
Different Voices, Different Venues: Environmental Racism Claims by Activists, Researchers, and Lawyers

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Abstract

Environmental Justice Movement activists have mobilized on the basis of grievances involving the disproportionate exposure of working class and minority subgroups to various environmental risks. Academics have frequently offered empirical documentation of such exposure. Public interest lawyers have sought legal remediation for injustice claims. But substantial structural changes to ameliorate disproportionate exposure have not occurred. Why? We argue that activists, researchers, and lawyers speak with different voices in different venues, with the consequence of creating “noise,” instead of uniting to speak in one voice. We review the sociological literature to identify the separate voices of activists, researchers, and lawyers, analyzing each one’s focus, target audience, and types of evidence offered. Then we discuss the consequent noise and conclude with some suggestions for uniting the voices in a cooperative, coherent argument for amelioration of the unequal distribution of environmental risks.

Keywords: *environmental justice, environmental activism*

We live in a risk society with pressures from population growth, resource depletion, and increased levels of exposure to environmental hazards as byproducts of the economic growth machine. But these risks are not equally distributed. Working class and minority groups suffer greater risks of exposure to environmental risks than do whites and the more affluent.

Since the 1980s, activists in the Environmental Justice Movement (EJM) have identified various kinds of risks and

mobilized to ameliorate them using political and legal tactics. Social science researchers have documented inequalities in risk exposure under the rubric of environmental racism (ER). Lawyers argue before courts and administrative agencies on behalf of their activist plaintiffs for relief from environmental insults. Despite such prodigious efforts by so many people, environmental injustices persist. Why?

We hypothesize that activists, researchers, and lawyers speak with different voices and operate in different venues.² The consequence is that they often talk past one another, creating “noise” rather than a unified voice. Our purpose in this paper is to identify and analyze those different voices. After a review of the emergence of the EJM to establish its distinction from other environmental movements and to identify the different voices raised in the demand for greater environmental equity, we describe the characteristics of each voice and analyze its operation in its own venue. We then discuss the outcomes of each voice in its own venues and the “noise” that it may produce in the other venues. We conclude with suggestions for uniting the voices and developing a working coalition with the potential to generate substantial structural changes that may ameliorate the unequal distribution of environmental risks.

The Environmental Justice Movement and Academic Research

Evidence abounds that humans have been concerned about environmental quality for nearly as long as written records are available. Ancient Roman laws and codes evolved in response to the increasing social, economic, and political demands of an expanding urban population (Johnston 1999; Robinson 1992; Wolff 1951). For example, laws banned cart

and horse traffic at certain hours for the safety of residents walking and conducting business, laws stipulated particular times for dumping offal and sewage into the rivers and streams to assure that the pollution did not coincide with families' washing clothes in the rivers, codes even mandated urban garden spaces for recreational use. Local medieval statutes regulated the number of animals in the community to control the amount of waste left in the streets and legislated water and sewer systems aimed at safe drinking water and public sanitation (Zupko and Laures 1996). Concerns about urban filth derived from the belief that stench alone could cause illness. Some codes recognized that environmental quality was distributed on the basis of status, as slaves and the poor lived in more degraded environments than the elites. But, in societies relying on the extensive use of peasant or slave labor, environmental inequalities were not the basis for protest mobilization.

With the advent of the Industrial Revolution, environmental conditions further deteriorated, and concern for environmental quality increased commensurately. In the United States, the environmental effects of industrialization and urbanization in the late 19th century spawned two forms of elite-sponsored movements, the sanitation movement and the conservation movement. The sanitation movement derived from concerns with urban crowding and the associated spread of diseases such as typhoid, typhus, smallpox, diphtheria, and tuberculosis (Andrews 1999). Although the poor were disproportionately burdened, they did not mobilize on the basis of environmental inequalities. Instead, reform-oriented elites lobbied for public health regulations and achieved significant improvements in environmental quality (Andrews 1999).

The conservation movement evolved from the larger Progressive movement. The conservation movement combined Progressivist views of excessive capitalist exploitation of the environment with the formal closing of the frontier to generate activism among affluent whites who lobbied for resource management and the protection of public lands (Brulle 1996; Cable and Cable 1995; Cole and Foster 2001; Hays 1959; Humphrey and Buttel 1982; McCormick 1989; Nash 1967; Oelschlaeger 1991). Andrews refers to the New Deal as the successor of Progressivism (1999), and it similarly impacted the conservation movement. Conservationism emphasized production processes that served the interests of the public; that is, economically efficient production processes, based on the wise use of resources and on waste prevention that promoted middle-class economic progress. The movement "was led and implemented from the top down, by what might be called enlightened and pragmatic paternalism rather than by citizen activism" (Andrews 1999, 177). Conservationism waxed and waned during the 20th century, its membership dominated by middle and upper class white

males. It received support from corporations that benefited from government policies permitting exploitation of resources on public lands. Movement grievances focused on the scientific management of resources for maximum economic benefit without destruction of the resource base (Andrews 1999; Cable and Cable 1995; Humphrey and Buttel 1982; McCormick 1989). These elites were little concerned with environmental equity.

The contemporary environmental movement emerged in the mid-1960s, catalyzed by the appearance of Rachel Carson's *Silent Spring* (1962), the flowering of the decade's counterculture, and the proliferation of a variety of other social movements. Conservationism was fused with values stressing communalism over individualism and emphasizing steady-state economics over ever-expanding economic growth. The result was a youth-centered, "hippie" movement that culminated with Earth Day 1970.

After Earth Day and the passage of significant environmental legislation, general public concern for the environment increased in the 1970s, as measured in numerous national surveys (Dunlap and Scarce 1991). The movement became less counter cultural and more mainstream; it was nationalized and institutionalized through the combined efforts of established conservation organizations, such as the Sierra Club and the National Audubon Society, and several new organizations, such as the Environmental Defense Fund and the Natural Resources Defense Council (Brulle 1996; Cable and Cable 1995). Currently, the majority of the national environmental groups focus on reform policies, engaging in congressional lobbying and electoral campaigns. Analysts assert the elitist character of this movement: leaders and members of these professionalized organizations typically are white males of middle or higher social status. Movement grievances emphasize the preservation of lands, water resources, and wildlife and regulation of air and water quality (Andrews 1999; Cable and Cable 1995; Cable and Shriver 1995; Mitchell, Mertig and Dunlap 1992).

In the 1980s, a new, grassroots wing of the contemporary environmental movement emerged in the wake of the 1978 Love Canal revelations and the 1979 Three Mile Island nuclear accident (Cable and Shriver 1995). The constituency and aims of the grassroots wing significantly differ from the national wing of the movement (Freudenberg and Steinsapir 1992). The grassroots wing is primarily comprised of working class individuals without prior movement experience who organize when their communities are faced with environmental contamination (Boyte, Booth and Max 1986). They seek avoidance of environmental threats, remediation of environmental damages, and compensation for the adverse health effects from contamination. They use direct action tactics to pressure government agencies to enforce existing environmental regula-

tions. Sometimes they resort to litigation to force regulatory compliance, using research or expert testimony from behavioral and natural scientists (Cole and Foster 2001).

