ENVIRONMENTAL JUSTICE 27, 30 (R. Hofrichter ed., 1993).

182. See generally DOUGLAS S. MASSEY & NANCY A. DENTON, AMERICAN APARTHEID: SEGREGATION AND THE MAKING OF THE UNDERCLASS 96-109 (1993) (discussing discriminatory practices currently employed in the real estate and home financing industries).

183. However, the evidence of discrimination is not one-sided. While the preference to self-segregate is not as widely held among minorities as it is among whites, minorities nonetheless demonstrate a distinct preference to live in communities with a substantial minority presence. A 1976 study of the Detroit area revealed that 62% of African-Americans surveyed indicated that their first choice of residential neighborhoods would be one in which 50% of the residents were African-American. The same study found that only 17% of African-Americans would desire to live in a neighborhood in which whites were a majority. See *id.* at 88-96.

erty by discriminatory factors, they must expend more resources to purchase the same level of housing amenities (including distance from environmentally sensitive land uses) than do their non-minority counterparts. It seems clear that in the housing sector, as in many others, minorities face more limited opportunities than do their non-minority peers. This abhorrent state of affairs cannot be remedied by limiting those opportunities that remain. If residential proximity to environmentally sensitive land uses offers opportunities foreclosed by illegal and invidious discrimination in other spheres, the appropriate remedy would be to continue the crusade against the discrimination, not to aggravate the already lamentable circumstances of the group whose interests are being trumpeted.

2. Politics and Process Failures

While we rely on the political process to allocate and distribute many resources, environmental racism/justice scholars argue that defects in this process may cause it to fail to measure accurately the preferences of communities of color. As with the market failure argument, the accusations aimed at the political process take many forms. Environmental racism scholars rely principally on the most simple process failure claim—that people of color are grossly underrepresented in the political process.¹⁸⁴ In the civic republican model, underrepresentation could impede the full and diverse public discussion necessary to reveal the public good. Under a public choice model, underrepresentation exacerbates rent-seeking behavior by groups that are, by implication, overrepresented.

In addition to the simple claim of underrepresentation, other, more nuanced challenges to the accuracy of the preferences measured by the political process might also support the environmental racism claims. For example, public choice theorists argue that, even if each member of the community is appropriately represented at the

184. See Cole, *supra* note 64, at 1995 (noting that “communities of color have been historically excluded and . . . are grossly underrepresented today”); Robert W. Collin, *Environmental Equity: A Law and Planning Approach to Environmental Racism*, 11 VA. ENVTL. L.J. 495, 517 (1992) (arguing that people of color lack the political power to overcome environmental discrimination); Kelly Michelle Colquette & Elizabeth A. Henry Robertson, *Environmental Racism: The Causes, Consequences, and Commendations*, 5 TUL. ENVTL. L.J. 153, 169 (1991) (“This exclusion from the siting process may explain why poor minority communities are so frequently the target of hazardous waste siting and currently host a disproportionate share of these facilities.”); Rachel D. Godsil, Note, *Remediating Environmental Racism*, 90 MICH. L. REV. 394, 399 (1991) (stating that communities of color are targeted for environmentally sensitive land uses because of political powerlessness).

decision-making level, well organized interest groups will dominate the political process and capture rents as a result of their undue influence.¹⁸⁵

a. Underrepresentation

In support of their underrepresentation theory, environmental justice advocates point to the historical exclusion of African-Americans from the political process, and argue that the effects of this exclusion continue to undermine our confidence in the accuracy of determinations made by government institutions.¹⁸⁶ For example, Professors Colquette and Robertson assert that “[m]embers of a community with the least structural power tend to be missing as players in the hazardous waste siting process,”¹⁸⁷ and quote Dr. Bullard’s contention that “regulatory politics . . . generally exclude the poor.”¹⁸⁸ Professor Reich explains that “people of color . . . also lack access to key planning decisions . . . because of language problems, lack of technical or financial resources, and absence from lobbying organizations.”¹⁸⁹ Although environmental justice advocate Luke Cole’s article focuses on the perceived bias against low-income communities in the siting of environmentally sensitive land uses, his extensive list of explanatory factors encompasses racial as well as income-related considerations:

Many interrelated factors contribute to [the disproportionate exposure of poor and minority communities to environmental hazards], including industry’s tendency to seek inexpensive land in low income neighborhoods as well as poor people’s lack of political and economic power in resisting such intrusions. The factors that have diminished certain communities’ ability to resist undesirable land uses and pollution include the racist exclusion of people of color from decision-making processes and decision-making bodies, racist and economic exclusion from “nicer” neighborhoods, “expulsive zoning,” the exploitation of workers’ immigration status, governmental neglect and de-

185. See Farber & Frickey, *supra* note 98, at 14-15.

186. See Cole, *supra* note 64, at 1994-95 (noting that the government often finds “no relevant population affected” even though underrepresented minority communities were clearly “affected”).

187. Colquette & Robertson, *supra* note 184, at 168-69.

188. *Id.* at 169.

189. Peter L. Reich, *Greening the Ghetto: A Theory of Environmental Race Discrimination*, 41 U. KAN. L. REV. 271, 277 (1992).

sign, and the "success" of environmental laws.¹⁹⁰

Professor Richard Lazarus has taken a more detailed look at the perceived lack of representation of minorities in the environmental decision-making processes and contends that minorities are underrepresented in both "those parts of the federal government that dominate environmental protection policymaking" and at the local enforcement level of federal environmental bureaucracies.¹⁹¹

Although the standard underrepresentation claims advanced by environmental justice advocates are seldom supported by empirical or even anecdotal evidence, they nonetheless have intuitive appeal. There are several reasons, however, why the protestations of exclusion and disenfranchisement do not present a convincing account of the causes of environmental racism.

First, only Lazarus is careful to speak of underrepresentation, not of exclusion. Minorities have not legally been excluded from positions of decision-making authority for more than two decades.¹⁹² Until the passage of the Voting Rights Act of 1965,¹⁹³ significant and substantial structural obstacles prevented blacks from exercising the franchise.¹⁹⁴ In the thirty years since its passage, however, the Voting Rights Act has succeeded in dismantling most of the pre-existing "open barriers to black voter registration and the casting of ballots."¹⁹⁵ As a result, black voter registration in the southern states is dramatically higher than it was before the passage of the Voting

190. Cole, *supra* note 11, at 619, 628-29.

191. See Lazarus, *supra* note 27, at 819-22.

192. Many of the existing environmentally sensitive land uses were sited before this country made advances in including minorities in the political process. See, e.g., GERRARD, WHOSE BACKYARD, *supra* note 146, at 541 ("Of the twenty-one commercial [hazardous waste] land fills operating today, only one is on a site selected since . . . 1976"). Accordingly, the underrepresentation claim may be more persuasive with respect to those facilities. However, if underrepresentation is no longer an issue, or is less of an issue today, the fact that *existing* facilities were sited under an illegitimate system does not unequivocally indicate that *proposed* sitings in the same communities are suspect.

193. 42 U.S.C. § 1973 (1988).

194. See Lani Guinier, *The Triumph of Tokenism: The Voting Rights Act and Black Electoral Success*, 89 MICH. L. REV. 1077, 1093 n.75 (1991); Samuel Issacharoff, *Polarized Voting and the Political Process: The Transformation of Voting Rights Jurisprudence*, 90 MICH. L. REV. 1833, 1838 (1992).

195. Issacharoff, *supra* note 194, at 1838-39. The expansive exercise of the franchise by blacks was seen as important not only to the individuals themselves, but also to the advancement of a progressive social agenda in general. See Guinier, *supra* note 194, at 1081-82 (describing the evolution through which "[b]lack voter registration and political participation gradually became the [civil rights] movement's dominant vehicle for implementation of its legislative agenda").

Rights Act.¹⁹⁶

In addition, the 1982 amendments to the Voting Rights Act created a group-based right to meaningful participation in the political process that is intended to protect racial and ethnic minorities from precisely the kind of "underrepresentation" identified by the environmental racism literature.¹⁹⁷ Under the redrawn statute, "second-generation" challenges have forced governmental bodies to reconstruct political institutions that had imposed structural limitations on the ability of blacks to satisfy electoral expectations even though they were registering and voting in increasing numbers.¹⁹⁸ For example, "second-generation" litigants successfully challenged the use of at-large elections, which, combined with bloc voting among an identifiable group, serve effectively to dilute the minority vote.¹⁹⁹ Indeed, many of the predominantly minority jurisdictions in which environmentally sensitive land uses have been sited may be part of majority black districts created to enhance the opportunity for blacks to achieve electoral success at the state level.²⁰⁰ In this context, scholars

196. As a result of the Freedom Rides and the use of Federal Registrars, the number of registered black voters in the South tripled soon after the passage of the Voting Rights Act. See Issacharoff, *supra* note 194, at 1838 n.25 (citing Bobby M. Rubarts, Comment, *The Crown Jewel of American Liberty: The Right to Vote; What Does it Mean Under the Amended Section 2 of the Voting Rights Act?*, 37 BAYLOR L. REV. 1015, 1020 (1985)).

197. Of course, the Fourteenth and Fifteenth Amendments to the United States Constitution also prohibit race-based restrictions on the right to vote. The Voting Rights Act, however, protects that right more extensively than does the Constitution alone. In 1982, Congress amended the Act in response to the Supreme Court's adoption of an intent-based test for constitutional voting rights claims in *City of Mobile v. Bolden*, 446 U.S. 55 (1980), and *Rogers v. Lodge*, 458 U.S. 613 (1982). See Voting Rights Act Amendments of 1982, Pub. L. No. 97-205, 96 Stat. 134 (codified at 42 U.S.C. § 1973(a) (1988)). The 1982 amendments recast the statutory voting rights doctrine to allow a broad-gauged inquiry into the "results" that challenged practices have on the capacity of minorities to participate fully in the political process. See Issacharoff, *supra* note 194, at 1834, 1841 n.38, 1845-46.

