ALSO BY PAUL HAWKEN

Natural Capitalism
The Ecology of Commerce
Growing a Business

BLESSED UNREST

How the Largest Movement in the World Came into Being and Why No One Saw It Coming

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VIKING

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THE RIGHTS OF BUSINESS

Miss Rachel Carson's reference to the selfishness of insecticide manufacturers probably reflects her Communist sympathies, like a lot of our writers these days. We can live without birds and animals, but, as the current market slump shows, we cannot live without business. As for insects, isn't it just like a woman to be scared to death of a few little bugs! As long as we have the H-bomb everything will be O.K.

P.S. She's probably a peace-nut too.[1]

—Letter to *The New Yorker* protesting the publication of *Silent Spring*

The Bhopal tragedy is a symbol of the cruelty of corporations against humanity. The day that we succeed in holding Dow liable for the continuing disaster in Bhopal will be good news for people all over the world. From that day on chemical corporations will think twice before peddling poisons and putting profits before the lives and health of people. We are not expendable. We are not flowers offered at the altar of profit and power. We are dancing flames committed to conquering darkness and to challenging those who threaten the planet and the magic and mystery of life.

—Rashida Bee, Bhopal survivor and organizer[2]

On June 16, 1962, *The New Yorker* magazine published the first of three installments of a forthcoming book, *Silent Spring*, by biologist Rachel Carson. The magazine's legendary editor, William Shawn, was ecstatic about the series, telling Carson it was a "brilliant achievement . . . full of beauty and loveliness and depth of feeling."[3] Carson was already widely read. Her previous book, *The Sea Around Us*, spent thirty-nine weeks atop the *New York Times* best-seller list and was translated into thirty languages. But unlike her previous works, all of which were widely praised, *Silent Spring* created an uproar that has never truly subsided. Carson's argument stood firmly in the tradition of demands for social and environmental justice that extended back to concerns about environmental health during the Industrial Revolution. It also marked, almost inadvertently, a turning point in the unspoken elitism and racism of the early environmental movement. Her exposé of industry-sponsored poisoning of the environment brought for the first time a broad cross section of the population into the environmental dialogue. The *environment* now included people's bodies, mothers' milk, African Americans, farmworkers, and the poor, some of whom were just as polluted as the Cuyahoga River, which famously caught fire in 1969. But as the environmental movement gradually became more diverse in its membership and broader in its scope, it incrementally lost the support of business and politicians, and was even seen as their enemy, and was abandoned to fend for itself.

Rachel Carson's subject was chlorinated pesticides, which she came to because of a controversy about aerial spraying of DDT over Long Island and New England by the USDA in an effort to eradicate fire ants, gypsy moths, caterpillars, and mosquitoes. Carson read letters from angry residents describing the death of songbirds, bees, and grasshoppers, and soon afterward agreed to write the magazine series.[4] At the time, DDT could be purchased in bulk for fifty cents a pound. It had been a savior during World War II, the first war in which fewer combatants died of disease than from combat wounds. This was almost entirely the result of DDT sprays and

dustings that killed typhus-carrying fleas. There was no gainsaying this fact, and Carson's analysis of the benefits *and* costs of DDT and other newer pesticides therefore ran contrary to the pesticide industry's triumphal claims. Based on scientific evidence, she believed that some of the new chemical compounds introduced after the war were killing birds, fish, and animals, as well as causing cancer and other diseases in human beings.

Silent Spring began with a "Fable for Tomorrow," a fictional essay describing a storybook town's hellish descent into a pesticide-poisoned reality:

> There was once a town in the heart of America where all life seemed to live in harmony with its surroundings. The town lay in the midst of a checkerboard of prosperous farms, with fields of grain and hillsides of orchards. . . . Then a strange blight crept over the area and everything began to change. Some evil spell had settled on the community: mysterious maladies swept the flocks of chickens; the cattle and sheep sickened and died. Everywhere was a shadow of death. The farmers spoke of much illness among their families. In the town the doctors had become more and more puzzled by new kinds of sickness appearing among their patients. There had been several sudden and unexplained deaths, not only among adults but even among children, who would be stricken suddenly while at play and die within a few hours.
>
> There was a strange stillness. The birds, for example—where had they gone? Many people spoke of them, puzzled and disturbed. The feeding stations in the backyards were deserted. The few birds seen anywhere were moribund; they trembled violently and could not fly. It was a spring without voices. On the mornings that had once throbbed with the dawn chorus of robins, catbirds, doves, jays, wrens and scores of other bird voices there was now no sound; only silence lay over the fields and woods and marsh.

