1 Introduction

World War III has already begun, according to environmental activist Dave Foreman. In this struggle of humans against the earth, he says "there are no sidelines, there are no civilians."[1] Founder of Earth First!, Foreman and his followers have been fighting this world war by performing acts of "monkeywrenching," or "ecotage" (ecological sabotage, the destruction of machines or property that are used to destroy the natural world). Monkeywrenching includes acts such as pulling up survey stakes, destroying tap lines, putting sand in the crankcases of bulldozers, cutting down billboards, and spiking trees so they cannot be logged. Foreman claims such acts of ecological sabotage are part of a proud American tradition of civil disobedience, like helping slaves escape through the Underground Railroad or dumping English tea into Boston Harbor. Rather than slaves or colonists, monkeywrenchers say they are not protecting humans, but earth itself.

As Foreman's remarks suggest, environmentalists have tended to focus on protecting the earth rather than the humans who inhabit it. This book argues not only for protection of the planet but also for public-interest advocacy on behalf of people victimized by environmental injustice. Environmental injustice occurs whenever some individual or group bears disproportionate environmental risks, like those of hazardous waste dumps, or has unequal access to environmental goods, like clean air, or has less opportunity to participate in environmental decision–making. In every nation of the world, poor people and minorities face greater environmental risks, have less access to environmental goods, and have less ability to control the environmental insults imposed on them.

This chapter begins the task of diagnosing, analyzing, and resolving problems of environmental injustice (EJ). It focuses on six key questions: (1) Why

have so many environmentalists called for protection of the environment, even as they remained misanthropic and ignored the plight of humans? (2) How did environmentalists come to recognize problems of environmental justice? (3) What are the characteristics of environmental injustice? (4) What are some key examples of environmental injustice, both in developed and in developing nations? (5) Why do some people deny EJ problems, and how defensible are their denials? (6) Why do critics of the EJ movement tend to reject various solutions to EJ problems, and are their rejections reasonable? After evaluating each of these questions, the chapter closes with an overview of each of the remaining chapters of the volume.

Environmentalism and Biocentrism

To understand why people have ignored environmental injustices for so long, it might be helpful to examine the attitudes and priorities of various environmentalists, like Dave Foreman. Foreman's priorities were called into question several years ago after an accident at the Louisiana-Pacific sawmill in Cloverdale, California. On May 8, 1987, a band saw struck an 11-inch spike embedded in a redwood log. The saw shattered, and pieces of blade flew across the room. A large section hit workman George Alexander, 23. It broke his jaw and knocked out several teeth. Foreman called the California accident "tragic"; nonetheless, the attitudes and writings of many environmentalists seem to encourage disrespect for humans even as they call for a greater respect for nature and the earth. Such writings often are exclusively nature centered (biocentric) rather than also human centered (anthropocentric).[2]

In "Animal Liberation: A Triangular Affair," J. Baird Callicott claims that "the extent of misanthropy in modern environmentalism . . . may be taken as a measure of the degree to which it is biocentric." And most environmentalists have heard Edward Abbey's famous remark that he would rather shoot a human than a snake. Garrett Hardin even went so far as to recommend that people injured in wilderness areas not be rescued; he worried that rescue attempts would damage pristine wildlife. Even Paul Taylor, in *Respect for Nature*, writes that "in the contemporary world the extinction of the species *Homo sapiens* would be beneficial to the Earth's Community of Life as a whole." In *Eco-Warriors*, Rik Scarce advocates extermination of humanity as "an environmental cure-all."[3]

Gene Hargrove believes that several factors explain the misanthropy of many environmentalists. One reason is that the early U.S. environmentalists, like Teddy Roosevelt, were the most educated and powerful people in the country. Their environmentalism frequently consisted of bird-watching or expensive ecotourism, not addressing areas of greatest pollution where poor people live. Another reason is that there was no significant conflict between environmentalists and the government until the 1950s, when the Sierra Club had a falling out with the U.S. Forest Service over logging policy.[4] Prior to

this time, environmentalists were aligned with powerful commercial and government interests, not with poor people. A third reason for traditional environmentalists' emphasis on protection for nature, rather than humans, is that many environmental ethicists have claimed that problems of planetary degradation can be blamed on anthropocentrism, or human-centered values. Callicott's remark, just quoted, is a good example. Rejecting anthropocentric ethics, many environmental philosophers have called for biocentric norms. They have argued for evaluating human actions on the basis of how well they promote ecological, not human, welfare.