198. See Guinier, *supra* note 194, at 1093-94. A "third-generation" of voting rights jurisprudence appears to be upon us. See *Shaw v. Reno*, 509 U.S. 630 (1993). In *Shaw*, the Court expressed its emerging view of the constitutional limitations on a states' authority to take race into account in redistricting. See *id.*; see also *Shaw v. Hunt*, 116 S. Ct. 1894 (1996) (invalidating the district lines that were drawn on remand from *Shaw v. Reno*).

199. See Guinier, *supra* note 194, at 1093-94; Issacharoff, *supra* note 194, at 1839-42.

200. Even if environmental justice advocates cannot substantiate an underrepresentation claim, they may reject majority-take-all decision-making at the state level if it leads to the siting of an environmentally sensitive land use in a *community* where the proportion of minorities in the population is larger than that of the *state*.

This argument may be premised on two concerns: (1) continued discrimination against, and marginalization of, minority representatives in predominantly white decision-making bodies; and (2) dissatisfaction with the inability of majority rule decision-making to satisfy the policy preferences of minority groups. See Guinier, *supra* note 194, at 1134.

expressing concern about preferences revealed through the representative process must do more than simply invoke the once compelling complaint of underrepresentation of minorities.²⁰¹

Second, the environmental justice advocates' simple cry of minority underrepresentation fails to confront the more difficult theoretical issue raised by some voting rights scholars—whether minority representatives necessarily better protect the interests of minority citizens than do non-minority representatives.²⁰² Professor Lani Guinier details the difficulties with the once conventional wisdom that minority representatives will be more responsive to the will of their minority constituents,²⁰³ and suggests that a form of proportionate interest group representation, rather than mere black electoral success, may better serve the political needs of marginalized minority groups.²⁰⁴ Because the environmentally sensitive land uses challenged by environmental racism scholars are often sited in poor communities with large minority populations, land use policy interests, rather than race, may present the more compelling basis for political cohesiveness in these communities.

Third, minorities have made greater strides in obtaining elective offices at the state and local level,²⁰⁵ and government decisions about the placement of environmentally sensitive land uses are, for the most part, made at these levels. Indeed, many of the communities that host environmentally sensitive land uses are majority-minority communities. Unless there exists a state or federal override of local autonomy, or a failure in the democratic processes of the community, the environmental racism theory is weak when the decision-making body is elected from a community whose majority are members of minority groups.

201. Ironically, the underrepresentation criticism becomes even more cogent when the environmentally sensitive land use is sited in a community where minorities are not a disproportionately large portion of the population; in these communities, the influence of the minority voice is likely to be even more limited.

202. See Guinier, *supra* note 194, at 1128-34.

203. See *id.*

204. Professor Guinier argues:

For those at the bottom [of the political system], a system that gives everyone an equal chance of having their political preferences *physically represented* is inadequate. A fair system of political representation would provide mechanisms to ensure that disadvantaged and stigmatized minority groups also have a fair chance to have their policy preferences *satisfied*.

Id. at 1135-36.

205. See FRANK R. PARKER, BLACK VOTES COUNT 1 (1990) (pointing out that between 1965 and 1989, the number of African-American elected officials in the United States increased from approximately 500 to 7200).

Finally, many of the processes leading to the placement of environmentally sensitive land uses incorporate opportunities for direct public participation. The National Environmental Policy Act (NEPA) was adopted precisely to provide for public participation in the early stages of major federal projects having a significant impact on the environment.²⁰⁶ NEPA, as applied by federal regulations, requires federal agencies to prepare environmental impact statements for all federal projects having a significant impact on the human environment,²⁰⁷ to circulate that statement to other agencies and interested private parties,²⁰⁸ to provide a forum for public comment on the proposed project,²⁰⁹ and to respond in the final document to any material criticisms of the project.²¹⁰ Furthermore, NEPA implementing regulations mandate that environmental impact statements be written so that "the public can readily understand them,"²¹¹ and require decisionmakers to consider the impacts of the cumulation of environmentally sensitive projects in any one area.²¹² Moreover, other federal statutes require agencies to solicit public participation at various stages in the regulatory process, and to respond to public comments in a meaningful manner.²¹³

The various states have adopted many different regulatory frameworks for the siting of environmentally sensitive land uses, and many of them emphasize the need for public participation in the decision-making process.²¹⁴ The most striking examples of state-created means of direct participation are the "mini-NEPAs" that exist in various states. Currently, state versions of NEPA are operative in at least thirteen states, the District of Columbia and Puerto Rico.²¹⁵

206. See 42 U.S.C. §§ 4321-47 (1994). While NEPA applies only to federal projects, that threshold requirement has been interpreted liberally to cover any action that the federal government has the power to control, either through direct participation, funding, or agency authorization through a permitting process. Moreover, the public involvement extends to indirect effects of major federal actions, even if those indirect effects consist of purely private development.

207. See 42 U.S.C. § 4332.

208. See 40 C.F.R. § 1512.19 (1995).

209. See *id.* § 1503.1.

210. See *id.* § 1503.4.

211. *Id.* § 1502.8.

212. See *Kleppe v. Sierra Club*, 427 U.S. 390 (1976).

213. See, e.g., 42 U.S.C. § 7410(a)(1) (1994) (portion of Clean Air Act requiring notice and a public hearing before state implementation plans can be adopted).

214. See GERRARD, WHOSE BACKYARD, *supra* note 146, at 52.

215. See CAL. PUB. RES. CODE §§ 21000-21178.1 (West 1996); CONN. GEN. STAT. ANN. §§ 22a-1a to -1h (West 1995); HAW. REV. STAT. §§ 343-1 to -8 (1985 & Supp. 1992); IND. CODE ANN. §§ 13-12-4-1 to 13-12-4-10 (Michie 1996); MD. CODE ANN., NAT. RES. I

While NEPA applies only to major federal actions, many state NEPAs apply to state and local projects *and* to purely private actions. Moreover, five of the states that do not have mini-NEPAs require environmental analysis and an opportunity for public participation for certain types of projects. All of these environmental reviews are submitted to the public for notice and comment.

In reality, public participation at the state and local level has not been a significant problem for many years. Most public or private promoters of environmentally sensitive land uses face one of two scenarios: (1) either their proposed project is perceived to be lucrative and is subject to bidding among municipalities for the privilege to host the project, or (2) their proposed project is controversial and the promoter despairs of ever establishing a site due to ubiquitous and well-organized public opposition. Thus, states face the contemporary challenges of trying to stifle bidding wars that erupt over the more attractive environmentally sensitive projects (many of which—such as prisons—were considered locally undesirable in the recent past) or restricting local absolutists from blocking regionally important environmentally sensitive land uses.²¹⁶

Ultimately, members of the host community may express their preferences concerning residential proximity to environmentally sensitive land uses with their feet. As discussed above, at least some host communities attain their predominately minority status after the challenged use is located within the community. The migrants who account for this transformation cannot be said to have been left out of the decision-making process. In fact, by moving into the community, they revealed their assessment that the benefits of residential proximity to the environmentally sensitive land use outweigh the

§§ 1-301 to 305 (1989 & Supp. 1995); MASS. GEN. LAWS. ANN. ch. 30, §§ 61-62H (West 1992); MINN. STAT. ANN. §§ 116D.01-.11 (West 1987 & Supp. 1996); MONT. CODE ANN. §§ 75-1-201 to -207 (1995); N.Y. ENVTL. CONSERV. LAW §§ 8-0101 to -0117 (McKinney 1984 & Supp. 1996); N.C. GEN. STAT. §§ 113A-1 to -13 (1994 & Supp. 1996); S.D. CODIFIED LAWS §§ 34A-9-1 to -13 (Michie 1992 & Supp. 1996); WASH. REV. CODE ANN. §§ 43.21C.010-43.21C.914 (West 1983 & Supp. 1996); WIS. STAT. ANN. § 1.11 (West 1986 & Supp. 1992); D.C. CODE ANN. §§ 6-981 to -990 (1995); P.R. LAWS ANN. tit. 12, §§ 1121-1127 (1977 & Supp. 1992); see also THOMAS J. SCHOENBAUM & RONALD H. ROSENBERG, ENVIRONMENTAL POLICY LAW: PROBLEMS, CASES AND READINGS 293 (3d ed., 1996) ("About 20 states have environmental policy acts modeled after NEPA.").

216. See Michael Wheeler, *Negotiating NIMBYs: Learning from the Failure of the Massachusetts Siting Law*, 11 YALE J. ON REG. 241, 284-88 (1994) (proposing alternate models of intermunicipal regional negotiation). See generally MICHAEL O'HARE, FACILITY SITING AND PUBLIC OPPOSITION (1983) (describing the powerful participation of opposition groups in most attempts to site environmentally sensitive land uses and proposing mechanisms for overcoming this vocal, usually successful, but often minority voice).

burdens. Indeed, the decision not to leave a community reveals something about the relationship between the perceived burdens imposed by a challenged facility and the benefits derived from remaining in the community. While these decisions may reflect options constrained by lack of mobility or discrimination in the housing market, they nonetheless provide some guidance concerning preferences among available choices.

b. Public Choice Theory and Limitations on the Legitimacy of the Representative Process

In addition to challenging the extent of information available to minority communities, environmental racism scholars allege that minority communities have less access to the expertise necessary to combat an undesirable siting proposal, are less organized than their non-minority counterparts, and lack the financial resources and personnel required to sustain a long-term protest.²¹⁷ This criticism resonates with themes underlying public choice theory, questioning the power of the political process to measure and implement preferences legitimately.²¹⁸

Public choice theorists argue that collective judgments are not likely to represent a coherent revelation of public will, or even the culmination of informed and informative debate. Rather, public choice theory condemns the very notion of a coherent public will, and portrays the political process as an exercise in rent-seeking behavior by specially organized subgroups.²¹⁹ Relying on this theory of social choice, environmental racism scholars may claim that even if minorities have a representative number of voices participating in the siting decision, the voices of others in the debate are heard more clearly.