Carson could not have devised an opening passage more likely to inflame her critics. Science writing was supposed to be objective and rigorous, without emotion. The admixture of fable and science enraged some scientists as well, but the qualities that made the book anathema to them made it engaging to the general public. Certainly the "shadow of death" that caused

children to die within hours was excessive, but the book was no jeremiad, and Carson's prediction as to the eventual outcome of the uncontrolled use of these chemicals could not have been more convincing: "Can anyone believe it is possible to lay down such a barrage of poison on the surface of the earth without making it unfit for all life? . . . [M]an is a part of nature, and his war against nature is inevitably a war against himself."[5]

Before *Silent Spring*, corporations were attacked by reformers and social critics primarily for their rapaciousness and inhumane working conditions. In Carson, they were faced with a soft-spoken critic who alleged that their products shouldn't be made at all. Her goal was to reduce, if not eliminate, a new class of pesticides used in agriculture, even though she supported the moderate use of safe pesticides and biological control agents. For the first time, modern industry had been broadsided and outflanked by an environmentalist. Shocked and infuriated, it reacted with condemnation, assaults, and mockery. Food giants such as General Mills and Gerber's, the pest control industry, agribusiness, chemical companies, and government agencies such as the USDA worked separately and together to destroy Carson's reputation and credibility. With this seminal confrontation, industry and the public relations industry cut their teeth, preparing them for the battles ahead. They have never relented in their fight. They have long since perfected techniques to marginalize scientific data that conflicts with their financial interests. Their basic approach to counter such troubling evidence is to foreshorten time by emphasizing imminent problems over long-term concerns. For example, while Carson hypothesized that it would take a century for the full effects of pesticides to be seen, pesticide makers warned of potential crop losses that could occur as soon as the next planting season. When the Kyoto Protocol was being negotiated in 1997, albeit with only a slim chance of being ratified in the United States, the fossil fuel and automobile industries likewise sponsored advertisements showing people forced into dangerous small cars, or contending with having no fuel at all.

Rather than countering the thesis of *Silent Spring* with facts, which it could not do, industry was forced by the book's popular acclaim to undermine it on an emotional level. Initially, it was ill equipped for this battle, but it soon found an appropriate tone: anger, infused by the metaphors of war. The use of agrochemicals became a security issue, critical to preventing hunger and famine. Just as strong nations stockpiled munitions, bombs, and aircraft to counter possible enemy attack, the agricultural industry had its own cache of weapons, chemicals delivered by aircraft and heroic men

who guarded the safety of the nation's food supply by attacking enemy insects. The strategy sounds ludicrous, yet the tactics used to stifle *Silent Spring* were a harbinger of how industry would attack its critics in years to come, whether the product in question was a Corvair or a pack of Marlboros. To industry, Carson was not merely an annoying interloper, she was a naïf making the nation vulnerable to attack. The president of Montrose Chemical Corporation, at the time the largest manufacturer of DDT, fired one of the first of many salvos, charging that Carson was not a scientist but a "fanatical defender of the cult of the balance of nature." Defeating Carson was a key objective in what had become nothing less than an industrial holy war.[6]

That controversy established a basic dynamic between environmentalists and industry. Both used fear to engage the public, and the threats each warned of all had a basis in fact. While environmentalists were genuinely apprehensive about a toxic future, industry was alarmed about its own future in the form of sales. A mismatch in terms of scope, perhaps, but it was a psychological draw on the emotional level. Robert White-Stevens, the somewhat frantic spokesperson for American Cyanamid, exemplified the quality of rhetoric employed by industry: "The real threat, then, to the survival of man is not chemical but biological, in the shape of hordes of insects that can denude our forests, sweep over our crop lands, ravage our food supply and leave in their wake a train of destitution and hunger, conveying to an undernourished population the major diseases, scourges of mankind."[7] The denunciations were biblical in scope, apocalyptic in tone. Joining the counterattack, Monsanto satirized Carson's work in a pamphlet entitled "Desolate Spring," wherein a small town, similar to the one Carson imagined, sees all its plants and lives destroyed by ravenous insects. "The bugs were everywhere. Unseen. Unheard. Unbelievably universal. On or under every square foot of land, every square yard, every acre, and county, and state and region in the entire sweep of the United States. In every home and barn and apartment house and chicken coop, and in their timbers and foundations and furnishings. Beneath the ground, beneath the waters, on and in limbs and twigs and stalks, under rocks, inside trees and animals and other insects—and yes, inside man."[8]

Another tactic was to raise the provocative question: Who let a woman into the room? Such misogyny was the subtext of many reviews, critiques, and industry broadsides. Former secretary of agriculture Ezra Benson wanted to know, "Why [was] a spinster with no children so concerned with genetics?"[9] The baton was picked up by Dr. William Bean, who dismissed Carson's thesis in the *Archives of Internal Medicine*: "*Silent Spring*, which I read word for word with some trauma, kept reminding me of trying to win an argument with a woman. It can't be done."[10] *Time* magazine called it "an emotional and inaccurate outburst."