Often this biocentrism or ecocentrism is coupled with an appeal to holism, to valuing nature as a whole, rather than valuing its individual species or parts, like humans. Because biocentrists focus on the good of the whole (ecosystems, habitats, and so on), philosophers like Tom Regan have charged them with "environmental fascism." Regan and others believe an ethics of maximizing biotic or ecological welfare could lead to violating human rights in order to serve environmental welfare. Indeed, the misanthropic words of Callicott, Hardin, and Taylor, already quoted, give some credence to the charge of environmental fascism.[5]

Contrary to environmental fascists and misanthropic biocentrists, this book argues that protection for people and the planet go hand in hand. Recognizing the importance of environmental justice, the book points out that poor and minorities are the most frequent victims of all societal risks, including environmental degradation. To help reclaim the democratic birthright of people everywhere, these chapters suggest methodological and procedural reforms in the way society evaluates and distributes environmental risks. They also argue for correcting unequal opportunities to participate in environmental decision–making. Finally, the book explains why everyone ought to assume responsibility for the actions of those who pollute, develop, and threaten either the land or the most vulnerable people on it.[6]

From Environmentalism to Environmental Justice

Early in the twentieth century many environmentalists were aligned with governmental and industrial interests. The environmental movement of that era conjured up images of backpackers and bird-watchers, Boy Scouts and nature lovers. The images were of white upper- or middle-class people concerned with conserving a pristine wilderness or an important sanctuary. The environmental movement often focused on action to protect threatened forests, rivers, and nonhuman species, not humans. Even in the academic community, environmental scholarship and particularly environmental ethics traditionally have focused on esoteric topics such as whether to give "rights" to trees and rocks and whether nature has intrinsic or inherent value.[7] Have they been playing the violin while Rome burned?

Two decades ago, while wealthy environmentalists focused on leisure activities and environmental scholars wrote about ivory-tower topics, the

grassroots environmental movement began to notice society's most vulnerable groups. They recognized that poor and minorities have been especially damaged by societal threats such as environmental pollution, runaway development, and resource depletion. This grassroots movement saw farmworker communities victimized by pesticides, Native American tribes devastated by radioactive waste, African-American ghettos beset with urban pollutants, Latino settlements plagued by hazardous waste incinerators, and Appalachian towns controlled by absentee-owned coal companies.[8] They saw minority communities forced to trade unemployment for environmental pollution, to exchange a shrinking local tax base for toxic dumps, to trade no bread for a bloody half loaf. Such tradeoffs arose in communities more worried about starvation, unemployment, and violent crime than about health threats from industrial pollution. As Professor Bob Bullard, U.S. sociologist and EJ advocate, notes, this situation has changed. Most minority communities are no longer willing to make such no-win exchanges. They realize they constitute the path of least resistance for polluters and developers, and they have begun to take action. In fact, Bullard says that 80 percent of minority-community resistance groups began as environmental organizations. The tactics of such groups have been demonstrations, marches, hearings, public workshops, research, and lawsuits.[9]

Many people believe that traditional environmental activists, as opposed to EJ advocates, have different goals and backgrounds because often they come from different worlds. This book suggests, however, that the two movements are merely different sides of the same coin. What affects the welfare of the planet affects us all. And once polluters and developers learn that their costs of doing business must be borne by everyone and not shifted to the poor and the powerless, "greening" the ghetto may be the first step in "greening" the entire society.

Understanding Environmental Injustice

The grassroots, minority-led movement for political equality, self-determination, and EJ has sprung up mainly in the urban centers of America. Led largely by women of color, this movement combines many of the philosophies and goals of civil rights and environmental activism. But what is the environmental justice movement? It is the attempt to equalize the burdens of pollution, noxious development, and resource depletion. Environmental justice requires both a more equitable distribution of environmental goods and bads and greater public participation in evaluating and apportioning these goods and bads. Evidence indicates that minorities (e.g., African Americans, Appalachians, Pacific Islanders, Hispanics, and Native Americans) who are disadvantaged in terms of education, income, and occupation not only bear a disproportionate share of environmental risk and death but also have less power to protect themselves.[10] Even children represent a minority victimized by environmental injustice. They are more sensitive to all forms

of environmental pollution, and frequently schools have been built atop closed hazardous waste sites.[11] Studies consistently show that socioeconomically deprived groups are more likely than affluent whites to live near polluting facilities, eat contaminated fish, and be employed at risky occupations. Research also confirms that they are less able to prevent and to remedy such inequities.[12] Because minorities are statistically more likely to be economically disadvantaged, some scholars assert that "environmental racism" or "environmental injustice" is the central cause of these disparities. Other social scientists have found that race is an independent factor, not reducible to socioeconomic status, in predicting the distribution of air pollution, contaminated fish consumption, municipal landfills and incinerators, toxic waste dumps, and lead poisoning in children.[13] Members of communities facing such threats typically are too poor to "vote with their feet" and move elsewhere.