The experience of successful minority organization around environmental equity issues belies this assertion. The outpouring of support on a local, state, and national level for the Afton uprising in 1982 is but one example of the power of minority (primarily African-American) social action organizations. Like the civil rights groups of

217. See BULLARD, *DUMPING IN DIXIE*, *supra* note 3, at 14-16.

218. See Daniel A. Farber & Philip P. Frickey, *The Jurisprudence of Public Choice*, 65 *TEX. L. REV.* 873, 874 (1987) (posing the "ultimate issue" of public choice as "whether legislatures can claim to formulate public policy legitimately").

219. The way public choice theory characterizes the power of interest groups in the democratic process can be traced to Mancur Olson's theory of collective action. See MANCUR OLSON, JR., *THE LOGIC OF COLLECTIVE ACTION: PUBLIC GOODS AND THE THEORY OF GROUPS passim* (1965); see also GEORGE J. STIGLER, *THE CITIZEN AND THE STATE: ESSAYS ON REGULATION passim* (1975) (exploring the ways the public adopts a policy to facilitate the economic analysis of the creation and effects of regulation).

the past, environmental equity activists often emerge out of these established organizations, as well as black churches.²²⁰ It has been suggested that the emergence of a sustainable movement in black communities depends on whether those communities possess "(1) certain basic resources, (2) social activists with strong ties to mass-based indigenous institutions, and (3) tactics and strategies that can be effectively employed against a system of domination."²²¹

In fact, minority groups have been able to capitalize on the lessons of public choice theory. While the Afton uprising did not succeed in blocking the disposal of PCBs in Warren County, other minority communities have successfully organized and rejected the placement of environmentally sensitive land uses in their communities. In *Confronting Environmental Racism: Voices from the Grassroots*,²²² Professor Bullard relates the stories of nine minority community action groups that emerged to confront perceived environmental problems. Overall, the grassroots organizations were highly successful. Citizens of West Dallas, Texas, succeeded in closing down a lead smelter and obtained a \$450 million out-of-court settlement against the smelter on behalf of 370 children and 40 property owners.²²³ While community activist groups in Alsen, Louisiana, Houston, Texas, and Richmond, California, failed to force the closures of the environmentally sensitive land uses in their communities, they did extract concessions involving capacity reductions and emission controls.²²⁴ Citizens' action groups halted construction of two proposed hazardous waste facilities in East Los Angeles, and the citizens of Kettleman City, California, succeeded in blocking, for the time being at least, the construction of a hazardous waste incinerator in their community.²²⁵

3. Imperfect Information and Process Failures

Environmental equity advocates also point to the lack of infor-

220. Cf. Regina Austin & Michael Schill, *Black, Brown, Red and Poisoned*, in UNEQUAL PROTECTION: ENVIRONMENTAL JUSTICE AND COMMUNITIES OF COLOR, *supra* note 2, at 53, 61-63 (discussing the advantages of organizing within a common culture).

221. See ALDON D. MORRIS, *THE ORIGINS OF THE CIVIL RIGHTS MOVEMENT: BLACK COMMUNITIES ORGANIZING FOR CHANGE* 282 (1984).

222. Robert D. Bullard, *Anatomy of Environmental Racism and the Environmental Justice Movement*, in *CONFRONTING ENVIRONMENTAL RACISM: VOICES FROM THE GRASSROOTS* 15, 26-39 (Robert D. Bullard ed., 1993).

223. *See id.* at 36.

224. *See id.* at 37.

225. *See id.* at 29, 32, 37.

mation available to minorities and the poor as a cause of the disproportionate siting of environmentally sensitive land uses in poor and minority communities. This argument takes one of two forms. The first possibility is that developers deliberately or negligently withhold information from the target community concerning the nature of their proposed projects. The second possibility is that the information is available to the host communities, but is not assimilated by the residents of that community.

At first blush, both of these charges appear damning. Whether the proximity to the environmentally sensitive land use is being allocated through the market or through the political process, lack of information seriously undermines our confidence that the distributive decisions reflect rational preferences. Market-based neoclassical economics relies on the assumption that each market participant bases her conclusion that the transaction will maximize her welfare on full information about the transaction.²²⁶ In addition, both theories of law and economics and civic republicanism seem to depend on full information.²²⁷ Under the public choice model, the problem of special rent-seeking groups arises primarily out of differing incentives to obtain information as between small special interest groups and the diffused public.²²⁸ Similarly, the civic republican model suggests that deliberation on issues of the public good will be enhanced by widespread dissemination of information, increasing the capacity of diverse groups to join the political debate.²²⁹ Finally, whatever can be said about the ample opportunities afforded for participation in the decision-making process, one might imagine that participation without adequate information would be futile or even counterproductive.

A closer read, however, cautions against rushing to judgment

226. See CASE & FAIR, *supra* note 175, at 465.

227. See Michael A. Fitts, *Can Ignorance Be Bliss? Imperfect Information as a Positive Influence in Political Institutions*, 88 MICH. L. REV. 917, 934-38 (1990). According to Professor Fitts:

The law-and-economics approach emphasizes the utilitarian value of information—its ability to reveal productive or exchange opportunities for furthering means/end rationality. Civic virtue, on the other hand, views the elucidation of opinions primarily as serving a value-based function, leading people (by the exchange of information and ideologies) to recognize the bias of their own positions, and to change their preferences or values—that is, to help identify ends.

Id.

228. See *id.* at 928.

229. See Cass R. Sunstein, *Beyond the Republican Revival*, 97 YALE L.J. 1539, 1557 (1988) (“[R]epublicans envision [the government] process as the forum in which alternative perspectives and additional information are brought to bear.”)

about the importance of the information gap. To be sure, relevant information should be available to all interested participants in the decision-making process, and concerns that information is hidden should be fully addressed. Beyond the circumstance of deception, however, the community's failure to become fully informed about the risks and benefits of environmentally sensitive land uses does not necessarily indicate a failure of the market or the political process.

Forming judgments without full information is neither always irrational nor always a bar to rational decision-making. As an initial matter, a decision not to acquire full information may itself reflect a rational allocation of resources. We all make many decisions without going to the effort to become fully informed. Most of these are relatively trivial, and may not justify the investment in full information. Others are more important, but we may not have the time to collect the relevant information. The mere choice whether to become fully informed is itself a choice bounded by scarcity. In communities where incomes are low, the allocation of resources to subsistence may leave little time or energy for engaging in local politics or becoming educated concerning the issues raised by the potential siting of environmentally sensitive land uses.²³⁰ While scholars may lament the choices made by the residents of the host communities, bald references to the problem of "lack of information" will not address the time and resource constraints which resulted in the decision to remain uninformed.

Moreover, in many circumstances perfectly rational decisions are made based on imperfect information. At least in the standard two party-political process, limited information may serve as an important device for improving reasoning processes, overcoming certain perverse interest group incentives, and avoiding political stalemate.²³¹ These lessons may well apply in the context of decision-making concerning environmentally sensitive land uses, information about which tends to be complicated, controversial, and subject to manipulation by special interest groups—both proponents and opponents of the siting.

Finally, even if the information gap is assumed to be a process failure that should be corrected, that correction would not necessarily

230. The incentive to gather information may be further diluted by the complexity of siting decisions and the simplicity of the signal that most private participants in a siting process can send: permit the facility or not. See Roger G. Noll & James E. Krier, *Some Implications of Cognitive Psychology for Risk Regulation*, 19 J. LEGAL STUD. 747, 767 (1990).

231. See Fitts, *supra* note 227, at 939-55.

lead to a redistribution of environmentally sensitive land uses away from minority neighborhoods. The misinformation or lack of information shared by residents of potential host communities may lead to unnecessary and unwise *opposition* to environmentally sensitive land uses, as well as to unreflective acquiescence.²³²

B. *Interfering with Accurately Measured Preferences*

Even where process failures do not undermine our confidence that an exchange enhances private welfare, collective judgments may nonetheless reject (presumably accurate) preferences that are revealed through market transactions. Based on utilitarian or rights-based rationales, society interferes with accurately revealed preferences in essentially four circumstances: (1) when it is determined that certain members of society should be guaranteed access to certain goods and/or services; (2) when private preferences are invidious or otherwise contrary to community values; (3) when the fulfillment of private preferences causes harm to others; and, (4) when the fulfillment of private preferences causes socially unacceptable harm to the individual. In addition, in light of emerging insights into the pervasive influence that social policy may have on the formation of private preferences, legal scholars are beginning to challenge policy makers to reconsider the presumptive legitimacy of private preferences in many circumstances.²³³

1. Removing Decisions from the Market or Political Spheres

Even in the absence of identifiable process failures, one can argue that society should remove the decisions that lead to the distribution of environmentally sensitive land uses from the market and the political process altogether. That is, we may wish to prevent individuals from exchanging health for job opportunities and communities from trading health risks for social benefits.