But it was the men who proved to be emotional and hysterical in their responses to the book. Norman Borlaug, who won the Nobel Peace Prize for developing nonlodging varieties of wheat, lost his composure at a U.N. conference on food: "The current vicious, hysterical propaganda against [pesticides], being promoted today by fear-provoking, irresponsible environmentalists, had its genesis in the best-selling, half-science, half-fiction novel *Silent Spring*. . . . If the uses of pesticides in the USA were to be completely banned, crop losses would probably soar to 50 percent, and food prices would increase four-fold to five-fold."[11] Interlaced with constant assaults on Carson's credibility were mentions of her nature worship, and assertions that she wasn't really an accepted scientist but a misguided amateur, that her writing was for popular consumption, that her thesis didn't pass the rigor of peer review, and that she "overstepped" her place as a female writer of popular books.[12] Congressman Jamie Whitten from Mississippi, then chair of the House Appropriations Subcommittee on Agriculture, condescendingly suggested that the book "move over from the non–science fiction section of the library to the science-fiction section, while we review the facts—in order that we may continue to enjoy an abundant life."[13] A brochure was ginned up by the National Agricultural Chemicals Association entitled "How to Answer Rachel Carson," which assured its readers that DDT would disappear from the human body in ninety days. It denounced her book as "more poisonous than the pesticides she condemned."

After *Silent Spring* was published, and for years to follow, no peer-reviewed studies were conducted to justify the overwrought claims of the book's critics. No one challenged the fact that DDT killed insects effectively, but hard measurements of yield and cost benefits simply did not exist. Longitudinal studies done later did show large increases in crop yields starting in the early 1950s and extending into the 1970s. The problem with these data was that increases were entirely attributed to pesticides, ignoring any improvements in fertilizers, machinery, hybrid varieties of seeds, irrigation, and other factors. One study that compared crop losses in 1936 and 1957 showed that the amount of losses due to insects had not changed. But what did start in the 1950s were large-scale payment programs to farmers

designed to reduce crop surpluses and provide price supports. With this perverse incentive in place, farmers removed arable land from cultivation to qualify for subsidies, and worked their remaining fields more intensely, eliminating crop rotation and diversity, thus encouraging the spread of insects. New synthetic pesticides allowed such cultural practices, which farmers would have once seen as injurious and foolish. And because constant spraying kills beneficial insects along with destructive ones, pesticides have the opposite effect of what their promoters intend: they increase the insect population, and that population's pesticide resistance. The result is a self-defeating cycle for farmers, who have no choice but to spray, and who must constantly find new types of pesticides to fight off insects resistant to current varieties.[14]

Throughout the battle with her critics, Carson was waging a second one; while the world was arguing the merits of pesticides and whether they caused cancer, Rachel Carson's own cancer was spreading. While finishing *Silent Spring*, she had been hit by successive waves of disease and acute discomfort. As she checked and rechecked her research on the links between pesticides and cancer, she was diagnosed with a malignant tumor in her breast. After undergoing a radical mastectomy and removal of lymph glands, she spent months recovering before she could return to work on the book. Publication was delayed again as she dealt with pneumonia, ulcers, and the weakening side effects of radiation. Then came bladder problems, a staphylococcus infection, and severe phlebitis in both legs, which crippled her. Soon after, her knees and ankles became swollen and inflamed, and she was given steroidal treatments. As deadlines passed, she labored on, sometimes from bed, sometimes in a wheelchair. Knowing that the book would garner intense publicity and scrutiny, she swore her closest friends to secrecy and hid her condition from the world; the word *cancer* was never mentioned to her agent or editor. Five months after publication, following a whirlwind of tours, speeches, interviews, and appearances, she began heavy radiation treatment again, with its attendant pains, nausea, utter fatigue, and depression. By then the cancer had spread to her bones. Her heart condition also worsened, prompting Carson to hope that her heart would kill her before the cancer did.

In her remaining months of life she was invited to give major addresses across the country, though she could accept only a few. Confined to a wheelchair, she politely told her hosts it was a touch of arthritis. Seated or standing, she never spoke angrily or aggressively; her voice remained calm,

measured, and dignified. The speech she gave to the Kaiser Foundation at the Fairmont Hotel in San Francisco on October 18, 1963, was her last—and the first time she called herself an ecologist. The time had come, she said, for human beings to "admit their kinship with other forms of life. . . . We must never forget the wholeness of that relationship. We cannot think of the living organism alone; nor can we think of the physical environment as a separate entity."[15] The day after that speech, David Brower and his wife, Anne, brought Carson and her wheelchair to Muir Woods to see her first redwood tree. From there they drove to Rodeo Lagoon in Fort Cronkite, where they watched a flock of two hundred brown pelicans (*Pelecanus occidentalis*) with their seven-foot wingspan wheeling through the afternoon light. When Carson returned home later that week, the pain had become constant and she could no longer care for herself. She could barely hold a pencil and was never to walk again. She died five months later, leaving one-third of her estate to the Sierra Club, some of which was used to fund Brower's handsome series of folio books on the environment.