The grassroots wing of the contemporary environmental movement differs from the dominant national wing in two ways. First, grassroots activists' grievances center on "a new species of trouble" (Erikson 1991) that derives from changes in postwar industrial technologies using synthetic organic chemicals and radioactive materials. Such production processes and their associated wastes, end-products, and accidents all pose much higher health risks than found in wood, glass, and steel manufacturing technologies (Commoner 1992; Schnaiberg 1980; Schnaiberg and Gould 1994). Accidents and unsafe storage and disposal of the chemical and radioactive byproducts led to contaminated neighborhoods and communities (Brown 1979, 1987; Cable and Shriver 1995; Commoner 1992; Freudenberg and Steinsapir 1992).

Second, grassroots activists express greater mistrust of government and big business than does the dominant wing membership (Cable and Cable 1995; Brown and Mikkelsen 1990; Krauss 1989). In the Love Canal and Three Mile Island disasters as well as environmental insults in other communities, the government's failure to protect the public adequately disillusioned many grassroots activists (Levine 1982; Walsh 1981, 1988). They became suspicious and critical of the government's role in protecting citizens' rights and safety. Similarly, corporations' failures to design safe production processes, to reduce toxic wastes, to develop safe waste storage and disposal technologies, and to assume responsibilities for accidents without being compelled through litigation has engendered activists' belief that they are victims of a corporate state structure that denies their democratic claims (Cable and Benson 1993; Cable and Shriver 1995; Krauss 1989). Grassroots activists view contamination and victimization as the inevitable byproducts of the economic growth machine, a production system supported by government and corporate officials and predicated on the practice of externalizing the social and environmental costs of production to the public (Brown and Mikkelsen 1990; Cable and Cable 1995; Cable and Degutis 1991; Krauss 1989; Schnaiberg 1980; Schnaiberg and Gould 1994).

Although reformers and other elites occasionally expressed concerns about environmental inequalities, the disproportionate distribution of environmental risk was not the basis of protest mobilization until the EJM formed in the 1980s. Our discussion of the EJM provides the context for the movement's emergence and serves as the empirical basis for our analysis of the different voices of activists, social science researchers, and public interest lawyers. The EJM is part of the grassroots wing of the contemporary environmental

movement and represents a fusion of the grassroots wing's economic analysis of environmental problems with the civil rights movement's racial critique of political and economic institutions (Cole and Foster 2001). Environmental justice activists mobilize collective resistance by claiming that minority and low-income groups are disproportionately exposed to environmental risks because of racism and classism. Their grievances focus on the inequity of exposure to sources of contamination and the desire for environmental, economic, and social justice (Bullard 1983, 1990a, 1990b, 1993, 1994b; Bullard and Wright 1986-87, 1989; Cole and Foster 2001; Lavelle and Coyle 1993).

Collective resistance rallying to the charge of racial discrimination was precipitated by a 1982 incident in which North Carolina officials chose predominantly black Warren County as the site to construct a landfill for the disposal of polychlorinated biphenyls (PCBs) (Brulle 1996; Bullard 1990b; Cable and Shriver 1995; Lee 1992). Residents formed a grassroots organization to protest the siting of the PCB landfill. They requested assistance in their struggle from the United Church of Christ's Commission for Racial Justice (CRJ), a civil rights organization formed in 1963. Warren County residents, CRJ members, and representatives of the Southern Christian Leadership Conference (SCLC) and the National Association for the Advancement of Colored People (NAACP) engaged in civil disobedience to protest racial discrimination in the choice of a black community for the landfill site. Walter Fauntroy, a Washington, DC congressional delegate, was among the 500 people arrested in the demonstrations (Bullard and Johnson 2000). After the PCB landfill was constructed over residents' protests, Fauntroy requested a US General Accounting Office (GAO) investigation of the demographic characteristics of Southern communities hosting four commercial hazardous waste sites in the Environmental Protection Agency's (EPA) Region IV. The US GAO (1983) complied and released its findings that the majority of the population in the host communities was black.

Also in 1983, sociologist Robert Bullard published his study of Houston's municipal waste disposal sites, finding that six of eight city incinerators, all five city landfills, and three of four privately owned landfills were located in black neighborhoods. Bullard's findings were used by Linda McKeever Bullard who filed a class action lawsuit on behalf of a grassroots organization to block the construction of a landfill in a black neighborhood of suburban Houston. The citizens lost the 1979 lawsuit, *Bean v. Southwestern Waste Management, Inc.*, but it was the first case to use civil rights law to challenge the siting of a waste facility (Bullard and Johnson 2000).

In 1987 the CRJ released their study on the location of Southern hazardous waste landfills at a press conference at

which CRJ Executive Director Ben Chavis, Jr. reportedly coined the term “environmental racism” to describe the CRJ findings on racial disparity in locating hazardous waste sites. Findings from the GAO, Bullard, and CRJ studies as well as the claim of “environmental racism” were used to mobilize supporters in the EJM. This early alignment of the EJM with civil rights organizations was founded on the presumption that “the disproportionate impact of environmental hazards was not random or the result of neutral decisions but a product of the same social and economic structure which had produced de jure and de facto segregation and other racial oppression” (Cole and Foster 2001, 20). The civil rights alignment also distinguished environmental racism as a separate grievance from those of the anti-toxics movement.

Community-based protest organizations were formed, drawing supporters with the theme of disproportionate exposure to environmental risks; many protests were relatively successful. In 1989, residents of predominantly black Richmond, California protested against pollution from a petrochemical refinery. The facility is still operating, but activists won significant concessions on emissions levels (Bullard 1993). Residents of predominantly Latino Kettleman City, California, organized against a 1990 proposal to build a hazardous waste incinerator in the neighborhood; construction was prevented (Bullard 1993). Native American residents of Rosebud, South Dakota in 1991 protested against a proposed solid waste landfill and prevented construction.

In late 1991, over 650 grassroots and national leaders congregated for four days in Washington, DC for the First National People of Color Environmental Leadership Summit, an event organized by CRJ Executive Director Ben Chavis, Charles Lee (director of the CRJ’s environmental justice program), EJM activists from across the country, and researchers such as Bullard and Bryant. Delegates attended from all 50 states and from Puerto Rico, Chile, Mexico, and the Marshall Islands. The summit brought academic researchers into the environmental justice movement and broadened its scope “beyond its antitoxics focus to include issues of public health, worker safety, land use, transportation, housing, resource allocation, and community empowerment” (Bullard and Johnson 2000, 557). Cole and Foster (2001) identify several important outcomes from the conference, such as the formation of alliances and the dissemination of movement tactics, but probably the most significant outcome was consciousness raising among community activists. They recognized the nature of the links between racism and economic exploitation and viewed environmental inequalities as symptomatic of larger, structural forces.

Community-based environmental justice organizations tend to exhibit some common characteristics. The grievances claim environmental discrimination based on race or class.