To be sure, society does remove some decisions from the political and/or market realm altogether. By collective judgment, society may express "preferences about preferences" (second-order preferences) through which the majority voluntarily forecloses certain options from the menu of available market or political choices.²³⁴ The

232. See *infra* text accompanying notes 259-71 (discussing the limits of rational evaluation of risky alternatives).

233. See, e.g., Sunstein, *Legal Interference*, *supra* note 100, at 1131 (arguing that the legal system should "not take private preferences as exogenous variables").

234. See *id.* at 1140.

Constitution represents one of the most interesting types of disabling collective judgments: the judgment that we should bind ourselves in the present to prohibit the implementation of certain of our collective judgments in the future.²³⁵ An important safeguard of this document is the guarantee of equal protection, which prohibits the collective decisionmaker from implementing determinations based on classifications we consider invidious or objectionable.

Race-based discrimination is one such classification. If the claim of environmental racism were based on allegations that siting decisions were made in the political arena on the basis of the race of the host community, the constitutional violation would be clear and the only uncertainties to be resolved would be issues of proof.²³⁶ As noted above, however, most environmental equity activists do not allege that siting decisions have been made on the basis of invidious criteria. Rather, they challenge the allegedly disproportionate impact of facially neutral policy choices and market transactions.

As an analog to political precommitment strategies, society may collectively decide to remove certain allocative or distributive decisions from the market altogether, expressing a second order preference for decommodification of the good or service. Although the justifications for removing certain commodities from the market realm²³⁷ are diverse and hotly debated,²³⁸ many commodities none-

235. Much has been written about these types of collective judgments, or "precommitment strategies." See JON ELSTER, *ULYSSES AND THE SIRENS: STUDIES IN RATIONALITY AND IRRATIONALITY* 66-103 (1979); THOMAS C. SCHELLING, *CHOICE AND CONSEQUENCE* 236 (1984); Sunstein, *Preferences and Politics*, *supra* note 93, at 24-27.

236. See *Arlington Heights v. Metro. Hous. Dev.*, 429 U.S. 252, 268-71 (1977) (remanding an equal protection claim of housing discrimination in light of *Washington v. Davis*' requirement of intentional discrimination); *Washington v. Davis*, 426 U.S. 229, 239 (1976) (stating that the Equal Protection Clause is violated when official conduct discriminates on the basis of race). The several environmental racism challenges raised in federal court under the equal protection clause have faltered on the shoals of the intent requirement. See, e.g., *East Bibb Twiggs Neighborhood Ass'n v. Macon-Bibb County Plan. & Zoning Comm'n*, 706 F. Supp. 880, 885-87 (M.D. Ga.) (no evidence of "improper racial animus"), *aff'd*, 896 F.2d 1264 (11th Cir. 1989); *Bean v. Southwestern Waste Mgmt. Corp.*, 482 F. Supp. 673 (S.D. Tex. 1979) (insufficient evidence of intent to discriminate), *aff'd without opinion*, 782 F.2d 1038 (5th Cir. 1986); *NAACP v. Gorsuch*, No. 82-768-CIV-5, order at 9 n.8 (E.D.N.C. Aug. 10, 1982) ("There is not one shred of evidence that race has at any time been a motivating factor for any decision taken by any official—state, federal or local—in this long saga.").

237. Removal of a commodity from the market realm can be distinguished from other types of collectively imposed prohibitions on alienability, such as prohibitions on the transfer of a commodity by any means, including by gift. Some narcotics are subject to such a prohibition, as is the transfer of one's right to vote. See Radin, *supra* note 107, at 1854. It is not clear whether an environmental justice argument premised on inalienabil-

theless cannot be traded in the traditional market sense.²³⁹ Children (both their beings and their labor), whole blood, human organs, fetal gestational services, and sexual services are among the goods and services for which market transactions have been prohibited. Other goods, such as narcotics, are consigned to a very limited, highly regulated market realm.

However, it cannot credibly be argued that society should precommit to prohibiting all market-based risk-related exchanges. Precommitment strategies entail the considerable cost of loss of autonomy to those in the community who would prefer not to be bound, and thus can be justified only under a limited set of conditions.²⁴⁰ Moreover, if the costs of the prohibition to dissenters are great enough, the prohibition will fail, as is illustrated by the robust market for illegal drugs. Finally, industrialized society *relies* on the willingness to exchange health and safety risks for benefits. Without such tradeoffs, buildings and bridges could not be built,²⁴¹ industries could not hire workers,²⁴² and leisure activities would be severely restricted.

Of course, we can, and should, commit to reducing the health and safety risks imposed by industrialization as much as is feasible and wise. And we should not feel compelled to respect the autonomy of the most risk-taking among us. The appropriate level of risk regulation may well be an inefficient one, through which society redistributes resources in order to "purchase" increased safety for those individuals and communities who would otherwise be willing to

ity would require absolute inalienability or only non-commodification.

238. See RICHARD A. POSNER, *THE ECONOMICS OF JUSTICE* 1-5 (1981) (suggesting that all scarce resources should be ownable and alienable and applying that theory to non-market behavior); see also Richard A. Epstein, *Why Restrain Alienation?*, 85 COLUM. L. REV. 970, 990 (1985) ("Rules restraining alienation are best accounted for, both positively and normatively, by the need to control problems of external harm and the common pool."). Compare Susan Rose-Ackerman, *Inalienability and the Theory of Property Rights*, 85 COLUM. L. REV. 931, 932-33 (1985) (proposing three normative rationales for inalienabilities: economic efficiency, "certain specialized distributive goals," and incompatibility of unfettered market processes with the responsible functioning of the democratic state) with Radin, *supra* note 107, at 1852 (advocating a "non ideal, pragmatic evaluation of market-inalienabilities based on a conception of personhood or human flourishing that differs from a that of traditional liberalism or economics").

239. See Radin, *supra* note 107, at 1855-56.

240. See Donald A. Dripps, *Precommitment, Prohibition, and the Problem of Dissent*, 22 J. LEGAL STUD. 255, 256 n.5 (1993).

241. See MCGARITY & SHAPIRO, *supra* note 92, at 4-5 (discussing construction fatalities in seven industrialized countries).

242. See *id.* (estimating that as many as 12,000 persons per year may die in industrial accidents).

exchange unacceptable levels of risk for jobs or other benefits.²⁴³ Society has already committed to this regulatory structure, imposing significant restrictions on the location, design, and operation of environmentally sensitive land uses. Environmental justice advocates may fruitfully argue that we have not done enough to reduce the risks, but they cannot credibly argue that we should eliminate these risks altogether.

2. Guaranteed Minimums and Egalitarian Distribution

With respect to some essential goods and services, our society has maintained the market-based distribution system but has made an effort to provide a safety net beneath it. Food, housing, and medical care are the primary goods for which our society has attempted to establish a minimum level of access. Women, infants, and children receive in-kind transfers of nutritionally appropriate foodstuffs through the WIC program and families with dependent children are eligible to receive food stamps; the extremely poor have access to medical care through state-administered Medicaid programs; and the federal government subsidizes the construction of some "affordable" housing,²⁴⁴ and the rental of private units under the Section 8 Existing Housing Certificate Program.²⁴⁵ Legal interference with private preferences in this manner may reflect either a collective commitment to a more egalitarian distribution of certain resources than the market process would permit, or a rights-based commitment to a certain minimal allocation of certain resources, or both. It is possible to shoe-horn environmental justice claims into this category. Environmental equity activists, in essence, seek a more egalitarian distribution of access to "clean" air, water, and surroundings. There exists, however, a fundamental difference between environmental

243. *See id.* at 296-97.

244. The public housing program for low-income residents was established in the Wagner-Steagall Housing Act. *See* Wagner-Steagall Housing Act of 1937, Pub. L. No. 75-412, 50 Stat. 888 (codified at 42 U.S.C. §§ 1437(a)-(j) (1994)); Michael H. Schill, *Privatizing Federal Low-income Housing Assistance: The Case of Public Housing*, 75 CORNELL L. REV. 878, 894 (1990). Due to the ensuing world war, however, few units were constructed under that statute. *Schill, supra*, at 895. The Housing Act of 1949 authorized the construction of 810,000 public housing units, which were not completed until 1972. *See id.* As of 1990, 1.3 million units of public housing existed in the United States. *See id.* at 897.

245. Under Section 8, participating households identify privately owned rental property which meets minimum safety standards and rents for less than the federally prescribed maximum rent. If the household and the rental unit qualify, the residents pay no more than 30% of their incomes in rent, and the federal government pays the remainder of the rent. *See* 42 U.S.C. § 1437(f) (1994); *see also* Schill, *supra* note 244, at 899-900 (describing the Section 8 program).

equity claims and the paradigm cases of redistribution of essential resources—the former entails an implicit tradeoff that does not exist in the latter. When society distributes food more equitably by providing food stamps or in-kind transfers, the redistribution does not entail a net loss for the recipients.²⁴⁶ The same is true in the context of housing subsidies or free medical services. In the environmental equity context, however, it is either possible or likely that forced redistribution of a clean environment would require communities to give up benefits (i.e., jobs, tax revenues, etc.) which may outweigh the value of the redistributed resource.