One month after Carson's San Francisco speech, five million dead fish floated to the surface of the lower Mississippi River. Although smaller fish kills had occurred in previous years because of pesticide runoff from cane fields, this was a degree of magnitude greater than anything seen before. The State of Louisiana asked the U.S. Public Health Service to investigate. The agency found the cause to be the pesticide endrin, and the source was endrin's manufacturer, Velsicol Chemical Corporation, which had illegally dumped the substance into a wastewater treatment plant in Memphis. As it happened, Velsicol's law firm had sent a letter to Carson's publisher one month before *Silent Spring*'s publication, claiming that the book would disparage its products, particularly chlordane and heptachlor, with the clear implication that they would litigate. Velsicol also threatened *The New Yorker*, and later the Audubon Society, with protracted litigation. The company's attorney, Louis McLean, suggested that Carson's goal was to "create the false impression that all business is grasping and immoral, and to reduce the use of agricultural chemicals in this country and the countries of Western Europe, so that our supply of food will be reduced to east-curtain parity."[16] In the late 1980s the EPA finally banned endrin, heptachlor, and chlordane, but Velsicol continued to produce those pesticides for another decade for export, even shipping to countries in which they were banned.

On April 14, 1964, Rachel Carson's wish was granted, and she died of cardiac arrest. Whether the attacks against her hastened her death will never

be known, but the effect of *Silent Spring* was ultimately measurable in every human being in America. DDT belongs to a family of chemicals called chlorinated hydrocarbons that are not soluble in water but do dissolve in lipids (fat). Because of this property, they are not easily eliminated from human and animal bodies but are stored in fatty tissue, thus building up in the food chain. In 1942, before DDT was commercially introduced in the United States, its metabolite, DDE, was not found in human tissue. By 1950, the average level of toxicity for people living in the United States was 5.3 parts per million. When *Silent Spring* was published, DDT production peaked at 180 million pounds per year, and the amount measured in human tissue peaked at 12.6 ppm. Sixteen years later, body burden had fallen to 4.8 ppm.[17] Today, it is under 1 ppm.

Silent Spring transformed a few hundred quiet conservation groups predominantly concerned about birds, national parks, and hiking into a much larger and more vocal *movement*. Historians generally treat the environmental movement as a postwar phenomenon, but Carson reignited an issue that has concerned people for hundreds of years in ways conservation never did: public health. Her genius was to link the loss of human health with the mind-set of biological dominance, with the idea that business and science had a mandate to conquer and exploit nature.[18]

As early as 1949 Aldo Leopold's collection of essays, *Sand County Almanac*, had exposed readers to the science of ecology, but the public had not yet grasped the first principle of Ecology 101: namely, that everything is connected. It was through the lens of human health that the connection between agricultural practices, food chains, avian life, and human cancer was finally made clear, and laid at the feet of society to assume responsibility. Industry's reaction to *Silent Spring* brought the issue of public health to the fore, and two different parties argued for the right to defend it (three, if you count the government's anemic response): a quiet, determined science writer, and defensive corporate executives. Each accused the other of profiting from false claims.

Silent Spring ended a century-long accommodation between industry and the environment, enlarging the conceptual framework of the environmental movement from conservation to include human rights and the rights of all living beings. *Silent Spring* made the environment immediate by revealing the pollution inside our bodies, not just in nature. And it made

clear that toxicity played no favorites, though industry did, with the poor often paying the highest price. *Silent Spring* was one of the first critiques to question what has come to be known as corporate junk science—for example, the "science" used by the tobacco industry in its decades-long deception of the American public, a tactic dubbed *biostitution* by Robert Kennedy Jr. Without intending to, Carson also challenged the very notion of corporate hegemony and authority. The environmental movement discovered that to protect the environment, it had to confront power, corruption, and mendacity in the world of commerce, a struggle that extended back through history and across the world. From the beginning, an environmental movement had to be an environmental *justice* movement, and an environmental justice movement was de facto a *social* justice movement. Two seemingly unrelated elements of history had become reengaged in the public mind because of Carson's work. The question that continues to reverberate to this day is whether human rights trump the rights of business, or vice versa, a conflict that has been ongoing for more than three hundred years.