The organizations, seldom funded by national environmental groups, are often led by women and are composed primarily of working class people of color without prior social movement experience. Their tactics involve demonstrations, petitions, lobbying local elected officials, letter-writing, public meetings, citizen-conducted health surveys, educational forums, and litigation. The targets of protest are usually local, state, and federal officials whom residents deem accountable for their direct or indirect influence in environmental siting and enforcement decisions. Generally, movement organizations tend to be most successful when the goal is to block the construction of a proposed facility, rather than to close an existing facility. In the latter case, groups frequently win some concessions from the facilities, such as capacity reduction, emissions controls, and monetary compensation (Bullard and Johnson 2000; Cole and Foster 2001).

Prior to 1992, few academic researchers conducted empirical studies of environmental racism. But Bullard’s advocacy and scientific work provided a bridge between movement activists and academics interested in environmental racism. Bullard and colleagues continued research on environmental racism, publishing a series of articles in the 1980s leading to the 1990 book, *Dumping in Dixie*. A small group of academics, including Bullard and Bunyan Bryant of the University of Michigan, met with Charles Lee in 1990 to discuss the topic. They sent letters that described the findings of disproportionate impact and requested meetings with the Secretary of the US Department of Health and Human Services and with the head of the EPA (Cole and Foster 2001). EPA head William Reilly agreed to meet with the group of academics and the Office of Environmental Equity was subsequently created. In 1992, Bullard and Ben Chavis were named to President-Elect Bill Clinton’s Transition Team on the Natural Resources and Environment Cluster, formed to provide input into the policies that the new administration would try to implement.

A flurry of academic research was published in 1992 and 1993 that confirmed the presence of environmental racism. Some were case studies, such as Bailey and Faupel’s (1992) study of Emelle, Alabama and White’s (1992) study of Alsen, Louisiana, but most were quantitative studies. Lavelle and Coyle (1993) reported on a study of 1,177 Superfund sites that found racial bias in government-imposed penalties against corporate polluters, in government response to environmental hazards in a community, and in government choice of a solution for such hazards. In separate studies, Zimmerman (1993) and Hird (1993) found that the location of Superfund sites was associated with race. Several studies documented the relationship between race and the location of facilities required to report their emissions for the Toxic Release Inventory (TRI) (Burke 1993; Szasz and Meuser 1997). Mohai and Bryant

(1992a) examined the distribution of commercial hazardous waste facilities in a three-county area surrounding Detroit. They found that the 16 facilities in the Detroit area represented 76% of all state facilities, the relationship between race and the location of waste facilities was independent of income, and in a comparison of facilities inside and outside the city that race remained the best predictor.

Been (1993) suggested that identifying the *current* demographic characteristics of neighborhoods containing waste facilities left open the possibility that market forces had reduced property values in those communities *after* the facilities were sited and subsequently attracted poor and minority folks who had little choice but to live in less desirable neighborhoods. To ascertain whether the discriminatory outcome was due to discrimination in the initial siting process or to post-siting market forces, she re-examined the 1983 GAO report and Bullard's Houston study (1983), expanding both by adding demographic data on the communities at the time the siting decisions were made and then tracing the changes in those demographics in the next census (Been 1994a, 1994b). In her extension of the GAO study, she concluded that the initial siting processes had been discriminatory; market forces had not. In her extension of Bullard's study, she found that the siting processes and subsequent market forces had been discriminatory. In 1994, the CRJ released a report on an update of its 1987 study in which the researchers adapted Been's technique. With the use of 1990 census data to identify demographic changes in the communities between 1987 and 1990, they found that environmental racism increased: compared to 1987 figures, areas with at least one facility had more than twice the percentage of non-whites than areas without facilities.

In 1994, President Clinton signed Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." The order reinforces Title VI of the Civil Rights Act of 1964, which prohibits racially discriminatory practices in programs receiving federal funds and directs federal agencies to ensure that their actions "do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination . . . because of their race, color or national origin" (Section 2-2, Executive Order 12898). The order calls for improved methodologies for data collection and encourages participation by affected populations in the various phases of impact assessment. Clinton subsequently created the National Environmental Justice Advisory Council (NEJAC), whose task was to advise the EPA on methods for attaining environmental justice. Bullard was appointed to the Council, along with 24 others from the EJM, the federal government, industry, and academia.

In 1994, Bullard formed the Environmental Justice Resource Center at Clark Atlanta University in Atlanta, Georgia, in an attempt to bring together community activists and academic researchers. The Center acts as a research, policy, and information clearinghouse on issues of environmental justice, race and the environment, civil rights, facility siting, land use planning, brownfields, transportation equity, suburban sprawl, and sustainability.³ Staff members assist, support, train, and educate people of color, students, professionals, and community leaders to facilitate their inclusion in environmental decision-making.

In the wake of the Executive Order 12898, the EPA planned to conduct a six-month community study of cumulative risk assessment and in 1994 selected Chester, Pennsylvania as the site. Just south of Philadelphia, predominantly black Chester hosts several waste facilities that process a combined total of 2.1 million tons of waste per year. Chester residents, who had previously organized over health concerns associated with the facilities, welcomed the EPA's study. The results, released in 1995, confirmed activists' fears, finding unacceptable cancer risks and serious non-cancer risks, such as kidney and liver disease and respiratory problems. But the regional EPA director cautioned residents that the study showed only a correlation, not a *causal* relationship between elevated health risks and the presence of noxious facilities in the community (Cole and Foster 2001).

When the state's Department of Environmental Protection (DEP) granted a permit for yet another waste treatment facility in Chester, in 1996 residents filed a complaint in federal court under Title VI of the Civil Rights Act accusing the state, the DEP, and state officials of racial discrimination. Bullard's Environmental Justice Resource Center aided the grassroots group in data collection. But the case was declared moot by the US Supreme Court in 1998 when the corporation applying for the permit withdrew the request.

A significant shift among academic researchers occurred between 1994 and 1996. A number of studies did *not* confirm the presence of environmental racism; they found class and other factors were better predictors of environmental exposure than race. Anderton and colleagues (1994a, 1994b) found that the most consistent significant correlation with location of waste facilities was the proportion of industrial workers in a tract and, criticizing the methodologies of earlier studies, concluded that no nationally consistent and convincing evidence exists for environmental racism. Glickman and Hersh (1995) examined differential levels of risk from TRI facilities in the Pittsburgh area and noted that five groups were at higher risk than the general population: all blacks, all poor, poor blacks, poor whites, and the elderly. Bowen et al. (1995) conducted a similar study in the Cleveland area, finding that TRI facilities were more likely to be located in poor-

er and less affluent communities than in areas with minority concentrations. Pollack and Vittas (1995) examined TRI sites in Florida and held that location was most closely related to the degree of urbanization and industrialization, population density, and housing prices. Cutter et al. (1996) investigated the association between demographic characteristics and environmental threats in South Carolina and found that, at the county level, race and income were associated with the presence of a facility, but in the opposite direction from earlier findings: the disproportionate burden was on white, more affluent communities in metropolitan areas. At the census tract and census block levels, no association obtained between race and the presence of a facility.