3. Unacceptable Risk of Harm to Self or Others

In other circumstances, we interfere with market exchanges, even though they appear to maximize welfare, when fulfillment of the private preferences will cause harm to others or a socially unacceptable level of harm to self. Accordingly, we establish safety standards in the workplace, and require employers to adhere to those standards, even if they are able to entice some employees to work under riskier conditions.²⁴⁷ Many communities establish minimum health and safety standards for residential property, and prevent landlords and tenants from agreeing to lease substandard housing, even for reduced rents.²⁴⁸ Environmental equity advocates might attempt to rely on this category to justify massive intervention with the market and political process. However, their focus on distributive equity instead of enhanced health and safety regulation ultimately condemns this attempt to failure.

Existing environmental protection statutes provide a robust example of society's rejection of private decisions that are likely to

246. To be sure, the form in which our society redistributes food may entail a net loss to society in efficiency terms, as most non-cash transfers do. In addition, a food stamp recipient is constrained in the manner in which she can legally exchange the food stamps for goods, which entails a sacrifice of autonomy. However, food stamps are made available to low-income families, not imposed upon them. If the limitations on consumption autonomy imposed on food stamp recipients is not outweighed by the increased consumption made possible by the stamps, then the eligible individual need not make the exchange.

247. For a thorough description of the laws regulating workplace safety, and a persuasive argument that these laws are poorly drawn and strikingly underprotective, see MCGARITY & SHAPIRO, *supra* note 92, *passim*.

248. See, e.g., *Hilder v. St. Peter*, 478 A.2d 202 (Vt. 1984) (enforcing the housing code through an implied warranty of habitability). For a review of the theoretical and empirical literature concerning the consequences forcing these minimum standards, see Roger A. Cunningham, *The New Implied and Statutory Warranties of Habitability in Residential Leases: From Contract to Status*, 16 URBAN L. ANN. 3, 138-53 (1979).

cause harm (or risk of harm) to others or unacceptable risk of harm to self. While many view environmental protection statutes merely as tools to internalize externalities, most environmental protection statutes are not intended simply to ameliorate inefficient resource allocations, but also to reject even efficient decisions that result in an unacceptable level of harm or risk of harm.²⁴⁹ For example, the Clean Air Act is principally a technology-forcing statute that requires the EPA to establish primary and secondary national ambient air quality standards for criteria air pollutants at a level which protects the public health with an adequate margin of safety, without regard to the efficiency of the standard.²⁵⁰ Because these standards are established with regard to regional air quality, they discourage the undue concentration of emissions in any given area.

The Resource Conservation and Recovery Act's regulations concerning the standards for treatment and disposal of hazardous wastes are similarly aspirational.²⁵¹ RCRA imposes a detailed manifest system on generators and transporters of hazardous wastes, and regulates the treatment, storage, and disposal of such wastes. The act prohibits land disposal of hazardous wastes except in those circumstances where (1) the wastes are treated prior to disposal with the "best demonstrated treatment technology;" or (2) the EPA grants an

249. See Thomas O. McGarity, *Media-Quality, Technology, and Cost-Benefit Balancing Strategies for Health and Environmental Regulation*, 46 LAW & CONTEMP. PROBS. 159, 161 (1983). Thomas McGarity argues that:

the general preference of Congress and especially of implementing agencies for the technology-based approach in the context of the chemical industry is warranted by an almost universal recognition that citizens of this country have a 'right' to a healthy environment and workplace, at least insofar as the societal pursuit of that right is not technologically impossible or prohibitively expensive.

In addition, administrative procedures for developing risk information incorporate many conservative biases, and "most approved procedures tend to overstate the actual risk." W. KIP VISCUSI, *FATAL TRADEOFFS: PUBLIC AND PRIVATE RESPONSIBILITIES FOR RISK* 156 (1992) ("[I]n regulating toxic substances, . . . results from the most sensitive animal species are often used, and government agencies such as the EPA routinely focus on the upper end of the 95 percent confidence interval as the risk level rather than use the mean of the distribution.")

250. See 42 U.S.C. § 7409(b)(1) (1994); McGarity, *supra* note 249, at 164.

251. The central objective of the 1984 Hazardous and Solid Waste Amendments to the Resource Conservation and Recovery Act was to minimize or eliminate the land disposal of hazardous wastes.

[C]ertain classes of land disposal facilities are not capable of assuring long-term containment of certain hazardous wastes, and to avoid substantial risk to human health and the environment, reliance on land disposal should be minimized or eliminated, and land disposal, particularly landfill and surface impoundment, should be the least favored method for managing hazardous wastes

42 U.S.C. § 6901(b)(7) (1994).

exemption to the prohibition based on a showing that the proposed disposal methodology meets exacting health and safety standards.²⁵² For the waste that is disposed of on land, RCRA sets stringent design and performance standards for landfills to prevent leaking and requires ongoing monitoring of the groundwater surrounding the facility.²⁵³

The Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) directed the EPA to cleanup pre-RCRA old and abandoned hazardous waste sites.²⁵⁴ CERCLA eliminated many of the common law constraints on apportioning responsibility for the clean-ups, establishing strict joint and several liability and greatly reduced causation criteria. While Congress expressly disavowed an intent to return all areas to pristine levels, it did require that CERCLA cleanup actions be "consistent with [a] permanent remedy . . . to prevent or minimize the release of hazardous substances so that they do not migrate to cause substantial danger to present or future public health or welfare or the environment."²⁵⁵

Other federal statutes limit construction of environmentally sensitive land uses in certain areas as a result of geologic, geographic, or atmospheric conditions in the area. The Clean Water Act, for example, regulates the discharge of fill material into wetlands.²⁵⁶ Under that statute, in order to construct any facility on land characterized by wetlands vegetation and the presence of hydrolic soil, landowners generally must obtain a permit from the U.S. Army Corps of Engineers, which is required to evaluate the proposed project for its impact on the wetlands.²⁵⁷

Some environmental equity advocates purport to encourage widespread interference with the market and the political process out of concern that many siting decisions are resulting in unacceptable risk of harm. In doing so, however, they somehow shift their focus

252. 42 U.S.C. §§ 6924(d)(1), 6924(m).

253. For example, RCRA requires double liners, leachate collection systems, and a sophisticated system of groundwater monitoring. *See* 42 U.S.C. § 6924(o).

254. 42 U.S.C. §§ 9601-9675.

255. Erin Sheridan, *How Clean is Clean: Standards for Remedial Actions at Hazardous Waste Sites under CERCLA*, 6 STAN. ENVTL. L.J. 9, 18-19 (1986-87).

256. 42 U.S.C. § 1344 (1994).

257. *See* 33 U.S.C. § 1344(a) (1994). Exceptions to the permit requirement exist, such as when the Corps has issued a general or a nationwide permit that encompasses the project. *See* 33 U.S.C. § 1344(e)(1); 33 C.F.R. § 330.6 (1995). General permits are issued on a regional basis and authorize activities that will have minimal individual or cumulative adverse environmental effects, while nationwide permits authorize relatively small-scale activities that are determined to involve little if any impact on the environment. *See id.*

away from the continued existence of environmentally sensitive land uses and the failure of existing environmental protection statutes to ensure the health and safety of those living nearby, to the existing *distribution* of environmentally sensitive land uses. If an environmentally sensitive land use is unacceptably risky in a poor and/or minority community, it should be just as unacceptably risky in a predominately wealthy and/or white neighborhood. Thus, as long as environmental equity advocates are calling for a redistribution of environmentally sensitive land uses, they cannot convincingly rest their argument on society's obligation to reject private preferences or collective judgments that result in unacceptable levels of risk.²⁵⁸

4. Risk and the Limits of Rationality²⁵⁹

Whether acting as a policymaker, democratic deliberator, or market participant, to form a rational preference concerning residential proximity to environmentally sensitive land uses one must be capable of rationally evaluating information involving risk and uncertainty. It can be argued that the human mind is so challenged by this task that society should not privilege the measured preferences that depend on such evaluations. In particular, if humans cannot meaningfully evaluate the burdens imposed by potential exposure to environmental risks, it is nonsensical to suggest that residential proximity to such risks represents the rational choice of the residents of a host community. Unfortunately, at some point society must evaluate the burdens imposed by potential exposure and make judgments about whether they outweigh the benefits of the offending facility. The real question is whether this determination should be made by individuals in the market, or collectively through the political process. And, if we decide that collective judgments are more accurate or otherwise more acceptable, we must decide at what level—local, state, or national—these judgments should be made.

Most people rely on established heuristics to aid in their evaluation of risks, and these heuristics systematically skew lay perceptions of risk.²⁶⁰ Most of us are incapable of engaging in rigorous statistical

258. Professor Elizabeth Chambliss has pointed out that the very determination of what risks are unacceptable may be influenced by the racial and class characteristics of the neighborhoods most likely to play host to a particular land use. This troubling possibility raises complex issues that go beyond the scope of this paper, but which may, if explored, better support claims of environmental racism than any arguments advanced thus far by environmental equity advocates.

259. "[D]ecisions involving risks illustrate the limits of human rationality...." VISCUSI, *supra* note 249, at 150.