Often the sources of environmental injustice are the corporations and governments who site questionable facilities among those least able to be informed about, or to stop, them. Zoning boards, influenced by politically and economically powerful developers and their friends, also have helped create much environmental injustice. If the arguments of this book are correct, however, we the people ultimately are responsible for environmental injustice. We have allowed corporate and government abuses to disenfranchise the weakest among us.

To understand environmental injustice, consider a typical situation that began several decades ago in Texarkana, Texas. Patsy Ruth Oliver, a former resident of Carver Terrace, a polluted African-American suburb of Texarkana, began to notice dark patches of "gunk" seeping up through withered lawns, around puddles, and into the cracked centers of streets. The suburb also had an unusual cluster of medical problems. Their cause finally emerged in 1979, one year after residents of Love Canal, New York, discovered leaking barrels of dioxin beneath their homes. When Congress ordered the largest chemical firms in the United States to identify their hazardous waste sites, the Koppers Company of Pittsburgh identified Carver Terrace as one of its problem areas. For over 50 years, Koppers had used creosote (a known carcinogen) to coat railroad ties. In 1961, when it closed its Carver-Terrace operation, it bulldozed over most of its facilities, including the creosote tanks. Not realizing the dangers left by Koppers, poor families eagerly bought plots in the new Carver Terrace. When Koppers finally admitted the risks at the site, the Environmental Protection Agency (EPA) brought in scientists in full protective gear. They declared the Carver Terrace soil contaminated, but the scientists did not bother to interview the residents. Instead they claimed that the area posed "no immediate health threat" to citizens. Oliver and her neighbors were enraged. They formed the Carver Terrace Community Action Group and soon discovered that the EPA had failed to notify them of two other EPA studies that concluded the site posed immediate health hazards. Oliver argued that the government should "buy out" her community, just as it did for Love Canal. She also concluded that racism was

the only reason her neighborhood was treated differently from Love Canal. "I have a master's degree in Jim Crow," she said. Eventually Oliver forced the government to purchase the homes in Carver Terrace, although the buyout destroyed the African-American community there. In 1984, Texas officials asked the U.S. EPA to place Carver Terrace on the Superfund list, the $1.3 billion trust that Congress established in 1980 to clean up toxic waste dumps.[14]

Bob Bullard says that the Patsy Olivers of the world are typical of the EJ movement. Struggling to protect their families and homes, they are not traditional activists. They are just trying to survive. On December 17, 1993, the day demolition of homes began in Carver Terrace, Patsy Oliver died of a heart attack.

Environmental Injustice at Home and Abroad

Inspired by the example of Patsy Oliver, many EJ activists also trace their beginnings to 1982 when North Carolina decided to build a polychlorinated biphenyl (PCB) disposal site in Shocco Township in Warren County. The township is 75 percent African American, and the average per capita income of the county is 97th (of 100 counties) in North Carolina. The U.S. EPA allowed state officials to place the waste only 7 feet above the water table instead of the normal 50 feet required for PCBs. Outraged by this discrimination, 16,000 residents (mostly African Americans and Native Americans) organized marches and protests. Officials arrested more than five hundred local residents. They lost their battle, the state opened the dump, and PCBs have been leaching into the soil. Their actions, however, helped begin the EJ movement.[15]

As in the North Carolina PCB case, African-American communities have been among those hardest hit by environmental injustice. Often the government is the culprit, as in West Dallas, Texas, where, in 1954, the Dallas Housing Authority built a large public housing project—3,500 units—immediately adjacent to a lead smelter. During its peak operations in the 1960s, each year the smelter released 269 tons of lead into the air. West Dallas children had blood lead levels that were 36 percent higher than those in children in control areas. Such exposures are significant because even small amounts of lead can impair learning, interfere with red blood cell production, and damage the liver and brain. Despite repeated studies showing the public-housing children were in danger from the smelter, officials did nothing. For 20 years local and federal officials ignored citizens of West Dallas who asked merely that the city and state enforce existing lead-emission standards. Finally, in 1983 the city and state sued the smelter for violations of city, state, and federal lead-emissions standards. Within two years, the smelter agreed to clean up lead-contaminated soil, to screen children and pregnant women for lead poisoning, and to provide $45 million in compensation to several generations, including hundreds of children exposed to the lead.[16]

Perhaps the most notorious example of environmental injustice against African Americans has occurred in the "Cancer Alley" region of Louisiana.