Been (1995) countered Anderton et al.'s (1994b) findings, exploring alternative explanations for their results, and found that the neighborhoods most likely to host a waste facility were those characterized by: median family incomes between \$10,001 and \$40,000; black proportions of the population between 10% and 70%; and Hispanic proportion of the population more than 20%. She concluded that the outcome described as environmental racism is an "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" (Been 1995, 21).

In 1997, the academic research pendulum swung back (Szasz and Meuser 1997). Findings of environmental racism were reported in studies by Boer et al. (1997) on waste facilities in Los Angeles County, by Ringquist (1997) on TRI facilities in the United States, by Downey (1998) on TRI emissions in Michigan, by Foster (1998) on hazardous facilities in Chester, Pennsylvania, by Hird and Reese (1998) on environmental quality, by Stretesky and Hogan (1998) on Florida Superfund sites, and by Szasz and Meuser (2000) on TRI facilities in Santa Clara County in California.

Cole and Foster assert that the EJM remains one of the most active social movements today and indicate that the movement suggests the possibility of a broad-based, progressive coalition that could transform society (2001, 165). The issues adopted by the movement have broadened to include: unequal enforcement of environmental, civil rights, and public health laws; differential exposure of some populations to harmful chemicals, pesticides, and other toxins in the home, school, neighborhood, and workplace; faulty assumptions in calculating, assessing, and managing risks; discriminatory zoning and land use practices; and exclusionary practices that prevent some individuals and groups from participation in decision making or limit the extent of their participation (Bullard and Johnson 2000; Bullard, Warren and Johnson 2001). As for the case that started it all: the state of North Carolina is slated to spend over \$25 million to clean up and

detoxify the Warren County PCB landfill (Bullard and Johnson 2000).

Voices and Venues

Community-based environmental justice organizations won some highly publicized victories against corporations and government agencies. Movement charges of environmental inequity resonate with deeply held mainstream American values of fairness. Activists' and researchers' efforts increased public awareness of the unequal distribution of environmental problems. Yet no significant structural changes have occurred to ameliorate problems associated with disproportionate exposure to environmental risk. Why?

The three groups whose actions are most relevant to the EJM are activists, academic researchers, and lawyers. Each group has a unique voice and works in a specific venue. Their efforts are not necessarily consonant or cooperative; in fact, sometimes their efforts clash. We suggest that this separateness represents an obstacle in the EJM's quest to effect structural changes that would ameliorate environmental inequities. In this section, we analyze each group's voice and venue. We differentiate the voices of activists, academic researchers, and lawyers by identifying each group's *claim*, *major task*, and *targeted audience*. We describe the venue associated with each voice by analyzing the *method of reasoning* and *notion of causality* underlying the *strategies* employed in each venue to convince the targeted audience that the claim has been demonstrated.

Activists

Activists' grievance is that exposure to environmental risk is inequitably distributed and disproportionately impacts people of color and the poor. (Initially, they explained these differentials as a direct product of discrimination; later, they explained them as a result of racism and classism in policies shaping decision-making and institutional practices.) Activists' *major task* is to mobilize large numbers of people to persuade legislators to redistribute environmental risks and benefits more equitably. Their *targeted audience* is composed of: the aggrieved — those who are threatened by environmental exposure; conscience constituents (McCarthy and Zald 1977) — sympathetic bystanders who are not themselves exposed to such environmental threats, but generally support issues of social and economic justice; and the general public. The mode of argument is largely rhetorical, using semantic definitions of concepts that emphasize emotional appeal and that favor fuzziness over mutual exclusivity.

Activists favor a *method of reasoning* that relies primarily on the use of qualitative data-gathering techniques, such as the case study (Bailey and Faupel 1992; Bullard 1983;

Bullard and Wright 1986-87, 1989; Lavelle and Coyle 1993; White 1992). They typically select cases that are confirmatory, choosing communities that host noxious facilities rather than those that do not. In their reasoning, activists seek to affirm their claim rather than to test alternative hypotheses for describing the distribution of exposure to environmental threats (Liebersohn 1991). That is, activists' aim is to demonstrate the presence of discriminatory outcomes in environmental exposure.

Activists employ a lay *notion of causality* by which people may easily conclude that X is associated with Y; the connection is visible and it operates in a particular setting, but not in others. The temporal connection between cause and effect is not specified precisely; the timing may be either instantaneous or of long duration. A sufficient number of cases of environmental racism/classism are documented so the layperson recognizes differences between pre- and post-siting conditions. Activists in contaminated communities reason: "Before we lived next to that incinerator, we didn't get sick. But, after we moved here, my kids came down with respiratory diseases and lots of my neighbors' kids have respiratory diseases." Movement leaders facilitate that kind of external attribution for illness among the aggrieved to substantiate their claim and to increase movement participation.

Activists' *strategies* involve framing environmental justice grievances to appeal to the aggrieved, conscience constituents, and the general public. With the original frame of environmental racism, activists used concepts such as racism, intentional discrimination, and racist society to explain inequities in environmental risk (Pulido 1996). They urged black residents of threatened communities to seek legal redress in court or to demand greater participation in the decision-making processes shaping local and national policy on toxic waste siting and cleanup (Blais 1996; Bullard 1993, 1994a, 1999c; Foster 1993; Gelobter 1994; United Church of Christ Commission for Racial Justice 1987).

But activists soon re-framed their grievances under the banner of "environmental justice." With the environmental justice framing of grievances, activists adopted a broader, political economy framework to explain the ways in which institutional arrangements perpetuate American apartheid and shape life chances (Bullard 1994b). This framing change not only broadened their membership pool to include people of *all* colors and the poor, but also transformed their message from a confrontational condemnation of whites to a non-confrontational plea for fairness. Environmental justice advocates seek to empower people of color and the poor to demand meaningful participation with elected officials and their designates and greater influence in decision-making processes to achieve a more equitable distribution of benefits and risks where people live, work, play, and learn (Cole and Foster 2001, 14-16).

Thus, activists demonstrate their claims to the aggrieved, conscience constituents, and the general public by rhetorical appeal to basic values of fairness and by framing credible arguments. First, the presence of environmental risk in a neighborhood composed primarily of minorities and/or the poor is *prima facie* evidence of discrimination. Second, it makes little difference to those threatened whether the discriminatory outcome is intentional or unintentional.

Researchers

Researchers' *claim* is that only by conducting scientific studies can one accurately assess the role that race plays in exposure to environmental risks.⁴ Their *major task* is methodological — drawing samples from population subgroups by areas that adequately reflect differential risk of exposure, using appropriate measures on theoretically relevant variables, effecting proper controls to eliminate biases, and conducting appropriate evaluations of statistical models. Researchers' *targeted audience* is primarily other researchers in their sub-discipline in the scientific community and secondarily knowledge users. Researchers are aware that their work will be scrutinized by peers prior to publication. Their work must conform to normatively accepted standards emphasizing logic, clarity of language, proper specification of theoretical connections between concepts, and useful explanations or meaningful interpretations of events and processes. Knowledge users employ findings to understand social issues and solve a variety of problems.