260. See Roger G. Noll & James E. Krier, *Some Implications of Cognitive Psychology*

analysis of risk-related information. Instead, we form perceptions of and compare risks by grounding available information in a system of heuristics, in order to translate complex and confusing information into conclusions upon which we can act. For example, lay persons tend to overestimate low probability events and underestimate high probability events.²⁶¹ In addition, by relying on the "availability" heuristic, people judge an event as likely or frequent if past instances or similar events are easy to imagine or recall.²⁶² Because availability is affected by factors unrelated to frequency, such as dramatic media coverage of a recent potential, or barely averted, disaster, people tend to overestimate the probability that certain catastrophic events will occur.²⁶³ Studies also suggest the existence of a status quo bias, or reference risk effect, which leads people to underestimate current risk levels and to overestimate the benefits of preventing an increase of risk from its current level.²⁶⁴ As a result, new sources of risk may be more strictly regulated than are old technologies and familiar risks. Finally, people's perceptions of the riskiness of a proposed endeavor are extraordinarily malleable, and can be altered by the manner in which information concerning the proposal and its risks are presented. People tend to be risk seeking if the proposed uncertain outcomes are framed as possible gains from the status quo, but risk averse if they are framed as possible losses.²⁶⁵ These common cognitive errors—which can cause a significant gap between objectively measured and perceived risk—tend to be pervasive and robust.²⁶⁶ This gap arguably eliminates the rationality underlying the

for *Risk Regulation*, 19 J. LEGAL STUD. 747, 750, 753-55, 777 (1990); Paul Slovic et al., *Facts Versus Fears: Understanding Perceived Risk*, in JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES 463, 464-72 (Daniel Kahneman et al. eds., 1982); Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, in JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES 1, 3 (Daniel Kahneman et al. eds., 1982) (discussing various established heuristics used to assess probabilities, and the problems leading to inaccurate results).

261. See VISCUSI, *supra* note 249, at 117; Noll & Krier, *supra* note 260, at 754-60.

262. See Slovic et al., *supra* note 260, at 465-72.

263. Even a vivid disaster film or a warning of a tragic but extraordinarily unlikely consequence of a relatively safe activity can trigger the availability heuristic, and lead to gross overestimation of the risk attendant the activity. See *id.* at 465.

264. See VISCUSI, *supra* note 249, at 143.

265. See Daniel Kahneman et al., *Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias*, 5 J. ECON. PERSP. 193 (1991), reprinted in RICHARD H. THALEN, *THE WINNER'S CURSE: PARADOXES AND ANOMALIES OF ECONOMIC LIFE* 63 (1992). Most risky endeavors can be described either way. For example, a community of 55,000 that proposes to host a nuclear power plant can portray the emergency evacuation plan as one that is likely to save 50,000 lives in the event an evacuation is necessary or one that is likely to be unable to effectuate the rapid evacuation of at least 5,000 people.

266. See Lee Ross & Craig A. Anderson, *Shortcomings in the Attribution Process: On*

privileged status of private preferences.

In particular, decisions concerning residential proximity to environmentally sensitive land uses are precisely the type in which the most recognized heuristics may drastically distort the evaluative process. But this information does not necessarily advance the cause of the environmental justice movement. The heuristics described above suggest that individuals may systematically *over-estimate* the risk associated with residential proximity to environmentally sensitive land uses. Environmentally sensitive land uses often involve low probabilities of catastrophic events, while details of the possible consequences of those accidents may be graphically presented by opponents of the project, and accidents that do occur (such as the leak at Three Mile Island) tend to be widely publicized and thus readily "available." Accordingly, the many successful community vetoes of environmentally sensitive land uses might be better explained as irrational than the relatively few instances of community invitation to an environmentally sensitive land use. In light of the conservative biases incorporated into the commonly observed heuristics for evaluating risks, environmental justice advocates have a substantial hurdle to overcome to demonstrate that we should interfere with choices made by the individual or the community to protect them from unacceptable risk or from their own mistakes.

While lay perceptions of risk may be systematically biased, expert assessments are not necessarily better. Experts are not immune from the cognitive discrepancies that plague lay risk assessments,²⁶⁷ and "scientific" risk assessments may omit certain values that society (or at least individuals) perceive to be inextricable from rational evaluations of risk. Expert risk assessment, for example, does not distinguish between risks that are voluntarily assumed and those that are not, or between risks that are evenly distributed and those that are targeted to a specific subpopulation.²⁶⁸ Yet studies confirm that people make value judgments between these different contexts in which identical risks may arise, and that these value judgments are not based on cognitive errors concerning the objective probability of the risk, but on consistent recognition that these values matter as a

the Origins and Maintenance of Erroneous Social Assessments, in JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES, *supra* note 260, at 129, 144-49 (discussing the resilience of erroneous risk perceptions even in the face of evidence that should undermine the original perceptions).

267. See Kenneth R. Hammond et al., *Improving Scientists' Judgments of Risk, in* JUDGMENT AND DECISION MAKING 466, 467-68 (Hal R. Arkes & Kenneth R. Hammond eds., 1986).

268. See Pildes & Sunstein, *supra* note 118, at 55-59.

way to distinguish between otherwise equivalent risks.²⁶⁹

The divergence between lay and expert evaluations of risk does not condemn the quest for rationality in the decision-making concerning environmentally sensitive land uses. However, lay misperceptions undermine our confidence in private preferences as an indicator of social welfare. And merely increasing the information provided to lay persons and increasing their opportunities to participate in the decision-making will not necessarily enhance the rationality of the process.²⁷⁰ Moreover, the sterility of expert judgments calls into question our ability to substitute these judgments for private preferences in a normatively acceptable manner.

Mechanisms may exist by which people can be better informed and educated out of their biases, and experts can be made to consider "non-scientific" risk values.²⁷¹ If environmental equity advocates are striving for more rational allocation and distribution of environmentally sensitive land uses, they must seek out these mechanisms and suggest their implementation.

5. Endogenous Preferences and the Role of Social Policy

Much has been written lately of the constructed nature of private preferences. One's perception of one's wants and needs is highly contingent on cultural clues such as available information, current consumption patterns, legal rules, perceived options, and social pressures.²⁷² Recognition of the endogenous nature of private preferences calls into question all three of the commonly accepted bases for limiting the circumstances in which society should interfere with accurately measured private preferences. If preferences can be reshaped through the provision of more information, opportunities, and altered social pressures, then it will not be futile to attempt such an interference. And, if existing private preferences are formed with incomplete information in response to limited options and inappropriate social pressures, one cannot readily say that the fulfillment of those preferences best serves our goal of promoting individual autonomy.²⁷³ Finally, the very concept of maximizing social welfare

269. See *id.* at 57-58.

270. See Noll & Krier, *supra* note 260, at 764-65, 772.

271. See Pildes & Sunstein, *supra* note 118, at 90-91 (suggesting that deliberative processes may be found for exchanging expert and lay ideas about risk).

272. See Sunstein, *Preferences and Politics*, *supra* note 92, at 10.

273. See *id.* at 11-12 ("If preferences are a product of available information, existing consumption patterns, social pressures, and governmental rules, it seems odd to suggest that individual freedom lies exclusively or by definition in preference satisfaction, or that

through the aggregate satisfaction of private preferences becomes unstable in light of our understanding of the socially constructed nature of those preferences. Accordingly, scholars are increasingly comfortable arguing that policies should be designed not merely to maximize social utility within the given universe of preference profiles, but also to reshape that universe, in order that the emerging preferences be even more compatible with a shared vision of social welfare.²⁷⁴

In the case of environmentally sensitive land uses, the operative cultural constraint on preferences appears to be income class. In particular, in the context of all market-based decision-making, one's preferences are inextricably entwined with one's allocative starting point. This is clear from our models of the market: willingness to pay requires the ability to pay, and those with more resources can purchase freedom from proximity to environmentally sensitive land uses. In arguing that "black, rural, and poor" citizens of Sumter County had no real choice but to embrace the Emelle facility, and are dependent on the landfill for economic survival, environmental justice proponents Conner Bailey and Charles E. Faupel allude to the difficulties engendered when preferences respond primarily to class clues.²⁷⁵

The recent experience of the residents of Richmond, California is consistent with this insight. Recall that Richmond developed around and because of heavy industry that would be, in many communities, locally undesirable. By the early 1990s much of this industry was undesirable to some residents of Richmond as well, and residents pressured Chevron, the largest industrial presence in the area, to decrease emissions and establish a buffer zone around the facility. Much of the rhetoric of this pressure raised allegations of environmental racism. Ultimately, however, the opposition groups reached a settlement with Chevron that traded the company's continued physical presence for, primarily, an increased financial presence. Chevron agreed to hire more local employees, to assist in the creation of a job training program, to donate park space and a bike path, and to provide other much needed community goods and

current preferences should, on grounds of autonomy, be treated as the basis for settling political issues.").

274. See, e.g., SUNSTEIN, *DEMOCRACY*, *supra* note 103, at 20 ("It is not paternalistic, or an illegitimate interference with competing conceptions of the good, for a democracy to promote scrutiny and testing of preferences and beliefs through deliberative processes.").

275. See Bailey & Faupel, *supra* note 130, at 140-43.

services in exchange for the support of the organized residents.²⁷⁶

To suggest that these individuals and communities simply be barred from fulfilling their (albeit endogenous) preferences, without adjusting the cultural conditions that serve to limit their economic options, would simply decrease the welfare of minorities and the poor even more. Aspirational policies aimed at adjusting endogenous preferences, even if ultimately successful, directly interfere with a citizen's attempt to fulfill rationally formed preferences in the short run, in the hopes of altering those preferences over time. The interference is, by definition, costly to the citizen. She has determined how best to meet her needs and wants, and is precluded from doing so in order that those needs and wants will be reshaped. If these short-term costs outweigh the long-term benefits, the policy is probably unwise. In any event, the costs ought not be imposed lightly on a group that is, ostensibly, being saved from disadvantage.

None of the proposed solutions to the "environmental racism" problem directly confront the difficulty of determining when the solution will in fact increase the well-being of those affected (that is, when the solution will replicate what the communities would have chosen in a world where we are more confident that individual preferences are freely chosen). If the preferences for residential proximity to environmentally sensitive land uses are accurately measured by the market and political processes, the fact that they are endogenous and can be transformed by legal interference does not mean that the government should veto the community's attempts to fulfill the preference, or that we should permit vocal minorities within a community to veto the collective preference. Unless we change the conditions that lead residents to believe that trading proximity for financial benefits enhances their welfare, then merely vetoing the expressed preference leaves the communities worse off than would fulfilling it.