If we examine the history of industrialism we can see a long struggle between human and commercial rights, one that sometimes took place in the public eye, but was more often submerged or ignored. In the early nineteenth century teenage girls in Sheffield were employed as bench grinders to sharpen knives, scissors, and cutlery. Inhalation of metallic dust turned their complexions muddy, made their breathing labored and their coughs full of thick mucus. Before they became adults, they could no longer stand or sleep, and died soon thereafter. Toddlers from the ages of two to six were employed to make lace. Children were enslaved in airless rooms, pits, coalholes, and around dangerous pulleys and belts, to make chains, pins, snuffers, and nails. They worked seventy-two-hour weeks, from five in the morning until six at night. Young boys were used as piecers, cleaners, blowers, polishers, scavengers, spinners, jiggers, and runners. A ten-year-old boy who made "bad" nails would have his ears nailed to an iron counter for the day and receive no pay. Even the girls were hit and kicked. Accidents were common; fingers, toes, and arms were crushed or severed. Working conditions were so filthy that disease affected everyone. Boys and girls were exposed to lead, mercury, dyes, coal dust, chlorate of potassium, and sulfur. Early death from asthma, tumors, consumption, and pneumonia were the rule. It was often reported, though never formally documented, that William Pitt, when informed that his manufacturers could not pay higher taxes for his wars due to high wages, said, "Then take the children."[19] Whether

or not Pitt actually said this, England and Scotland did take the children, as well as their parents, who worked under conditions comparable to their offspring's. All were exploited by what Wordsworth called a commercial "outrage done to nature" that cut workers off from fresh air, clean water, and life.

An often misunderstood confrontation between corporate and human rights occurred during the rise and fall of the English group known as Luddites. In the early 1800s mechanical looms and frames began replacing skilled craftsmen in the English Midlands, primarily in Nottinghamshire, Derbyshire, Leicestershire, and Lancashire. Although the mechanical looms produced inferior goods, they could be operated by apprentices and unskilled labor, which drove down wages and reduced the size of the workforce. There was a rippling and devastating effect on employment and income throughout the Midlands as the new technology spread. In the spring of 1811 a frustrated, angry group of weavers and knitters in Nottingham, led by a mythical General Ned Ludd (named for a kindly dullard in the village of Ansley who had lived thirty years earlier) and his Army of Redressers, broke into textile factories and destroyed shearing and stocking frames. In the same year the prince regent issued an order barring textile trade with Napoleonic France and its allies, and an imminent war with the United States further slashed production. To make matters worse, several years of bad harvests and weather doubled and finally tripled the price of wheat. Many unemployed weavers were reduced to begging, while those still employed had their wages cut. Starving families aimed their desperation at the big mills.

The intention of these Luddites, as history has labeled them, however inchoately and naively expressed, was to recognize workers' rights, including the right to freely meet and associate, in the face of technological disruption. Today the term *neo-Luddite* has a negative connotation, and is used as a term of opprobrium for one who fears technology and innovation, implying that the original Luddites were an ignorant mob intent on quashing progress. This is an unfair characterization; Luddites were artisans, highly skilled workers steeped in craft traditions who took great pride in the textiles they produced. The fundamental question posed by these weavers and croppers was, "What is progress without full employment?" which has yet to be answered satisfactorily. For these workers, whose lives quickly deteriorated because of mechanical looms, unemployment, and soaring food prices, there was no transition into other jobs or retraining, no grievance process, no safety net. What they wanted was the right to engage in collective bargaining, and their grievances seem modest by contemporary standards: First, socks should not be made from inferior cloth produced by the wide stocking frames but should be seamless one-piece knits; and second, "colts," apprentices who had not fulfilled their seven-year legal training requirements, could not be employed to do the work of skilled weavers. Their demands were never taken seriously. When the right to speak collectively was further denied by an act of Parliament, they turned to property destruction to force employers to the bargaining table. The worst moment came with the torching of the Wray and Duncroff mill near Bolton. Twelve people were arrested, and four were put to death, including Abraham Charlston, reportedly twelve years old, who sobbed for his mother on the scaffold. The tragedy was underscored when a later investigation revealed that the Luddites had actually *refused* to take part in the plan for arson. Their numbers had been infiltrated by industry-paid spies who then proceeded to hire a mob from a nearby town to torch the factory in the name of the Luddites.[20]

When the movement spread to France, it gave us the word *sabotage,* derived from the practice of tossing wooden shoes (*sabots*) into moving machinery. British historian Eric Hobsbawm called such acts "collective bargaining by riot," a fair description of the tactics employed in the face of mill owners' intransigence and Luddite confusion.