An 85-mile stretch of the Mississippi River between Baton Rouge and New Orleans, Cancer Alley produces one-quarter of the nation's petrochemicals. More than 125 companies there produce fertilizers, paints, plastics, and gasoline. Each year more than a billion pounds of toxic chemicals are emitted in the alley. An advisory committee to the U.S. Civil Rights Commission concluded that African-American communities have been disproportionately impacted by Cancer Alley for at least two reasons. One is that the system of state and local permitting for Louisiana hazardous facilities is unfair. The other reason is that citizens living in Cancer Alley have low socioeconomic status and limited political influence.[17]

Besides African Americans, indigenous peoples repeatedly have been victims of environmental injustice. Among Native Americans, some of the most serious abuses have occurred in connection with uranium mining in the West. Churchrock, New Mexico, in Navajo Nation, the territory of the largest Native-American tribe, is a case in point. Churchrock is the site of the longest continuous uranium mining in Navajo Nation, from 1954 until 1986. Navajo tribal governments leased mining rights to companies such as Kerr-McGee, but they did not obtain either the consent of Navajo families or any information as to the consequences of company activities. Because rainfall at Churchrock is about only 7 inches per year, mining companies withdrew as much as 5,000 gallons of water per minute from the Morrison aquifer to support construction and operation of the mines. Once this groundwater was contaminated with uranium, the companies released it into the Rio Puerco, the main water source for the Navajos. As a result, companies like Kerr-McGee not only significantly reduced the groundwater from which many families drew well water but also contaminated the only main surface water supply. For years, the two main companies, Kerr-McGee and United Nuclear Corporation, argued that the Federal Water Pollution Control Act did not apply to them. They said their activities took place on Native-American land that is not subject to any environmental protections. It was not until 1980 that the courts forced the companies to comply with U.S. clean water regulations.[18]

Among Latinos, one of the most common forms of environmental injustice is that faced by farmworkers exposed to pesticides. In 1972, the United States banned many chlorinated hydrocarbon pesticides such as DDT, aldrin, dieldrin, and chlordane, in part because they were so long-lived and remained on fruits and vegetables when they were consumed by the public. Instead farmers began using the much shorter-lived but much more toxic pesticides known as "organophosphates." The pesticides pose less threat to consumers because they are less persistent, but they are a greater threat to farmworkers. A large proportion of farmworkers are Mexican Americans, often illegal aliens who work for less-than-minimum wage and typically under difficult or illegal working conditions. Given such circumstances, the workers are in no position to complain about pesticide exposure. Moreover, what pesticide laws exist typically are not enforced, so farmworkers have little protection.[19]

People in developing nations usually face similar or worse environmental threats. In the case of pesticides, for example, after the United States banned

many chlorinated hydrocarbons, U.S. and multinational chemical companies merely began shipping them abroad. Currently about one-third of the pesticides manufactured in the United States are not allowed to be used in the United States and are exported, mostly to developing nations. According to the World Health Organization, the chemicals contribute to approximately 40,000 pesticide-related deaths annually in the developing world.[20] The case of Gammalin 20 is fairly typical. A highly toxic relative of DDT known as "lindane," Gammalin 20 has been banned in the United States for about 30 years. After it was imported into Ghana for use as a pesticide, the local fishermen along the shores of Lake Volta found it had another use as well. When they dumped it into the water, many dead fish floated to the top of the water, and the fishermen could easily collect them, sell them, and feed them to their families. Soon the fish population began dropping off at the rate of about 10 percent per year, and the Ghana villagers began experiencing the classic symptoms of nausea, vomiting, convulsions, circulatory disorders, and liver damage. The people did not connect their ailments to the chemical they dumped into the lake, and their problems continued until a Ghanaian nongovernmental organization explained what had happened.[21]

The 1984 chemical spill in Bhopal, India, also illustrated that people in developing nations receive far less protection from environmental threats than do citizens in the developed world. When a toxic gas, MIC, leaked from a Union Carbide pesticide plant in Bhopal, the accident killed nearly 4,000 people and permanently disabled another 50,000. The company later settled, with survivors and the disabled, for only several thousand dollars per person. After Bhopal, the predominantly African-American community of Institute, West Virginia, became the center of a violent conflict. West Virginia's Kanawha Valley, "the chemical capitol of the world," is the site of the only Union Carbide facility in the United States that manufactures MIC. On the one side, Union Carbide workers fought for their jobs. On the other side, local residents said they fought for their lives. Both the company and the EPA stonewalled citizens' demands for investigation of their health complaints and the chemical odors that saturated the valley's air. Citizens claimed that the EPA attempted to show there was no public health threat by continually revising its risk-assessment methods[22] so as to obtain the answers Union Carbide wanted.