V. PRESCRIPTIONS

As Professor Been has pointed out, the environmental racism movement cannot make a coherent call for environmental equity until its members develop and adopt a concrete theory of what counts as "fair" in the distribution of environmentally sensitive land uses.²⁷⁷ Nor can advocates or activists convincingly call for reform of the current system of allocating and distributing environmental risks without

276. Press release on file with the author.

277. Been, *Fairness*, *supra* note 15, at 1008-09, 1027-68.

anchoring those reforms in a credible theory demonstrating why the existing distribution of, and mechanisms for distributing, these risks should be rejected.

A. *Regulating Risks*

The foundational premise of an enlightened society's willingness to allocate and distribute risky enterprises based on private preferences expressed in the market and political system must be a firm commitment to establishing minimum health and safety standards beneath which individual and community choices must not fall. Some might argue that our system of environmental protection establishes the threshold at an acceptable level.²⁷⁸ Others would surely disagree. The adequacy of our environmental standards, however, is not a matter of racial justice.

Some environmentally sensitive land uses might be too dangerous to be sited near anyone. The risks entailed may be so great that nobody should have to live near the site. How to determine which environmental hazards are too dangerous to be permitted near residential areas is beyond the scope of this article, but the remedies indicated by that determination are clear. If dangerous sitings are permitted because environmental standards are too lax, those standards should be raised. If certain types of environmentally sensitive land uses cannot be made safe enough to be sited in residential areas, then such sitings should be prohibited.²⁷⁹ In such circumstances, the appropriate solution is to prohibit residential proximity to the environmentally sensitive land use altogether, not to site the uses more "equitably."

Moreover, the accumulation of hazardous sitings in one place might transform a relatively innocuous placement into an unreasonably dangerous one. Such a situation calls for more dispersed location of environmentally sensitive land uses, not because the existing distribution is "racist" or "inequitable," but because dispersion is necessary to prevent avoidable and unacceptable harm.

Even acceptable levels of regulatory protection will be ineffec-

278. Cf. MCGARITY & SHAPIRO, *supra* note 92, at 293-304 (stating that "[a]mong the several health and safety agencies that Congress created in the 1960s and early 1970s, the Environmental Protection Agency . . . has been one of the most successful," and urging Congress to model the Occupational Safety and Health Administration after the EPA).

279. Of course, poor and/or minority residents may still wish to migrate into residential proximity to a hazardous site. If the site has been removed from residential areas because it is too hazardous, theoretical consistency in social policy would require banning that immigration.

tive, however, if the safeguards are not adequately enforced. Proposals to ensure adequate enforcement of environmental protection statutes and to encourage residents of host communities to take advantage of citizen suit provisions to enhance compliance²⁸⁰ are laudable regardless of the community in which the offending facility is found.

At the same time, it is possible that disparate enforcement practices (within established limits ensuring adequate protection of health and safety) would inure to the benefit of poor and/or minority communities. The current debate over the development of brownfields illustrates this possibility, and, perhaps, provides a microcosm of the environmental racism debate.

Brownfields are generally defined as abandoned, inactive, or underutilized industrial sites which suffer from some form of environmental contamination resulting from the normal operating procedures of the prior industry, but which are not so contaminated that they have been placed on the National Priority List for cleanup under CERCLA.²⁸¹ It has been estimated that there may be as many as 500,000 brownfields in the United States.²⁸² Most brownfields are located in industrialized or formerly industrialized urban areas.²⁸³

The consequences of the decentralization of industry, combined with the broader deindustrialization of the generally occurring in the United States in 1970s and 1980s, have been devastating for many urban areas.²⁸⁴ Brownfields constitute urban blight, pose potential environmental hazards, and represent lost opportunities for inner city economic development.

280. See Eileen Guana, *Federal Environmental Citizen Provisions: Obstacles and Incentives on the Road to Environmental Justice*, 22 *ECOLOGY L.Q.* 1 (1995) (suggesting amendments to or alternative interpretations of federal environmental protection statutes to facilitate use of citizen suit provisions by poor and minority citizens).

281. See R. Michael Sweeney, *Brownfields Restoration and Voluntary Cleanup Legislation*, 2 *ENVTL. LAW.* 101, 106-07 (1995).

282. See Bernard A. Weintraub & Sy Gruza, *The Redevelopment of Brownsites*, 9 *NAT. RESOURCES & ENV'T* 57 (1995); OFFICE OF TECHNOLOGY ASSESSMENT, PUB. NO. OTA-BT-ETI-153, *STATE OF THE STATES ON BROWNFIELDS: PROBLEMS FOR CLEANUP AND REUSE OF CONTAMINATION SITES 2* (1995) (estimating that the number of brownfield sites may range from "tens of thousands to 450,000").

283. See ELIZABETH GELTMAN, *IDENTIFYING BROWNFIELDS LIABILITY ISSUES: DIAGNOSIS AND PRESCRIPTION WITH SUPERFUND REFORM 4* (June 28, 1995) (a report to the Office of Technology Assessment, Congress of the United States).

284. See Georgette C. Poindexter, *Addressing Morality in Urban Brownfield Redevelopment: Using Stakeholder Theory to Craft Legal Process*, 15 *VA. ENVTL. L.J.* 37, 39-45 (1995) (detailing the urban distress caused by the declining manufacturing base and the flight of the remaining industrial jobs to the suburbs).

Many business and legal experts blame the expansive liability provisions of CERCLA for the proliferation of brownfields.²⁸⁵ In particular, virtually any entity that has owned or operated a site since its initial contamination, or who transported waste to the site, may be liable for the full costs of cleaning up any hazardous waste release associated with the site.²⁸⁶ Moreover, CERCLA cleanup standards are both uncertain and inflexible: CERCLA requires, cryptically, that remediation comply with federal and state standards that are "applicable or relevant and appropriate"²⁸⁷ but does not permit flexibility in cleanup standards to reflect potential future uses of the property.²⁸⁸ In light of this potentially unlimited and uncertain liability,²⁸⁹ developers have opted to abandon the inner cities, and to locate new industries in suburban "greenfields"—previously undeveloped areas that are unlikely to give rise to CERCLA liability.

In response to these perceived disincentives, the EPA²⁹⁰ and many states²⁹¹ have implemented programs intended to encourage redevelopment of brownfields. The EPA initiative permits the agency to enter into a prospective purchaser agreement, including a covenant not to sue, if the agreement offers the EPA some direct benefit in terms of cleanup costs coupled with substantial indirect benefits to the community in which the site is located.²⁹² These indi-

285. See Sweeney, *supra* note 281, at 105-06; *Hearings Before the U.S. Senate Committee on Environment and Public Works*, 104th Cong. (1996), available in 1996 WL 10162794 (Statement of Carol M. Browner, Administrator, U.S. EPA).

286. See 42 U.S.C. § 9607(a) (1994); *United States v. Fleet Factors Corp.*, 901 F.2d 1550, 1553-54 (11th Cir. 1990); *Florida Power & Light Co. v. Allis Chalmers Corp.*, 893 F.2d 1313, 1317 (11th Cir. 1990).

287. 42 U.S.C. § 9621(d) (1994); see William W. Buzbee, *Remembering Repose: Voluntary Contamination Cleanup Approvals, Incentives, and the Costs of Interminable Liability*, 80 MINN. L. REV. 35, 46-47 (1995) ("A firm fix on what would be considered a sufficient cleanup is virtually impossible . . . without a site-specific evaluation by government officials; CERCLA cleanup standards in application are highly variable and subject to discretionary judgments, and thus yield unpredictable results.").

288. See 42 U.S.C. § 9621(b)(1) (1994).

289. If a site is not on the NPL, CERCLA provides no mechanism by which potentially responsible parties can determine their liability status or what type of cleanup would be legally sufficient to eliminate liability. See Buzbee, *supra* note 287, at 61-66.

290. See *Guidance on Settlements with Prospective Purchasers of Contaminated Property*, 60 Fed. Reg. 34,792 (1995).

291. Many states have their own remediation legislation that is stricter than CERCLA. Moreover, states are empowered to carry out remedial activities under CERCLA. See 42 U.S.C. § 9621(e)(2).

292. See *Guidance on Settlements with Prospective Purchasers of Contaminated Property*, 60 Fed. Reg. at 34,793-94. The previous guidelines did not permit consideration of indirect benefits. See *Guidance on Landowner Liability under Section 107(a)(1) of CERCLA, De Minimis Settlements Under Section 122(g)(1)(B) of CERCLA, and Settlements*

rect benefits include the creation or retention of jobs, restoration of abandoned or blighted property, provision of an important community service, and measures that serve to reduce the environmental or health risks posed by the site.²⁹³

Some state brownfield initiatives go even further, by introducing flexibility into the cleanup criteria.²⁹⁴ Under these initiatives, a site that is to be redeveloped for industrial use may not require as extensive or permanent treatment as one that is to be revitalized for residential purposes. Because the EPA generally defers to state enforcement decisions concerning CERCLA, a state's decision to encourage a voluntary cleanup under flexible criteria essentially shields the developer from federal enforcement actions.