It is helpful to consider that, although machine wrecking had a long history in mill towns, dating back more than a century, there was no historical context for what was still the beginning of the productivity revolution of the Industrial Age. The Luddite movement failed in no small part because mill owners felt threatened, and they were justified in their fears. Notes from General Ludd would arrive at night promising death to their guards, wives, and families if they did not destroy the mechanical "demons." By the end of 1811 a thousand frames had been broken. In 1812, Parliament passed the Frame Breaking Bill, making destruction of manufacturing equipment punishable by death. But mill owners were not accountable under the law for the death of workers if caused by overwork, toxins, neglect, unsafe working conditions, accidents, or disease.

Carson had no particular agenda against business per se, but she saw the results of the relentless drive for corporate primacy in one specific area—namely, agricultural pesticides. When President George H. W. Bush refused to sign the Convention on Biodiversity at the Earth Summit in 1992,

explaining that it was his job to protect "business rights," he repeated the oft-heard complaint of corporations that liberals and do-gooders unjustifiably criticize commerce and stifle economic development. This logic has become cast in stone and is repeated endlessly, but when one looks back dispassionately over the past centuries, it is impossible to find a period when business didn't have a disproportionate share of rights in the world.

Business justifies these rights because of its indisputable argument that it creates value, a position that nevertheless neatly evades the other side of the issue: How much value does it destroy in the process of carrying out its activities? Whether value is taken from the environment in the form of resources or despoliation, or from people in terms of wages, conditions, or worker health, it is largely unaccounted for in the calculation of value. Rachel Carson's reluctant conclusion was that once-respected businesses were creating products that destroyed value. They were exceeding their license to operate, and creating a public health hazard that threatened the web of life. Business rights are illegitimate if they remove rights from others, if they are not reciprocal and mutual with the rights of citizens, and if they extirpate other forms of life. From an economic viewpoint, what citizens have been trying to do for two hundred years is to force business to pay full freight, to internalize their costs to society instead of externalizing them onto a river, a town, a single patient, or a whole generation.

The International Campaign for Justice in Bhopal is illustrative of the complexity, breadth, and doggedness of the movement in addressing this imbalance. For the media, Bhopal is ancient news. For hundreds of thousands of people who lost family members or have become chronically disabled, it is daily reality. When events slip beyond the horizon of media coverage, they disappear from public discourse: abuse of power thrives in silence, shrinks in the light. The primary goal of movement groups is to prevent the fading away into darkness of the issue by continually placing it in the public eye until justice has been served. Union Carbide built the Bhopal plant in 1979 to manufacture methyl isocyanate, an unstable and extremely hazardous compound used to make Sevin, a common pesticide used on cotton, corn, and vegetables. The facility was intended to further India's move toward agricultural self-reliance, and was brought about through an agreement by the Madhya Pradesh government and the Union Carbide and Carbon Corporation. Bhopal officials and the Indian subsidiary of Union Carbide opposed placing the plant in an urbanized area but were overruled by the U.S. owners because a less populated area was more expensive. Corners were cut and safety standards sidestepped to enable the company to export low-cost pesticides throughout Asia. Tanks containing methyl isocyanate were too large, overfilled, and unrefrigerated. Flare towers were inoperative and backups nonexistent, and softness in the pesticide market caused further cutbacks in safety staff. The company had no contingent safety plans; it did not apply the same standards of safety engineering to the design and construction of the plant as it used in the United States. Three months before the explosion at the Bhopal facility, internal audits conducted by staff from a sister plant in Virginia warned of the danger of a runaway reaction, a cautionary report that never got to India or the people of Bhopal. Twenty-one years after the fatal leak, the company has not made public the nature of the chemical releases or their toxicity, thereby rendering medical treatment frustrating and difficult.

It is estimated that at least 100,000 people have sustained persistent injuries, debilitating illnesses, and disabilities from gas inhalation, including birth defects and diseases of the lungs and eyes. Although Union Carbide CEO Warren Anderson announced that he took moral responsibility for the accident shortly after it occurred, in the end, the company backed away from his statement and chose to litigate, moving juridical venue to India, where damage awards are considerably smaller. Union Carbide ultimately negotiated a settlement of $470 million—a figure that worked out to $800 per plantiff—while spending an additional $100 million on public relations, advertising, and legal fees. The victims of the Bhopal disaster were not consulted about the settlement imposed by the Indian Supreme Court, and no child under eighteen was allowed to file a claim. Sixteen years after the settlement, $330 million remains frozen in trust accounts. Because most of the claims and costs were covered by insurance, the company did not have to pay out the full amount, and took a relatively small charge against earnings of 43 cents a share in a year in which it booked profits of $4.88 per share. In 2002 Dow Chemical purchased the assets of Union Carbide.[21,22]

Bhopal illustrates all too tellingly the asymmetry of corporate and civil rights. Although Dow and Union Carbide are under criminal indictment in India, they refuse to respond to the charges. There is no system of justice to hold them accountable for the impact their mismanagement had on their victims' human rights, for their Indian subsidiary company was controlled by the parent company in shares and deed. In the plainest of language, Union Carbide had the right to extend itself into one of the more beautiful cities of India, but no requisite accountability. While the WTO and

constituent trade ministers work diligently to undo restrictions on corporate opportunity, there is no equivalent international organization that addresses economic and corporate responsibility. If NGOs hold up caution signs to globalization, it is because thousands of other human rights violations have only added to the grief of Bhopal, wounds that give people pause throughout the world.