Apart from the lax standards that U.S. and multinational corporations employ in their plants in poor areas, including developing nations like India, groups in the industrialized world also often intentionally dump toxic wastes in the Third World. Each year companies and local governments offer nations in the Caribbean and in West Africa hundreds of dollars for every 55-gallon barrel of toxic waste that can be dumped legally. For example, in 1988, the city of Philadelphia hired a Norwegian company, Bulkhandlung, to transport 15,000 tons of toxic incinerator ash to the African nation of Guinea. After plant and animal life died at the waste site, the African government ordered Bulkhandlung to remove the ash and return it to Philadelphia. The Africans appealed to the 1989 Basel Convention on the Control of Trans-

boundary Movements of Hazardous Wastes and Their Disposal, ratified by more than one hundred nations, including the United States. According to the convention, companies wishing to ship hazardous waste must notify the receiving country. In fact, exporters must receive written permission from the importing nation. Because the Basel Convention allows any country to refuse permission, it has helped address waste-related EJ problems. Nevertheless, corruption and lack of information often keep the citizens of waste-receiving countries from knowing what their leaders have accepted in exchange for payment. Thus it is questionable whether people in many developing nations actually give free informed consent to imports of hazardous waste that may threaten them.[23]

A chief economist from the World Bank recently created a massive controversy when he wrote an internal memo explaining the economic rationale for such waste transfers. The memo was leaked to the press in 1991. It said: "Just between you and me, shouldn't the World Bank be encouraging MORE migration of the dirty industries to the LDCs [less-developed countries]?" The memo further enraged ethicists and environmentalists by offering three reasons that developing nations were a good place to dump toxics: their citizens already had a lower life expectancy; such countries were relatively "underpolluted"; and impairing the health of the people with the lowest wages made the "greatest economic sense."[24]

Over the last two decades, many studies have documented the fact that polluters, both at home and abroad, appear to be following the advice of the World Bank economist. In 1983, Bob Bullard showed that, from the later 1920s to the late 1970s, Houston placed all of its city-owned landfills in largely African-American neighborhoods. Although they comprised 28 percent of the city's population, African-American communities received 15 of 17 landfills and 6 of 8 incinerators. Bullard pointed out that such dumping has magnified the myriad social ills—crime, unemployment, poverty, drugs—that already plague inner-city areas.[25] Journalists also have shown that the dirtiest zip code in California, a one-square-mile section of Los Angeles County, is filled with waste dumps, smokestacks, and wastewater pipes from polluting industries. In one zip code, where 18 companies discharge five times as much pollution as they emit in the next-worst zip code, the population is 59 percent African-American and 38 percent Latino.[26]

In 1984, Cerell Associates, a private consulting firm hired by the California Waste Management Board, issued a report titled "Political Difficulties Facing Waste-to-Energy Conversion Plant Siting." The report concluded that all socioeconomic groups resist the siting of hazardous facilities in their neighborhoods and adopt positions of NIMBY ("Not in My Back Yard"). Nevertheless, the study showed that because lower-income groups have fewer resources to fight corporate and government siting decisions, they usually lose.[27] Further confirming the Cerell findings, in 1986 the Center for Third World Organizing in Oakland, California, issued the report, "Toxics and Minority Communities." It showed that 2 million tons of radioactive uranium tailings, left from uranium mining, had been dumped on Native-American lands. As a

result, the study argued, cancers of the reproductive organs among Navajo teenagers had climbed to 17 times the national average. Later, in April 1987 the United Church of Christ Commission for Racial Justice released a widely quoted report that documented environmental racism throughout the United States.[28] Ben Chavis, the executive director of the National Association for the Advancement of Colored People (NAACP), organized a study that later showed 60 percent of African Americans live in communities endangered by hazardous waste landfills. The report revealed that the largest U.S. hazardous waste landfill, which receives toxics from 45 states, is in Emelle, Alabama; Emelle is 79 percent African American. The study also demonstrated that the greatest concentration of hazardous waste sites in the United States is in the predominately minority South Side of Chicago. Typically minority communities have agreed to take the sites in exchange for jobs and other benefits that have never become a reality. A more recent report, published in 1992 in the *National Law Journal*, concluded that government agencies do not guarantee equal political power and equal participation to all groups victimized by environmental injustice. In fact, the study showed that government agencies treat polluters based in minority areas less severely than those in largely white communities. The same report showed that toxic cleanup programs, under the federal Superfund law, take longer and are less thorough in minority neighborhoods.[29]

A 1992 EPA report likewise found significant evidence that low-income, nonwhite communities are disproportionately exposed to lead, air pollution, hazardous waste facilities, contaminated fish, and pesticides. When the report recommended greater attention to environmental injustice,[30] the EPA established the Office of Environmental Equity (OEE). Also in 1992 the General Accounting Office (GAO) began an ongoing study to examine the EPA's activities relating to EJ.[31] The Clinton administration likewise emphasized environmental justice when it selected a prominent leader of the EJ movement, Bob Bullard, to serve on the Clinton-Gore transition team.[32] On February 11, 1994, Clinton signed an executive order that directed each federal agency to develop an EJ strategy for "identifying and addressing . . . disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations."[33]

Bullard says that Clinton's actions are not enough. He claims the United States and other nations need an EJ equivalent of the 1964 Civil Rights Act and the 1968 Fair Housing Act. Every year since 1994, Congress has been debating bills designed to guarantee environmental justice. Because none has ever passed, current efforts to promote EJ rest on three bases: Clinton's executive order, the environmental justice division of the EPA, and the 1969 National Environmental Policy Act (NEPA).[34] Before leaving office in January 2001, President Clinton set the budget of the EJ branch of EPA at roughly the same amounts for 2001 and for 2002 as it was for the year 2000. President Bush is expected to cut both the overall EPA budget and the environmental justice program of the EPA.