Researchers engaged in hypothesis testing may follow more or less prescriptive rules of argumentation in their *method of reasoning*. The method of reasoning is linked to either mechanistic or inferential *notions of causality*. Some researchers try to conform to the more prescriptive rules of the logical deductive model with well-defined criteria for constructing propositions, arguments, and reaching valid conclusions. Others use less prescriptive rules relying on associational reasoning and inference. The mechanistic notion of causality employs a strict definition of cause and effect. It also assumes that the causal explanation be extended to apply under covering laws to other instances at different times and places (Bunge 1959, 1963; Culhane 1997; Kaplan 1964; Snyder et al. 1997). The inferential notion of causality finds a connection between cause and effect, establishes that both are present, hypothesizes a causal link, evaluates alternative explanations, and, where warranted, dismisses them in favor of the original hypothesis (Culhane 1997). This inferential notion of causality rests on probabilities. Social scientists generally require three kinds of evidence to establish inferential causality: association — the pattern of changes in one variable must be related to the pattern of changes in the other variable; the direction of influ-

ence — a cause must precede its effect; and non-spuriousness — the relationship persists when other possible explanatory variables are not significant.

Research *strategies* in studying race relations have historically focused on individuals or on organizations.⁵ For individuals, researchers focus on the attitude/behavior nexus — prejudice and discrimination — to identify the conditions that predispose an individual to selectively perceive and target others for unequal treatment and to examine the consequences of such treatments (Allport 1958; Merton 1957). For organizations, researchers explore the motive/action nexus using concepts such as institutional racism, caste and quasi-caste, American apartheid, and institutional discrimination to describe and understand the historical processes that perpetuate social, economic, and political inequalities (Davis 1949; Feagin and Feagin 1986; Hamilton and Carmichael 1967; Knowles and Pruitt 1969; Myrdal 1944). Both strategies are used to account for differentials in risk and their persistence. Researchers want to convince their colleagues and knowledge users in the public that their research is reliable and, hence, their explanations valid.

Lawyers

Typically, the lawyers who accept environmental justice cases are public interest lawyers.⁶ In contrast to, for example, personal injury lawyers who seek compensation for the client's injury with large sums of money to be divided between lawyer and client, public interest lawyers tend to view themselves "as surrogate representatives of under-represented people" (Rivkin 1999, 474). Lawyers representing environmental justice activists *claim* fundamentally that even those with little political power deserve to have their voices heard. They argue that citizens who suffer unjust exposure to environmental threats have the right to a legal redress of their grievances and the right to be included in environmental decision-making that affects them. The *targeted audience* of such public interest lawyers is the client. The lawyers' *major task* depends on the client's wishes, but usually involves the use of legal procedures to obtain for their clients the avoidance of environmental threat, the remediation of environmental damages, and/or compensation for the adverse effects of contamination. Lawyers' mode of argument is based on the objectives of law — efficiency, certainty, predictability, continuity, equity, and fairness. They attempt to establish the intent of an agency or other entity either to avoid its legally defined duties or to deny citizens their legal rights.

The *method of reasoning* is based on interpretations of legal grounds as defined by criminal law, tort law, or administrative law. The lawyer must adhere to procedural rules in making an argument that is appropriate to the venue in which the case is brought. Procedural rules concern such factors as

standing before the court, admissibility of evidence, and standards of proof.

The same basic *notion of causality* holds across the legal system, but criminal law carries significantly more stringent standards for causality than tort or administrative law; the standards for causality in administrative law are varied, bringing a high element of unpredictability to lawyer and client. Legal cause is proximate cause and it concerns intent. Intentionality is a complex legal concept, distinct from motive. While motive impels a person to act to achieve a result, intent involves the defendant's purpose to use a particular means to effect that result. For the purposes of establishing a case, only the intent is relevant. Even though a defendant acts without a hostile motive or desire to do any harm, s/he may be liable. Both cause (intent) and effect (harm) must be present; other explanations must be dismissed. The goal is to prove a causal connection between intent and harm to demonstrate culpability (Brennan 1988; Culhane 1997; Evans 1998; Kanner 1995, 1997a, 1997b; Snyder et al. 1997). Legal cause is proved for the plaintiff when the weight of factual evidence establishes with a high degree of certainty the proximity of the causal factor to the effect.

Legal *strategies* vary with the court in which the case is brought because criminal law, tort law, and administrative policy differ in their purposes and procedural rules. Criminal law and tort law are both rooted in common law, but have different aims (Buck 1996). Criminal law was established to protect the lives and property of citizens; criminal court action, then, is taken to punish violators through fines and/or imprisonment. In contrast, tort law was formed to govern the relationships between citizens; court action in tort cases is used to correct an imbalance in citizens' relationships through compensation or damages that restore balance.

Despite their different purposes, criminal law and tort law are both based on precedent because of their shared grounding in common law. In these courts, judges base their decisions on past court interpretations of the criminal statute or rule that has allegedly been violated. The burden of proof in criminal court is proof beyond a reasonable doubt; in tort law, the burden of proof involves the presentation of a preponderance of evidence. The logic is for judge/juries to determine the facts of the case and the burden of proof, identify previous cases with similar facts, and then choose between the competing precedents offered by opposing lawyers (Buck 1996). If the case is brought in criminal or civil court, the strategy is for the prosecutor or plaintiff's lawyer to design an argument that: identifies the statute or rule allegedly violated; establishes the intention of the offending party to violate the statute or rule by avoiding responsibility or denying citizens their rights; and presents a set of precedents that supports the case. By using precedent, the lawyer tries to relate the facts

of the case connecting cause and effect to previously admitted principles of causal explanation, thereby increasing the level of certainty.

Hearings concerning administrative policy are guided by significantly different purposes and procedural rules. Administrative agencies are created by government to establish broad policies within a restricted area, such as environmental protection. The agencies then establish rules for investigation and adjudication regarding those broad policy directives. Administrative rules are required to meet two constitutional standards: *procedural* due process (involving the agency's adherence to the legal requirements of notice and hearing) and *substantive* due process (pertaining to the agency's operating only within its designated policy boundaries) (Vago 2000). The purpose of court action using administrative laws is to force compliance with the established rules through fines or, invoking the criminal or civil provisions frequently contained in administrative laws, through compensation, damages, or imprisonment. Instead of being based on common law and precedent, administrative laws are based on the interpretation of civil laws described in detailed codes and emphasize a search for alternatives rather than the enforcement of rights and duties (Vago 2000). Judges locate the appropriate section of the code and interpret the statute by examining the original intent of the lawmakers, contemporary administrative interpretations of the statute, any relevant non-legislative changes that occurred after the statute was enacted, and past judicial opinions on the statute where available. They then apply their interpretations to a set of past actions and results and make a decision either against or in favor of the plaintiff, or stipulate some partial remedy as a compromise. In administrative agencies such as the EPA, the agency administrator is appointed by the president (Buck 1996). Frequent turnover in the administrator position causes discontinuity in agency interpretations of the statutes, politicizing the policy process and increasing the ambiguity in court actions using administrative law.