The arc of this discussion brings us inexorably to Exxon, and requires a historical flashback to the man who has become the poster child for corporate ruthlessness, John D. Rockefeller. Here again, a woman was the whistleblower for corporate malfeasance, and in this case it involved the corrupt, illegal practices of the world's richest man. Ida Tarbell's *The History of Standard Oil* (1904) contained a remarkable series of nineteen articles published over a two-year period for *McClure's* magazine. In it she recounted damning facts, stories, and anecdotes about the company, many received directly from one of its partners and longtime directors, Henry H. Rogers. A centimillionaire (tantamount to a multibillionaire today), who invested heavily in oil, minerals, and railroads, Rogers was naively forthcoming in his discussions with Tarbell, believing that his cooperation would ensure she got her facts right. She did, and the reading public was outraged, while to his dying day John D. Rockefeller seethed at the mention of Tarbell's name. Written in the calm and lucid prose later employed by Rachel Carson, *The History of Standard Oil* laid bare the corrupt and unethical practices that led to the company's dominance. Within seven years of the book's publication, the Standard Oil Trust had been dismembered into thirty-four separate companies under the Sherman Antitrust Act. The four largest became Exxon, Mobil, Chevron, and Amoco. Exxon merged with Mobil in 1998, Chevron purchased Texaco in 2000, and BP acquired Amoco in 1998. ExxonMobil and Chevron were among George W. Bush's biggest contributors when he was governor of Texas and when he ran for president, and had much to say about the government's policies on climate change through private meetings with Vice President Dick Cheney. ChevronTexaco named an oil tanker after Secretary of State Condoleezza Rice and has been accused of environmental and human rights abuses in Ecuador and Nigeria.

The pesticide companies that dogged Rachel Carson paid a young public relations flack named E. Bruce Harrison to lead the campaign against her under the banner of the National Agricultural Chemical Association. Harrison later started his own firm, which helped devise the oil and automobile industry campaign called the Global Climate Coalition—"a voice for business in the global climate debate"—whose main purpose was to kill the Kyoto Protocol in the United States. ExxonMobil was one of its biggest supporters. Harrison also is credited with creating the concept of greenwashing. He realized early on that a number of large New York– and Washington-based environmental organizations depended on direct mail campaigns to maintain their finances. These organizations were prime targets to cut deals with miscreant corporations, which would enable both the company and the nonprofit to use minor corporate concessions to enhance their respective images. One example was the deal between Environmental Defense and McDonald's that called for the fast-food chain to introduce recycled paper into its waste stream of French fry containers, tray liners, and napkins. Harrison became a wealthy man, his company was sold to the Ruder Finn agency in New York in 1996, and the GCC was disbanded in 2002 after widespread industry defections.

ExxonMobil once issued directives forbidding the use of the word *sustainability* in all internal or external communications, and has vigorously funded groups that fight or delay policy on CO_2 reduction. It appears that another of its goals is to corporatize how science is perceived and understood by the public, creating doubt and fear whenever possible, but always couched in the language of reason. To do so, Exxon funds so-called think tanks that work diligently to create skepticism, if not cynicism, about efforts to mitigate climate change.[23] One of the recipients of its largess was the Action Institute for the Study of Religious Liberty, which received $155,000, then labeled emission controls "a misguided attempt to solve a problem that may not even exist."[24] The American Council of Capital Formation received $250,000 and rewarded its sponsor with this proclamation: "Science questions must be addressed before the United States and its allies embark on a path as nonproductive as that of the Kyoto Protocol." The American Council on Science and Health ($90,000 donation) assured us that "Policymakers can safely take several decades" to respond to global warming. The American Enterprise Institute ($960,000) wrote, "Between hacky-sack games, enviro-moralists kick around the imminent apocalypse of global warming, brought on—they're sure—by the pollution of human industry and the mindless plunder of our shared heritage. . . . The most recent studies now cast major doubt on global warming itself—the basis for all the gloom and doom predictions."[25] The American Legislative Exchange Council ($712,000) reported that "global warming could actually save lives."[26]

