

## **Environmental Justice and Risk Assessment: The Uneasy Relationship**

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### **ABSTRACT**

Allegations that disproportionate environmental risks fall on low-income and minority communities promote calls for "environmental justice." A related claim suggests that higher rates of some diseases stem from unequal risks. The empirical evidence supporting these claims remains weak, but uncertainty and controversy are unlikely to abate in the near future. The environmental justice movement has successfully mobilized its constituents, and captured the attention of policymakers, with a politically potent rhetoric of "risk and racism." Ironically, the movement remains largely uninterested in, or even hostile to, formal risk assessment even while ostensibly calling for more of it.

Ensuring that authorities effectively address any disproportionate risks borne by low-income and minority communities has been a central theme of advocates for "environmental justice" (Foreman, 1998; Bullard, 1994b). Since the early 1980's the environmental justice movement, a diverse coalition of grassroots activists and groups, has insisted that communities of color are too often the "invisible man" of environmentalism — underrepresented in environmental organizations and policy processes. The result, say activists and their sympathizers, is that communities of color have been unfairly victimized by polluted sites and inadequate environmental law enforcement, a claim bolstered by some widely trumpeted empirical research findings (Lavelle and Coyle, 1992; United Church of Christ/Commission for Racial Justice, 1987). Some have suggested that such communities have been routinely targeted for environmental poisons, perhaps leading to higher rates of chronic illness such as cancer. "Environmental racism" is the incendiary label often applied to such claims. More broadly, according to one leading interpreter, environmental racism refers "to any [environmental] policy, practice, or directive that differentially affects or disadvantages . . . individuals, groups, or communities based on race or color (Bullard, 1994a)."

Do low-income and minority persons in fact bear a disproportionate share of society's environmental risk? Do they develop pollution-related illnesses more often

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than other persons? We are far from answering either question, much farther regarding the latter. Perhaps more interestingly, a close examination of environmental justice activism makes abundantly clear that, despite persistent rhetoric to the contrary, the movement is not fundamentally risk-driven. And anyone hoping for the day when U.S. EPA and state environmental authorities have a reliable analytic handle on disproportionate risk borne by environmental justice constituencies should receive fair warning: don't hold your breath.

To be sure, we are more likely to find certain environmental risks in closer proximity to poor people than to wealthier ones. An EPA task force on environmental equity, created in July 1990 by administrator William Reilly in the wake of activist prodding, determined that one problem — lead exposure — stood out in the data as a particular threat among low-income black youngsters (USEPA, 1992). There probably are other industrial substances having a greater cumulative adverse impact on minorities than on whites — toxic residues ingested via fish consumption is often mentioned (Wright, Bryant, and Bullard, 1994) — but any resulting disproportionate disease incidence has so far eluded science. Moreover, scaring consumers away from fish only makes sense in health terms if the replacement food does not prove even riskier (Anderson and Wiener, 1995).

The lens of environmental justice can blind one to the big picture. For one thing, environmental risks are very widely distributed. Many low-income persons and persons of color reside and work (alongside a great many whites) in and near cities. Anyone who does is almost certainly breathing dirtier air than more rural folk. No one disputes that a fair amount of what migrates into urban airsheds would ideally not be there, especially the ozone that, as a significant respiratory irritant, can help trigger asthma attacks (Lave, 1997). African Americans, young and old, suffer disproportionately from asthma, as reflected by rates of asthma-associated mortality and hospitalization (U.S. Centers for Disease Control, 1995). But even in urban areas both indoor and outdoor environments may be implicated in asthma incidence (Rosenstreich *et al.*, 1997). In any case, environmental justice enthusiasts have yet to present a compelling rationale for making race *per se* a driving factor in clean air policy.

At a purely impressionistic level it is hard to discern any inkling of racial distinctiveness among the headline environmental controversies of our time. New Jersey has long been renowned for its abundance of hazardous waste, including the nation's top-ranked Superfund site, Lipari (Mazmanian and Morell, 1992). Would anyone claim that the size of that state's minority population in any way explains this? One might pose the same question about the Hanford nuclear waste site in Washington state, or even the infamous Love Canal and Times Beach episodes of years ago (Wildavsky, 1995). The huge Fresh Kills landfill on Staten Island, the sole facility of its kind in New York City, has endured since the 1940s for many reasons but, even in a city with a large minority population, race is surely not among them (Martin and Revkin, 1999). More convincingly, however, recent empirical studies do little to bear out the claim of regular or systematic ethnic bias either in facility siting or in cleanup decisionmaking (Foreman, 1998).