Brownfields initiatives have engendered a debate in the environmental community that mirrors the environmental racism controversy. Some activists contend that the development of brownfields is in the best interest of impoverished urban minorities,²⁹⁵ while others argue that the compromises that permit reindustrialization of these toxic areas represent yet another example of the willingness of policymakers to sacrifice the health and safety of minority communities to pursue other expediencies.²⁹⁶ As with the environmental justice debate at large, the resolution of these competing claims requires society to clarify its commitment to minimum standards of health and safety and confront our continued reliance on market solutions to tragic choices.

B. *Enhancing Opportunities for Participation*

Process failures undermine our confidence in the accuracy of the outcomes of the market and political process. Accordingly, few would disagree that society should continue to strive to identify situations in which people are actually prevented by institutional barriers from participating in political decision-making and proceed to dismantle those barriers. In that regard, no community should be empowered to impose unacceptably burdensome externalities on

with *Prospective Purchasers of Contaminated Property*, 54 Fed. Reg. 34,235, 34,241 (1989).

293. See 60 Fed. Reg. at 34,794.

294. See, e.g., MICH. COMP. LAWS § 13.32(1) (1994).

295. See, e.g., James T. O'Reilly, *Environmental Racism, Site Cleanup, and Inner City Jobs: Indiana's Urban In-fill Incentives*, 11 YALE J. ON REG. 43, 56-57 (1994) (praising Indiana's voluntary cleanup program).

296. See, e.g., Samara F. Swanston, *An Environmental Justice Perspective on Superfund Reauthorization*, 9 ST. JOHN'S J.L. COMMENT. 565, 569-71 (1994) (arguing that proposals to adopt flexible cleanup standards will put poor and minority communities at further risk of exposure to environmental hazards).

others in order to benefit from residential proximity to environmentally sensitive land uses.²⁹⁷ If a particular land use is locally beneficial but poses significant risks for those outside the host community, then those affected by the risk should be included in some way in the decision-making process.

Proposals designed to ensure that potential host communities have access to ample accurate information concerning proposed facilities, and that this information is presented in a comprehensible manner, seem unobjectionable. However, if documented heuristics bias risk assessments exist among lay persons as suggested by the current literature, the increased access to information will not necessarily lead to more rational decision-making.

Moreover, attempts to equalize opportunities to participate between wealthy and poor communities seem doomed to failure. As an initial matter, an enormous amount of resources would have to be devoted to meeting that goal, given the disparities in wealth and income in our society. Short of massive redistribution of wealth, the competing demands placed on the time and energy of poor citizens will continue to ensure that wealthier communities exert more influence in policymaking than their poorer counterparts.

Finally, the focus on outcome—empowering minority and poor communities to oppose most or all sitings—is decidedly ill-advised. A continued focus on increased public participation as a means to exercise the community veto power will enshrine existing environmentally sensitive land uses for which the new sites would substitute. Because new sites are almost always more heavily regulated and safer than old sites, this tactic seems imprudent. If new facilities are not built, the old ones will remain open. These old, unregulated sites are the very ones that communities claim are disproportionately sited.²⁹⁸

297. See Robert W. Collin, *Review of the Legal Literature on Environmental Racism, Environmental Equity, and Environmental Justice*, 9 J. ENVTL. L. & LITIG. 121, 163-65 (1994) (discussing the implications of the siting of a commercial solid waste landfill on the Campo Band reservation in southern California).

298. The sites evaluated in the GAO, CJR, and Bullard studies are old, pre-RCRA sites. According to Michael Gerrard, only one new off-site hazardous waste landfill has opened on a new site, and remained open, since the enactment of RCRA in 1976. Michael B. Gerrard, *The Victims of NIMBY*, 21 FORDHAM URB. L.J. 495, 514 (1994). It is located in Last Chance, Colorado, an area where the population is 97% white. See *id.* In addition, even though hazardous waste incineration is the preferred method of waste disposal, only a few new hazardous waste incinerators are currently operational, and communities are succeeding in blocking the construction of new ones. See *id.* Hazardous waste continues to be produced as a by-product of industrialized production. We can and should attempt to reduce it. However, attempting to do so by decreasing development of new, safer facilities, and forcing disposal and treatment in old, unregulated sites is a hap-

C. *Compensated Sitings*

Several scholars have suggested that environmental equity issues are best addressed by providing adequate compensation for the burdens imposed by environmentally sensitive land uses on host communities.²⁹⁹ While many environmental equity activists decry compensated siting proposals as immoral,³⁰⁰ compensation is probably the only solution that has any relevance to the underlying cause of current distribution of environmentally sensitive land uses. That is, if the distribution of environmentally sensitive land uses is influenced primarily by the constraints arising from the underlying distribution of income and opportunities in our society, compensation can make some contribution toward reducing those constraints.

If the compensation model is intended to provide a host community with sufficient benefits to outweigh the costs of the challenged facility, proponents of the reform must begin by identifying the market or political process failures that have distorted the community's ability to make a rational tradeoff without the provision for compensation. Our general reliance on private preferences measured in the market and political process would indicate that, if the facility can be sited without mandated compensation, the benefits of the facility itself adequately compensate the residents of the host community for the burdens the facility imposes.

Absent such a showing, compensation simply represents an attempt to decrease, to some small extent and with respect to a particular good, the disparities in wealth and opportunities that make us so uncomfortable about allocating environmentally sensitive land uses through the market in the first place. Rather than constituting an immoral buy-off of the residents of a host community, compensation can be understood as a mechanism for increasing the otherwise limited options faced by poor and minority communities and residents. In this context, compensation can be used to finance the option most environmental racism scholars say is fatally lacking in siting decisions: the opportunity to leave the community if one does not agree with the risk/benefit analysis that led to the siting in the

hazard, shortsighted, and potentially risky enterprise.

299. See, e.g., MICHAEL O'HARE ET AL., FACILITY SITING AND PUBLIC OPPOSITION 67-87 (1983); 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 (1994); Arthur M. Sullivan, *Victim Compensation Revisited: Efficiency Versus Equity in the Siting of Noxious Facilities*, 41 J. PUB. ECON. 211 (1990).

300. See, e.g., BULLARD, DUMPING IN DIXIE, *supra* note 3, at 91 (challenging the practice of "pay[ing] those who are less fortunate to accept risks that others can afford to escape").

first place. If one cause of society's rejection of a community's preferences is lack of mobility among residents, compensation can eliminate or at least reduce to a tolerable level that influence. Compensation is especially appropriate in circumstances where the siting causes a decline in the value of the dissatisfied residents' houses, because those houses probably represent the largest asset of the residents.³⁰¹ Moreover, compensation based solutions help cure the social choice ills, by returning the decision to the market. While the compensation remedy does not fully address the limits of rationality in dealing with certain types of risk, it at least eliminates or reduces the distortions added by the introduction of the political process into the risk assessment.

Of course, if it makes sense to pay residents of host communities to enable them to escape residential proximity to environmentally sensitive land uses, then, logically, we should also pay all those non-residents to whom the community seems more attractive once it becomes a host community, to ensure that unacceptable endogenous preferences do not lead them to migrate to the community. And why stop with environmentally sensitive land uses? Ultimately, compensation in this limited context will only reduce by a small fraction the vast disparities in wealth that drive the market and political forces underlying the allocation and distribution of environmentally sensitive resources.

D. The Problem with Prohibitions

The most problematic response to concerns about the inequitable distribution of environmentally sensitive land uses is prohibiting the siting of such uses. Alabama has already forbidden the siting of more than one commercial waste facility in any given county,³⁰² and the City Charter of New York requires that undue concentration of environmentally sensitive land uses be avoided.³⁰³

None of the theories that might support interference with private preferences concerning the allocation and distribution of environmentally sensitive land uses justify prohibitory reforms. The effect of

301. In 1989, Dow Chemical presented the residents of Morrisonville, Louisiana a voluntary buy-out and relocation plan, because the Dow facilities had grown so close to the community that public safety was endangered. Ninety-five percent of the residents accepted Dow's offer. See Clarice E. Gaylord & Geraldine W. Twitty, *Protecting Endangered Communities*, 21 *FORDHAM URB. L.J.* 771, 775-76 (1994).

302. See ALA. CODE § 22-30-5.1(c) (1987).

303. See New York City Planning Comm'n, *Criteria for the Location of City Facilities* art. 5.1 (Dec. 3, 1990).

such reforms is to further limit the options available to poor and minority communities, thereby exacerbating the problems underlying the current distribution of environmentally sensitive land uses. To the extent that the existing distribution of environmentally sensitive land uses reflects rational preferences shaped primarily by economic constraints, it is unlikely that prohibitions on the siting of environmentally sensitive land uses in minority or poor communities will serve the best interests of the affected populations. Blocking the siting of environmentally sensitive land uses in a particular community based on a perception that the community is already disproportionately burdened may prevent the community from making a trade-off that—to the community and its residents—results in a net benefit.

VI. CONCLUSION

Perhaps environmental justice advocates have bitten off more than they can chew, or at least more than they had hoped to swallow. The existing distribution of environmentally sensitive land uses cannot cavalierly be attributed to vaguely articulated market failures or breakdowns of the political process. Rather, environmental equity scholars must come to terms with the enormous implications of what they advocate: the potential wholesale interference with the accurately measured preferences of minorities and the poor with respect to residential proximity to environmentally sensitive land uses. If the existing distribution of environmentally sensitive land uses accurately reflects the measured, rational preferences of minority and poor communities, then society should be wary of interfering with attempts to fulfill those preferences. If extensive interference with these preferences is based on the perceived indeterminacy of preference measurement in the context of environmentally sensitive land uses, then the appropriate responses must evolve from that basis, and will differ dramatically from those currently advanced by environment equity activists.