In administrative law, the *method of reasoning* and the *notion of causality* are the same as those for criminal and tort law. That is, the notion of causality employs proximate cause, the connection between intent and harm, and the dismissal of alternative explanations for the harm. The method of reasoning is based on the procedural rules for administrative court. But, because the procedural rules are not based on precedent, the strategy for activists' lawyers using administrative law differs somewhat from those using criminal or tort law. The lawyer must design an argument that identifies the statute allegedly violated and establishes the intent of the offending party to violate the statute by avoiding responsibility or denying citizens their rights. But, instead of offering a set of *precedents* to support the case, the lawyer offers an *interpretation* of the statute that supports the case.

Thus, lawyers retained by environmental justice activists attempt to demonstrate to members of the legal system their claims of the right of citizens unjustly exposed to environmental threats to a legal redress of their grievances. Their intention is to gain for clients some relief from exposure. They use criminal, tort, and administrative laws to prove the legal intent of the offending party to violate environmental statutes by avoiding responsibility or denying citizens their rights.

Outcomes and Noises

Each of the three voices has achieved some measure of success in its own venue. But one group's voice is frequently heard as noise in other groups' venues. In this section, we briefly describe some outcomes of each group in its own venue; then, we discuss the noise produced in intergroup interaction.

Outcomes

Environmental justice advocates were successful in their efforts to mobilize the aggrieved, conscience constituents, and the general public and in persuading lawmakers to acknowledge the unequal distribution of environmental risks in society. The messages that minorities and the poor are disproportionately exposed to risk are social facts generally recognized by the media and the public. Activists have been successful in stopping the planned construction of facilities and in gaining some concessions from operating facilities. Their voices are heard by decision-makers in all branches of local, state, and federal government. The movement continues to expand in community efforts, law school programs, and on the web. The 2000 edition of the Directory of People of Color Environmental Groups lists 350 people of color groups, 189 separate environmental justice resource groups, and 67 legal resources groups. A number of law schools sponsor an environmental law journal or offer a specialization in environmental law. The web site of Clark Atlanta University's Environmental Justice Resource Center lists 37 Environmental Justice/Environmental web sites (www.ejrc.cau.edu).

Researchers, in conducting scientific research, are expected to identify which main effects are significant, assess the relative magnitude of each, and untangle any interactive effects on environmental risks. In general, researchers focus on the first issue specifying social, economic, and demographic correlates of environmental racism. On this task they obtained consensus: people of color and low-income people are disproportionately exposed to a wide variety of environmental risks (Asch and Seneca 1978; Berry et al. 1977; Bullard 1983; Burch 1976; Freeman 1972; Gelobter 1987, 1992; Gianessi et al 1979; Goldman 1994; Goldman and Fitton 1994; Handy 1977; Harrison 1975; Krivant 1975; Lee

1992; US GAO 1983; West et al. 1992; Zupan 1975). On the last two matters, they have been less than systematic.⁷ They merely conclude discriminatory outcomes are a product of a number of factors.

Lawyers pursuing environmental justice cases have sometimes convinced the court to find in favor of their environmental justice clients. They have been most successful in cases accusing a state regulating agency of violating procedural rules for siting a facility. An example is *CANT v. Louisiana Energy Services*, a case that began in 1989 when the Nuclear Regulatory Commission (NRC) reviewed a proposal from Louisiana Energy Services to build the nation's first privately owned uranium enrichment plant in Louisiana's predominantly black Claiborne Parish. Residents formed Citizens Against Nuclear Trash (CANT) and employed administrative law to sue the company and the NRC for environmental racism (Bullard and Johnson 2000). In 1997, the NRC's three-judge panel of the Atomic Safety and Licensing Board ruled that racial bias had played a role in the site selection process, and the judges chided the NRC staff for not addressing the specific mandate of Clinton's Executive Order 12898. Lawyers' efforts have met with less success in cases charging that a company's operating procedures violated rules and resulted in the contamination of a community. Sometimes concessions have been won, but the facilities remain in operation.

Lawyers have only rarely used civil rights laws to level a charge of environmental racism by arguing that an entity receiving federal funds engaged in a pattern of racially discriminatory procedures in facility siting. An example is the 1996 federal complaint filed by the grassroots group in Chester, Pennsylvania, accusing the state, the state's environmental regulatory agency (which received federal funds), and various state officials of *unintentional* environmental racism in granting a permit for a company to build a facility to treat contaminated soil. Although Title VI bans only intentional discrimination, it permits federal agencies to adopt regulations that also ban unintentional discriminatory effects. The US Supreme Court in 1983 ruled that federal anti-bias laws allow private lawsuits when intentional discrimination is alleged, but the court did not rule on whether such lawsuits are allowed over unintentional discriminatory effects. The Chester case was the first to try, by charging that the outcomes of the state agency's permit-granting process were racially biased. A US district court judge dismissed the suit, ruling that the suit had to be based on intent. But his ruling was subsequently overturned by a US Circuit Court of Appeals decision that interpreted the 1983 US Supreme Court ruling as the high court's endorsement of the right of private citizens to sue over discriminatory effects, regardless of intentionality. The Commonwealth of Pennsylvania

appealed the case to the US Supreme Court in early 1998. The Supreme Court later that year declared the case moot because the grassroots organization requested a dismissal after activists were informed that the soil treatment company had withdrawn their permit request. Thus, the legal issue of unintentionality remains unresolved in the courts.

Noises

Extensive interaction between activists and researchers has not transpired. Researchers may support the movement's goals, but their explanations for discriminatory outcomes may frustrate activists. Researchers' emphasis on precise semantic and operational definitions meets the standards of their targeted audience — their scientific peers — but fails to evoke the emotions that activists employ to mobilize the aggrieved. Researchers neither completely relied on intent as the causal variable nor analyzed variables influencing the wide variety of specific discriminatory outcomes to which activists pointed. Activists' claim that racism may be inferred from discriminatory outcomes without demonstration of the presence of prejudicial intent violates the researcher's procedural norms on demonstrating adequacy of proof (Heiman 1996a, 1996b). For the researcher, institutional discrimination is a reasonable claim only if historical arguments establish that intent to discriminate played a role in formalizing institutional arrangements in the exercise of powers as well as the assignment and conduct of responsibilities.

Although the association of two variables is a reasonable basis for attributing cause for activists, the general public, and the media, researchers may not draw causal inference from association. For the researcher to subsume correlative differentials under the causal umbrella of racism or institutional discrimination is to confer explanatory power and legitimacy to an unproven causal connection. If the rhetorical argument becomes the accepted causal interpretative frame, then further research to identify and prove cause is foreclosed, and alternative explanations remain unexamined. Activists seek a simple cause as the basis for mobilization; researchers offer multi-causal, rather than single-cause, models. Researchers' identification of the influence of factors other than race — market forces, degree of urbanization, proportion of industrial workers — dilutes activists' rhetorical appeals in raising consciousness. The existence of multiple causes undercuts activists' arguments that race be given high priority as a factor in ethical policy debate over redistribution of risks and benefits.