Any risk management professional who has closely watched the environmental justice movement has probably noticed two phrases being repeated with an almost mantra-like regularity. One is "cancer alley." The other is "multiple, cumulative and

synergistic risk." In movement lore, "cancer alley" endures as perhaps the signal example of environmental harm disproportionately borne by communities of color (Wright, Bryant and Bullard, 1994). In 1993 congressional testimony Pat Bryant, representative of the Gulf Coast Tenants Association, proclaimed:

"'Cancer Alley' . . . remains one of the most poisoned areas anyplace. One hundred and thirty-eight petro-chemical facilities have made home in large plantations, most of the time as close as possible to African-American communities. . . .

"Despite denials of the petro-chemical industry financed studies, we know that cancer incidence in this corridor is higher than the national average. Cancer is so commonplace in 'Cancer Alley' that almost every family is touched.

". . . This area has become a zone of national sacrifice. This is genocide at its finest, and it is a national disgrace (U.S. House of Representatives, 1993)."

The trouble is, careful research does not sustain the allegation that the petro-chemical industrial corridor extending from Baton Rouge to New Orleans promotes excess cancer incidence (Groves *et al.*, 1996).

Actually it is not surprising that black Louisianans have been seeing a lot of cancer since everyone else is too. Science writer Michael Fumento (1993) observes that "one fourth of us will contract cancer and one fifth of us will die of it. Indeed, as the population ages and fewer and fewer people die of other causes, more and more will die of cancer." But have black Louisianans been seeing more cancer than other Americans? In 1990 the respective cancer incidence rates among blacks and whites nationally stood at 423 and 393 per 100,000 (Fisher, Worth and Mayer, 1995). Differences in behavior and health care access are clearly part of the explanation. Behavioral (and some occupational) factors have been associated with cancer incidence in Louisiana but there appears to be no overall "cancer epidemic" in that state or in the so-called "Cancer Alley."

But the mythical "Cancer Alley" endures in movement rhetoric, and it is not hard to understand why. A connection between petrochemical plants — or, for that matter, between any source of fearsome and unwanted material — and disease has powerful intuitive appeal for citizens even though science may identify no causal linkage. As Margolis (1996) argues, a divergence between expert and citizen perception of risk remains one of the more treacherous fault lines in environmental politics, precisely because of the profound grip that intuition wields over citizen perceptions. And since one cannot prove a negative — that is, prove beyond all doubt that factories and dumpsites could never cause cancer — uncertainty prevails.

That uncertainty also provides powerful leverage for mobilizing citizens, and for holding the Establishment's feet to the fire. In the end, this is the real game that environmental justice activists are playing. These activists (especially those more or less full-time advocates who champion a broad agenda transcending specific site-level grievances) are best perceived as social justice proponents who happen to specialize in environmental themes. Employing such themes, they try to win a larger voice, and more resources, for disadvantaged communities, broadly defined. Their

specific targets are many and varied, their overarching motivation strongly egalitarian. On behalf of their redistributive ends, they wish to arouse and unify citizens in order to make and enforce demands on business and government. The environmental justice movement is, of necessity, highly opportunistic and improvisational. Because the movement's main thrust is toward the "empowerment" of a diverse citizen constituency, scientific findings that blunt or conflict with that goal are a decided inconvenience, and are therefore either ignored or ridiculed.

Formal analysis, including risk assessment, is thus largely irrelevant to the underlying objectives and gratifications that stir activist and community enthusiasm under the environmental justice rubric. The cry of "multiple, cumulative and synergistic risk" bundles a partly disingenuous plea for more research along with an intuitively appealing presumption that minority and low-income communities face substantial environmental risks that remain unrecognized and unassessed. But the plea is disingenuous because activists have no intention of using risk assessment, however careful, to guide their advocacy priorities. Indeed, much of their rhetoric betrays the tone of hostility toward "establishment science" common in grassroots environmentalism as a whole.