Citizens for a Sound Economy ($302,150) claimed: "The science behind global warming is inconclusive, and to teach otherwise is fear mongering."[27] And the Reason Public Policy Institute ($230,000) "reasoned" that "the sun, not a gas, is primarily to 'blame' for global warming."[28] Perhaps the most perverse subversion of climate science comes from another ExxonMobil grantee, the Mercatus Institute, which honored writer Michael Crichton, whose 2005 book *State of Fear* equates global-warming experts with Nazis, as a peer of Upton Sinclair and Rachel Carson.[29] Between 1998 and 2004 ExxonMobil awarded $1.74 million to the Competitive Enterprise Institute (CEI), the granddaddy of skepticism-for-hire. CEI and thirty other organizations have been dubbed the Cold Earth Society, and collectively have received $8 million from ExxonMobil. CEI sued President Bill Clinton to prevent expansion of research on global climate change by the U.S. Global Change Research Program; it also counseled President Bush not to attend the U.N. Summit on Sustainable Development in 2002, the tenth anniversary of the original Earth Summit, at which his father, attending the first global meeting on the fate of the environment, found it more important to protect business rights. The CEI Web site adopts the tactics created thirty-six years earlier by the agricultural chemical industry: make doubt and uncertainty about science the conventional wisdom, make people afraid of environmental initiatives, make people afraid of environmentalists, make people afraid of anything and everything except the official word offered by corporate-sponsored think tanks:

> Although global warming has been described as the greatest threat facing mankind, the policies designed to address global warming actually pose a greater threat. The Kyoto Protocol and similar domestic schemes to ration carbon-based energy use would do little to slow carbon dioxide emissions, but would have enormous costs. These costs would eventually fall most heavily on the poorest nations in the world. Luckily, predictions of the extent of future warming are based on implausible scientific and economic assumptions, and the negative impacts of predicted warming have been vastly exaggerated. In the unlikely event that global warming turns out to be a problem, the correct approach is not energy rationing, but rather long-term technological transformation and building resiliency in societies by increasing wealth. CEI has been a leader in the fight against the global warming scare.

The argument in favor of fossil fuels pretends to be about science and policy, but it more accurately involves a question of rights: the debate over business rights versus the rights of citizens is claiming public attention once again. When will a Rosa Parks of this issue stand up and take a seat at the front of the bus? That person would not step aside while Congress was being corrupted by corporate contributions. That person would question the rights of business and would ask that the concept of the separation of church and state be enlarged to include the separation of corporation and state. That person would call for third-party objective science as the basis of governmental policy, and would protest the politicization of the EPA. That person would demand complete transparency in how corporations donate their money, and would petition for legislation forbidding corporations to impersonate citizen groups, and so much more. Perhaps that person is Ray Anderson, founder of the textile and carpet company Interface, who became cochairman of the President's Council on Sustainable Development under Bill Clinton. More than any other CEO in the country, Ray Anderson has taken to heart the necessity of completely transforming an industrial company so that it not only is sustainable, but takes steps to restore what damage has been done in the past. Whoever he or she is, that person would have the courage to say that we have marched too long in lockstep with economic policies and assumptions that are harmful to the earth and the majority of its people, and that it's time we spoke truthfully about the consequences of our actions, about the enormous polarization of wealth, about how we treat others, about how economic globalization has become a race to the bottom enforced by rules that very few have agreed to. We'll celebrate that person in histories yet to be written—an honor I suspect will not be bestowed upon a single rich and powerful businessperson of today, who one hundred years from now is more likely to be remembered as a name on a building or foundation.

Just as ecology is the study of the relationship between living beings and their environment, human ecology examines the relationship between human systems and their environment. Concerns about worker health, living wages, equity, education, and basic human rights are inseparable from concerns about water, climate, soil, and biodiversity. The cri de coeur of

environmentalists in Carson's time was the same as that of the Lancashire weavers, the same as in the time of Emerson, the same as in the time of 2005 Nobel Peace Prize winner Wangari Maathai of Kenya. It can be summed up in a single word: life. Life is *the* most fundamental human right, and all of the movements within the movement are dedicated to creating the conditions for life, conditions that include livelihood, food, security, peace, a stable environment, and freedom from external tyranny. Whenever and wherever that right is violated, human beings rise up. Today, they are rising up in record numbers, and in a collective body that is as often as not more sophisticated than the corporate and governmental institutions they address.

EMERSON'S SAVANTS

There is an answer from every corner of the globe . . . the enslaved, the sick, the disappointed, the poor, the unfortunate, the dying, the surviving cry out, it is here.

—Ralph Waldo Emerson, *Journals*[1]

We shall match your capacity to inflict suffering by our capacity to endure suffering.

—Martin Luther King Jr., *The Trumpet of Conscience*

Those who work selfishly for results are miserable.

—Sri Krishna, Bhagavad Gita, The Song of God