Why have local, national, and international media not helped more to promote EJ? One reason is that small-town leaders like Patsy Oliver are typically unknown women. Both sexism and racism combine to silence them in the press. Another reason is that the Patsy Olivers of the world typically do not want media attention and public glory. They want results: health and safety for their families and communities. A third reason is that even the EPA has been slow to acknowledge environmental justice. Only in 1990, in its report "Environmental Equity: Reducing Risks for All Communities," did it finally admit that minority communities have borne more than their "fair share" of environmental pollution.[35] Policymakers bear some of the blame for the failure to confront environmental racism. They typically use quantitative risk assessment and benefit-cost analysis in ways that are not sensitive to justice issues. Both methods incorporate aggregation methods that often hide inequitable impacts. Those using both methods also usually try to trace the causes of specific problems to particular hazardous substances.[36] However, EJ proponents say that scientists should assess the total risks that a given community faces because many health threats are a combination of several factors. They also argue that often no one addresses the cumulative and synergistic public health and environmental burdens that minority communities often bear.

Apart from deficiencies in media attention, science, and law, another reason that society has been slow to confront issues of environmental injustice is the backwardness of environmental organizations. Groups like the Sierra Club sometimes mirror the biases of the larger society. Organizing at a time when discrimination was the norm, early Sierra Club leaders did not link social justice to the conservation cause. In fact, in 1959 the Sierra Club vetoed an explicit antidiscrimination policy and said membership already was open to everyone. And in 1971 members voted against addressing conservation issues related to the poor and minorities. Even today, many environmentalists view alliances with the disenfranchised as "too political." Nevertheless, in Los Angeles, Virginia, and Florida, many Sierra Club groups have taken up EJ issues on behalf of Latinos, Native Americans, and African Americans.[37]

Denial of Environmental Injustice Charges

In response to repeated calls for EJ, critics typically make two responses, one based on denying environmental injustice and another based on excusing it. The "denial" retort is that although EJ is desirable, because flaws in existing research make it almost impossible to identify particular instances of environmental injustice, most supposed cases can be challenged. The "excuse" response is to admit that there are instances of environmental injustice but to claim that the benefits of avoiding them do not outweigh the costs of correcting them. Proponents of the first, or "denial," argument often say that although poor and minority communities appear to be victimized, much of the evidence for their discrimination is "largely anecdotal." Attacking Bob

Bullard's early study of environmental racism in Houston, they note that the lawsuit based on it, *Bean v. Southwestern Waste Management Corp.*, was unsuccessful. They also claim that authors often assume rather than prove that actual risks near hazardous facilities are higher than elsewhere.[38]

While it is wrong to assume that risks always are higher near dangerous facilities, critics of EJ research ignore the fact that, all things being equal, public health risks probably are higher near noxious facilities, and research is needed to determine their level. Proponents of the denial argument also ignore the fact that such sites lower nearby property values.[39]

Many proponents of the "denial" argument specifically attack a widely discussed General Accounting Office (GAO) analysis that alleges environmental racism. This 1983 report examined community demographics near commercial waste treatment, storage, and disposal facilities. After assessing data from four noxious facilities in EPA Region IV (the Southeast), the GAO researchers found that the populations in three of the four areas surrounding the problematic sites were predominantly African American, even though they were only a minority in the state's population. Objecting to the GAO study, critics argue that it is ambiguous with respect to how one ought to characterize a community as minority. Christopher Boerner and Thomas Lambert, for example, claim that defining a minority community as one in which the percentage of minority residents exceeds the percentage in the entire population may be problematic. According to this definition, they note that Staten Island, New York, home of the nation's largest landfill, is a minority community even though more than 80 percent of its residents are white.[40] One problem with the preceding Boerner-Lambert criticism, however, is that it confuses the neighborhood near the landfill with all of Staten Island. Just because Staten Island is only 20 percent nonwhite does not mean that the area immediately around the landfill is only 20 percent nonwhite. Because most residents within several miles of the landfill are African American, Boerner's and Lambert's attempted criticism is questionable.

Critics of EJ research use the "denial" argument to make other allegations. They claim many EJ studies err in ignoring population density when they characterize a community as "minority." They say the real issue is the total number of people affected by some noxious facility, not just the percentage of nonwhites around it.[41] While the total number of people affected is important, this criticism begs the question of the importance of distributive justice. It arguably is worse for some people to be discriminated against, as subsequent chapters show, than for everyone to be treated the same and exposed to similar threats. Such discrimination is worse because it entails threats both to life and to equal treatment, whereas the same treatment of different groups may jeopardize only rights to life and not also rights to equal treatment.