Sympathetic accounts of the movement's rise often highlight studies published by the U.S. General Accounting Office (1983) and by the United Church of Christ/Commission for Racial Justice (1987). These studies purported to show that commercial hazardous waste facilities were more likely to be found near minority communities. What is most important to grasp about these studies is not just that they were crude and woefully misleading — though they were — but rather that they were always merely agenda-setting instruments of the movement, not its cause. Although more refined risk analyses may have some uses in the environmental justice context, it would be naive to imagine that their conclusions will matter much to communities unless bonded to a gratifying practical politics anchored within those communities. And analytic conclusions cannot achieve this effect unless they demonstrate what activists want shown, that minority and low-income people are disproportionately victimized.

The environmental justice perspective is powerful not because it speaks honestly to technical questions of harm or risk — it often does not — but because it appears to promise something larger, more uplifting, more viscerally engaging than mere careful calculation can offer. It effectively speaks to the fear and anger among local communities feeling overwhelmed by forces beyond their control, and outraged by what they perceive to be assaults on their collective quality of life. In this context, "multiple, cumulative and synergistic risk" must be seen as representing a kind of technically-grounded rhetoric rather than an authentic commitment to a technical perspective. Such language seems to its users to be the price of admission to the policy process, but it most certainly is not what the ticket buyers are really all about.

"Multiple, cumulative, and synergistic risk" is useful to the environmental justice movement in yet another way: it is virtually impossible that environmental authorities can, in the foreseeable future at least, successfully study and attack it. In December 1996 EPA staff from the Office of Policy Planning and Evaluation (OPPE) came before EPA's National Environmental Justice Advisory Council (NEJAC) to brief members on the cumulative exposure project under way. NEJAC learned that the project was using existing data to independently estimate cumulative concentra-

tions/exposures from three pathways (*i.e.*, outdoor air, drinking water, food) in an attempt to lay the groundwork for consideration of multi-pathway cumulative exposure. But that last word — exposure — bears emphasis, for it remains a long way indeed from “risk.” For the moment, let us assume that one can have full faith in the data being assembled, and that the inevitable gaps and uncertainties don’t too badly afflict those substances (such as dioxin, PCBs, pesticides, and lead) ranking highest in the activist pantheon of environmental horrors. Even so, can one expect EPA reliably to gauge the various interactive and cumulative effects of these (often very low) doses and exposures, and to do so in a way that would win the confidence of activists? The simple answer is no (unless, again, the results happen to provide a convenient platform for activist claims). To hope otherwise is to yearn for a pot of gold at the end of an analytic rainbow. Yet EPA’s all but certain failure on this score will help activists in one potent way: it offers grounds for additional rhetorical leverage over the agency.

There are serious environmental problems afflicting low-income and minority communities. But they are overwhelmingly quality-of-life problems: odors, noise, unsightly construction or destruction, traffic congestion — as well as the economic fragility that often brings people into unhappy proximity with such things. Truth be told, activist carping about “risk and racism” is really a cover for trying to crank up collateral attention to these other issues. There are serious health problems disproportionately affecting low-income persons and persons of color, but the potential leverage offered by pollution control over most of them ranges from slim to none.

But at the end of the day, one should not be too hard on environmental justice activists. Their manifest limitation as analysts stems from their commitment to a non-analytic enterprise that is deeply democratic in aspiration. And up to a point their strategy of racialized NIMBY (“Not In My Backyard!”) advocacy is compelling. It effectively blends civil rights and environmentalism, two of the great domestic policy progressive causes of the last 40 years, into a politically potent brew. From the White House to the county court house, the environmental policy milieu has been dramatically transformed as a result. And, like grassroots environmentalism generally, environmental justice advocacy has proved remarkably adept at one crucial task: just saying no (to dumps, incinerators, and facilities of many kinds). Advocacy is driven to an important extent not by risk or health *per se* but by the deeper political imperative to find new language and alternative policy vehicles with which to drive egalitarian social change. For better or worse (and to the enduring frustration of risk analysts) this often means also “saying no” to the premises, methods, and results of risk assessment.

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