Litigation frequently hinders mobilization because as protest activities ebb, lawyers increasingly make the decisions and the grassroots organization must dig deeper for funds to support the litigation. The lawyers' use of a binary logic of culpability to prove guilt or not guilt frustrates

activists who typically use ethics and moral reasoning to identify inequalities in the distribution of goods and bads. Although each logic is binary, little overlap occurs in what constitutes not-guilt, truth, and good and what constitutes guilt, falsity, and bad. Activists' argument that racism may be inferred from racially disproportionate outcomes without demonstration of the presence of prejudicial intent violates lawyers' rules on adequacy of proof (Heiman 1996a, 1996b). The court rejects explanatory claims that rest on assertion without supporting statistical evidence or supporting testimony. The activist's lay notion of causality finds no acceptance among lawyers. Evidence must establish that discriminatory intent and harm occurred, as well as offer proof of causal connection. Litigation may not be the best strategy for activists seeking social change. As Cole and Foster (2001, 47) suggest: "While legal action brings much-needed attention to environmental justice struggles, legal strategies rarely address what is, in essence, a larger political and structural problem . . . lawsuits take place in a forum in which the resources of private corporations and government entities far outweigh community resources."

Lawyers rely on a mono-causal mechanistic notion of causality that demands the demonstration of a causal connection between intent and consequence. Such a causal model based on intent frustrates researchers who build multi-causal models of explanation based on probability. Researchers and lawyers diverge widely in their understanding of intent. Lawyers distinguish between motive and intent, and only intent is relevant in a tort case. A defendant may be liable for harm even if s/he did not intend to cause *harm*, as long as s/he did intend to bring about the *consequences* that are the basis for the case. That is, the defendant is considered to intend the consequences, if the goal of his/her actions was to bring about those consequences. In contrast, social science researchers tend to consider motive and intent as synonymous and captured in the concept of attitude. They distinguish between attitude and behavior and measure the correlation between them. Regarding racial discrimination, the relevant attitude is prejudice, which is equivalent to intent; the relevant behavior is discrimination, equivalent to consequence. Researchers' statistical efforts to establish prejudicial intent in targeting people of color for placement of waste management facilities or other locally unwanted land uses are generally inconclusive.⁸ Researchers prefer to build multi-causal models to explain *institutional* discrimination. Institutional discrimination refers to a discriminatory consequence that is not reducible to an individual's prejudicial intent, but rather is a complex result of several variables, including a long history of racial practices that left an institutional imprint even after enactment of civil rights legislation. Researchers have clearly established in correlational studies the disproportion

of environmental risks borne by minorities and low income groups. But their work is useless to lawyers basing a case on discriminatory intent because courts do not allow the extrapolation of cause based on mere association.

In fact, such research often identifies predictors other than race that explain the disparities in harmful outcomes, including: age, income, historical patterns of land use, population density, proximity, rural, suburban, and urban, and type of site and its activity status (Greenberg 1993; Hird 1993; Hird and Reese 1998; Mank 1995; Pollock and Vittas 1995). Some argue that minorities are disproportionately exposed by dint of market forces (Been 1993). Others argue that informal covenants, redlining, and block busting lead to white flight to the suburbs, create hyper-segregation of blacks in urban areas (Massey and Denton 1989; Massey, Gross, and Shibuya 1994), and limit blacks' access to jobs, housing, and medical care (Bullard 1994a; Cable and Mix 2000). But, for the lawyer, the introduction of any other explanation discredits the plaintiff's claim that race is the grounds for discrimination. Multiple explanations of differential risk undermine the legal criterion of sufficiency of evidence in arguing racism as the cause of discrimination.

Reflections

Some progress has been made since the earliest days of the EJM. For example: one direct consequence of Executive Order 12898 was the Institute of Medicine's report (1999) on a National Academy of Science committee's recommendations for addressing environmental justice issues via public health, biomedical research, education, and health policies. Such attention suggests a widening forum for the discussion of the causes and consequences of disproportionate environmental risks. Activist/academic and Bullard's associate Glenn Johnson observes in his review of this manuscript that the "walls" separating activists, researchers, and lawyers have weakened since 1995. He bases his observation on anecdotal evidence such as the increased advocacy of environmental justice by health care practitioners and officials and the introduction of environmental justice materials in academic curricula. Johnson's diagnosis of the EJM is that the most significant problem "is not the 'science' of environmental justice, but the 'political science' among various decision makers who determine whether an environmental justice problem is legitimate or not."

Still, the efforts of activists, researchers, and lawyers remain less than successful in ameliorating environmental injustices, ideally obtainable by building coalitions. In the past, each group was constrained, pursuing its own subgoals: for activists, recruitment and political mobilization; for researchers, hypothesis testing and knowledge building; and

for lawyers, appropriate juridical arguments and winning. To create a more effective coalition, these “old” voices must modulate to “new” voices.

The old voice of activists is characterized by: the redress of grievances in a single community or in a limited number of sites; the mobilization of only one given ethnic group in a community; and an audience restricted to community residents. The old voice of researchers features hypothesis-testing relevant to the theoretical issues of a particular discipline and an audience comprised primarily of fellow researchers and only secondarily of other knowledge-users. The old voice of lawyers emphasizes practices associated with vested, self-interest law and adherence to the court’s procedural rules that do not permit multi-causal models as evidence. In intergroup interaction, these old voices produced noise.

In contrast, the new voices diminish the clamor. The new voice of activists must target system inequities and the institutional practices of capitalism that generate differential risks; reach out to a broader constituency to include, not only the poor of all colors, but also middle-class and white sympathizers; and carry their appeals for fairness to political arenas such as the court of public opinion because, although cultural values emphasize equality, the courts of justice do not hear arguments against class-based discrimination. The new voice of researchers must augment discipline-required hypothesis testing with participatory research models that respond to community needs; enlarge their audience to include community residents; and promote their research findings in political arenas such as Congress, governmental agencies, state legislatures, and local city councils. The new voice of lawyers must permit space for the more complex arguments of researchers; emphasize a client-centered model; and include the public as an important segment of their audience. Underlying the old voices is an emphasis on monolingualism in which each party typically acted in accord with its own agenda and spoke to a delimited audience. In contrast, underlying the new voices is an emphasis on polylingualism in which each party recognizes the agenda of the others, acts to achieve some degree of cooperation with them, and speaks to a broader audience.