Critics of the EJ movement also employ the "denial" argument to challenge the 1987 report of the Commission for Racial Justice (CRJ) of the United Church of Christ. Correlating percentages of nonwhites, within zip codes, with numbers of waste plants, the CRJ analysis showed that the percentage of

nonwhites in zip codes with one facility was twice that in zip codes having no such plant. For zip codes with more than one waste facility, the percentage of nonwhites was three times that in zip codes with no such plant. The CRJ also revealed that race was statistically more significant than either mean household income or mean value of owner-occupied housing as a determinant of where noxious facilities were located.[42]

In response to the CRJ findings, proponents of the "denial" argument allege that environmental injustice often disappears once one stops aggregating data from large areas such as zip codes. They say that how one defines the relevant geographic area determines whether or not there is environmental injustice.[43] Such criticisms, of course, are reasonable. One often can gerrymander geographic regions so as to exhibit or to cover up some spatially related effect. Nevertheless, the criticism is beside the point. If the area closest to a noxious facility tends to have a population of nonwhites rather than whites, then regardless of what zip codes (or any other systems of aggregation) reflect, there is likely to be environmental racism. Moreover, if even large aggregates appear to reveal evidence of environmental injustice, the appropriate response is to determine whether the apparent disparate impact is real. The appropriate response is not to say that there are ways of aggregating the data so that the injustice "disappears," because the real question is the defensibility of such methods of aggregation. And this question should be analyzed on a case-by-case basis. It would be surprising if there were never any real environmental injustice, and if poor or powerless people never were subject to more noxious facilities than wealthier ones.[44]

Utilitarian Excuses for Environmental Injustice

Using the "excuse" response, critics of the EJ movement do not deny environmental injustice. Instead they give two arguments to put the alleged injustice into perspective. They argue that (1) on balance, victims of alleged environmental insults may benefit from living near noxious facilities. They say victims might suffer worse from higher unemployment and housing costs if they did not live near dangerous sites. Likewise they charge that (2) the mere correlation of hazardous sites and the presence of poor or minority communities does not prove that racism or injustice actually caused the siting there. They say that African Americans, for example, may have moved to risky or undesirable areas because housing was cheaper or because of some other factor.[45] Both of these "excuse" arguments are questionable. Complaint (1) ignores the fact that, apart from the ultimate balance of costs and benefits (such as more employment) near a risky facility, the evidence of what residents want is clear. Poor people and minorities usually do not want most of the dangerous or undesirable sites to be located near them. And nearby residents have the right to control the risks that others impose on them. Critics of the EJ movement who use this "excuse" response seem to forget principles of equal human rights and instead to use utilitarian grounds to attempt to defend injustice. Such a defense is obviously flawed

because all people, especially innocent potential victims, have rights to exercise their preferences regarding what threatens their welfare—particularly when others profit from the threats.

"Excuse" argument (2), that the correlation between race and risky facilities does not prove discrimination, is correct. Nevertheless, it is misleading. The issue is not whether people, corporations, or governments deliberately discriminate against poor people or minorities in siting decisions and therefore cause them to live in polluted areas. Even if minorities moved to an area after it was polluted, the issue is whether some citizens ought to have less than equal opportunity to breathe clean air, drink clean water, and be protected from environmental toxins. If they do have less than equal opportunity, even though no one may have deliberately discriminated against them, the situation may need to be remedied, at least in part because people have rights to equal treatment. Moreover, racism or injustice need not be deliberate. Many people behave in racist or sexist ways even when they have no idea of their prejudices. Their ignorance of their own faults may limit their guilt, but it provides no evidence of the absence of those faults. Absence of evidence for deliberate discrimination is not the same as evidence of the absence of deliberate discrimination. Admittedly, in the landmark case of *Washington, May of Washington, D.C., et al. v. Davis et al.*, the court set a stringent standard of proof for damage awards in cases of environmental harm.[46] The standard is stringent because the court ruled that a plaintiff seeking damages must prove that harmful actions taken by an individual or group were intended to cause the plaintiff harm and not merely that the harm occurred as an unexpected by-product of the action. Just because such a standard of proof is required before a defendant must pay legal damages, however, does not mean that environmental injustice occurs only when the same standard of proof is met. Rather, the legal standard is stricter (1) because defendants must be presumed innocent until proved guilty, (2) because courts must be conservative in meting out punishment, and (3) because courts must be cautious in making damage awards. Although the "discriminatory intent" ruling in the *Washington* case damages some civil rights and environmental justice cases, because it is almost impossible to prove the subjective motivations of a decisionmaker, it applies only to legal rulings. The limits of truth or moral responsibility are not the same as the limits of what can be proved in a court of law as a basis for a damage award. Lack of legal proof for deliberate discrimination does not entail the absence of environmental injustice. Besides, as I argue in chapters 2 and 3, even if citizens, corporations, and governments do not deliberately discriminate, they nevertheless may be responsible for the institutional structures that indirectly cause disparate impacts on poor or minority groups. Later chapters argue that, at least in democracies, citizens typically have the governments they deserve and create. And if so, then citizens have duties to monitor and to correct government policies, especially those allowing discrimination against poor and minorities.

Many critics of the EJ movement use the "excuse" argument in a third way. They claim that alleged solutions to environmental injustice are even worse than the original injustice. They tend to focus on three such solutions: (1) eliminating all social costs (like pollution) of industrial processes; (2) allocating these costs evenly throughout the population; or (3) compensating the individuals who bear more of these costs.[47] With respect to the first solution to environmental injustice, critics of the EJ movement say that it would cause greater harm to society than does environmental injustice, and they probably are right, insofar as it is impossible to eliminate all pollution. In the case of pesticides, for example, critics claim (correctly) that because some pollution is inevitable, the "costs to society" of completely eliminating these chemicals are far higher than those of environmental injustice.[48] Nevertheless, proponents of the "excuse" argument beg a crucial question. Costs to whom? Costs to poor and minority communities might not be greater if society reduced or eliminated pollution near them. Moreover, in the specific case of pesticides, experts have argued that most of these chemicals are not essential to society and agriculture but instead are used to make foods look more appetizing. The same experts argue that biological forms of pest control are safer alternatives than chemicals.[49] The most basic problem, however, with this first solution to environmental injustice—eliminating all pollution—is that it is not realistic. It is a straw-man solution, one easy to reject because it is so extreme. A more realistic solution would be to reduce pollution to levels as low as practical. But critics of EJ do not consider this less extreme option.

What about a second solution to EJ problems, distributing pollution equally? Critics of the EJ movement also reject this alternative on the grounds that not siting noxious facilities in poor neighborhoods would have undesirable consequences, such as reducing the tax base and employment in areas needing them most.[50] This criticism, however, ignores the fact, as I show in chapters 4 and 5, that residents of poor neighborhoods typically do not feel deprived of economic benefits when someone protects them from dangerous facilities. And if not, then rejecting this second solution to EJ problems errs because it ignores the authentic consent and the well-confirmed opinions of those who have been most victimized by environmental injustice. To argue that communities desire health threats in exchange for economic benefits presupposes that the communities have given free informed consent to the noxious facilities. But proponents of the "excuse" argument typically have not established this presupposition. The argument also assumes that there is no right to a liveable environment. Probably EJ advocates would argue that all people do have such rights and that they ought not be traded for money, especially if what is traded is the health and safety of innocent victims such as children.[51]

Critics of the EJ movement also reject a third solution to EJ problems, compensating individuals who are disproportionately impacted by pollution from which society benefits. They reject this compensation solution on

the grounds that paying the poor to take health risks amounts to bribery or coercion. To avoid bribery or coercion, they claim that society should compensate only nonpoor or nonminorities, those who can freely consent to the risks. But if only they are paid, proponents of the "excuse" argument say the payment schemes ultimately would raise the level of unemployment and poverty.[52] Are they correct? No: this third objection is flawed in that it ignores the fact that if compensation is owed, then some is better than none. It also begs the question of whether compensation, as such, would increase poverty and unemployment. After all, there are ways to increase employment and reduce poverty, independent of compensating people for accepting noxious facilities. The criticism likewise errs because it presupposes that society has no responsibility to help correct unemployment and poverty, independent of its solutions to EJ problems. Moreover, it is desirable to consider the option of compensation in part because it forces society to ask whether the pollution costs associated with a proposed facility may be so high as to make it undesirable in any location.[53] It forces society to ask whether polluters genuinely are able to pay the full market costs of their actions. A key benefit of compensation schemes thus is that they force polluters to internalize the social costs of pollution and not to try to save money by dumping their burdens on the unwilling, the vulnerable, and the poor. In this regard, one model of compensating host communities for noxious facilities may be the 1982 Wisconsin program for landfill negotiation/arbitration.[54] One compensation model that appears not to have worked is the one created by the U.S. Department of Energy (DOE) for the proposed Yucca Mountain radioactive waste facility. This model failed, in part, because the DOE did not secure free informed consent from potential victims, did not disclose the complete risks to them, and severely limited all liability for the site. The conclusion to draw from cases like Yucca Mountain is not that compensation for environmental injustice is unworkable but that not all compensation schemes are just and reasonable.[55]