Such new, polylingual voices would bring beneficial effects for more effective cooperation among activists, researchers, and lawyers. One effect of the new voices would be to produce an agendum that broadens the base of participation at the grassroots level, simultaneously shaping the nature of policy-making debates to involve various publics, legislators, and bureaucrats. The new agendum would call for a risk free society, no end-production pollution, and equitable exposure to risks of morbidity and mortality by region, class, and race/ethnicity (Bullard 1999a, 1999b; Cole and Foster 2001). The EJM has already begun to focus attention on

issues that signal an improved agendum by highlighting: the effects of current federal and state laws, administrative regulations, and procedural guidelines on the implementation and enforcement of pollution policies; the unfairness of requiring victims to shoulder the burden of proof of harm rather than mandating that polluters prove their actions caused no harm; and the need to adjust the prioritization of community health and welfare relative to corporate profits and private property rights. Kuehn (2000) suggests further potential agendum items involving: the identification of criteria for defining minority and low income communities that both researchers and lawyers may use; the specification of political standards for determining when a disparate impact is inequitable; and the determination of the appropriate reference for community when determining the degree of disparity legally significant under Title VI.

A second beneficial effect of the new voices of activists, researchers, and lawyers is the replacement of specialized vocabularies with a common language of environmental justice that is denotatively meaningful. Highly abstract and theoretically detailed models must be unpacked, the complex made simple. In general, the vocabulary of social scientists, the logic of hypothesis testing, and the complexity of findings must be reinterpreted and simplified by lawyers to be useful in courts. Activists must learn both academic and legal terminologies, researchers must connect with activist and legal communities, and lawyers must work to incorporate these groups into the courtroom. The rule that governs all communication must not be forgotten: write so that both insiders and outsiders can understand it.

A third beneficial effect of the new voices is the opportunity to create new strategies in the courts of justice, the court of public opinion, and in political institutions. EJM activists have typically sought redress of grievances through the courts by framing suits under equal protection, environmental, and civil rights laws (Mank 1999; Poirer 1994; Schwartz 1997). Different arguments could be tendered in the courts to modify existing jurisprudence. Activists, researchers and lawyers acting together might convince judges to allow arguments which permit plaintiffs’ lawyers the same freedom as defense lawyers to introduce multicausal arguments that involve the relative influences of race and other variables on disproportionate risk. Allowing such arguments would replace the mechanistic notion of causality that presently discounts scientific assessments of disproportionate risk. In addition, new strategies might be developed for audiences *outside of* the courts of justice. The court of public opinion might be addressed via media and public forums in ways that inform and educate the public in the new polylingualism.

Perhaps the most important arena for the new, polylingual voices of the EJM is political institutions at all levels.

These new voices resonate to facilitate political action locally, nationally, and globally. Courts of justice may only rule on established law, and, although racial discrimination is prohibited, no laws exist against class-based discrimination. But, by appealing to cultural values of fairness, the EJM and public opinion together can potentially exert the political pressure to move even the most intransigent politicians in the direction of a more equitable distribution of environmental risks. At the national level, such political action will be most successful when politicians sympathetic to green/fairness issues hold office. When the EJM faces resistance in Washington from a predominance of politicians favoring capital formation, regional and community coalitions in the movement can target state and local issues. With a broader audience and with more articulated structural ties among the parties, the new, polylingual voices of the EJM will more successfully promote thinking globally while acting locally.

Endnotes

1. Phone: (865) 974-6021; E-Mail: scable@utk.edu.
2. We distinguish between the concepts of "discourse" and "voice." Discourse involves the social construction of meaning and follows postmodern theorists such as Brown (1990), Laclau and Mouffe (1985), Simon (1990), and Teymur (1982) and is used by such social movement analysts as Brulle (1996), Deitz and Burns (1992), and Dietz, Stern, and Rycroft (1989). Discourse refers to a group's commonly held version of reality "that constitutes the legitimate definition of the situation" (Brulle 1996, 60). Activists use a particular discourse to create a group identity distinct from the general social identity whose different interpretation the activists contest. In contrast, we use voice to refer to differences in vocabularies and venues that inadvertently impede cooperation among groups who *do* hold a common definition of the situation. That is, EJM activists share with many social science researchers and public interest lawyers a movement discourse that features environmental equity concerns. Their interpretations do not conflict but their vocabularies unintentionally constrain coordination of their efforts toward a common goal.
3. www.ejrc.cau.edu
4. Epidemiologists and demographers have long documented differentials in life chances by age, sex, race, ethnicity, etc., in patterns of cause-specific morbidity and mortality, generally relying on vital registration census data on large geographic units such as nations and regions. Studies at the community level sometimes rely on surveys collecting retrospective incident histories for individuals. For studies with large numbers of events, rates of risk are statistically robust and carry more probative value with the courts. Conversely, for studies of rare events, risk estimates are statistically weak and carry less probative value with the courts. Although epidemiologists and activists have sometimes collaborated in developing health care education, our focus is on social science researchers because of the considerable extent of the literature reporting on tests of the disproportionate risk of certain social groups rather than documenting actual illnesses.
5. Spatial autocorrelation is a problem for researchers who are interested in ascertaining whether environmental risk is distributed randomly or non-randomly across geographic units. If risk is distributed across *like* and *adjacent/neighbor*ing units, one obtains positive spatial autocorrelation. If neighboring units are *unlike*, one obtains negative spatial autocorrelation. Different models test different assumptions of contiguity and independence. If contiguous areas are alike, assumption of the independence of variables is violated. Thus, while geographers often examine issues of spatial autocorrelation to untangle definitively the effects of race and class across spatial units, sociologists and demographers rarely do so (Cliff and Ord 1973, 1981; Sibert 1975).
6. One might consider judges to comprise yet a fourth voice since, typically, judges do not have the kinds of specialized knowledge that lawyers do and may consequently be as naive as the public. For our purposes in this paper, however, we believe that treating judges as a fourth voice would bring unnecessary complications to the argument without a significant increase in understanding.
7. A few explanations for this sin of omission may be tendered. Researchers ideologically committed to the amelioration of social injustices and who believe that racial inequalities are "bad" may emphasize those theoretical interpretations in which race is "most" or "more important" than other variables, e.g., class. If race and class have significant main effects, rarely do researchers report their relative importance, e.g., standardized beta weights (Mohai and Bryant 1992a, 1992b). Models with main effects only are easier to interpret and calculate than are models with significant interaction terms. Even if fully saturated models were evaluated and interaction terms were found to be significant, the results of such analyses are not reported in the text, an appendix, or a footnote indicating where interested readers may obtain them. If the journal reviewers tend to favor qualitative over quantitative techniques, or favor less over more sophisticated statistics, researchers may eschew evaluating interaction effects.
8. For review of this claim, see Anderton et al. (1994a); Anderton et al. (1994b); Anderton, Oakes, and Egan (1997); Been (1994a, 1994b, 1995); Been and Gupta (1997); Boer et al. (1997); Centner, Kriesel and Keeler (1996); Daniels and Friedman (1999); Downey (1998); Goldman and Fitton (1994); Hamilton (1995); Kelsall et al. (1997); Mohai (1995); Reddic and Cuyenkendall (1995); and Zimmerman (1993).

Acknowledgments

The authors are grateful to James A. Black, Glenn S. Coffey, Katrice J. Morgan, Dean Hill Rivkin, Glenn S. Johnson, and two anonymous reviewers. Their comments on various drafts were educational and essential in strengthening our argument. Sins of omission and commission in the work are ours.

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