

## **Bhopal: Unending Disaster, Enduring Resistance**

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### **Introduction**

On March 23, 2006, fifty survivors of the Bhopal gas disaster and subsequent water contamination trudged into New Delhi and requested a meeting with the prime minister of India, Manmohan Singh. The Bhopal disaster occurred in 1984, when the Union Carbide Corporation (UCC) pesticide plant leaked 40 tons of methyl isocyanate (MIC) into the city of Bhopal, exposing 500,000 people to the toxic gas. The fifty survivors, several in their eighties, had walked all the way from Bhopal, sleeping on the side of the road and covering over 500 miles on foot. Their demands were chillingly simple: a commission to administer their relief and medical care, the provision of safe drinking water, and the active prosecution of those criminally accused of being responsible for the disaster, which has killed at least 20,000 people to date.<sup>[1]</sup> They also demanded environmental remediation of the factory, a national day of mourning for the victims, and the disaster's inclusion in school curricula. Finally, they wanted the prime minister to pursue — and blacklist, if possible — the corporation liable for the disaster, Union Carbide Corporation USA, owned since 2001 by the Dow Chemical Company.

These demands were not new. Most of them had been on the survivors' agenda since at least 1991. But this time, after waiting twenty-seven days, three survivors, three Indian activists, and two international supporters of the survivors, who were all on an indefinite hunger strike, were granted a meeting with the prime minister. On April 17, Prime Minister Singh granted all of their demands, with the caveat that the government would do nothing "extralegal" in pursuit of Union Carbide, whose factory had originally caused the disaster, or its current parent company, Dow Chemical.

It had been twenty-one years and over five months since the disaster occurred. Why would it take twenty-one years to meet such basic demands? And twenty-one years after the Bhopal disaster, when most people around the world believe it to be ancient history, how could the Bhopal movement be strong enough, suddenly, to win their demands?

Contrary to popular belief, the situation in Bhopal has gotten worse, not better, over the past two decades, especially the problem of water contamination. The deteriorating environmental conditions, combined with delayed justice and the ambitious but bungled government rehabilitation efforts, have given survivors a political education to go along with their anger and suffering. With every passing year that issues remain unresolved in the Bhopal case, the stakes are heightened for its eventual resolution. Everyone involved — the victims of chemical exposure, the government of India, and the corporation — understands that their continued survival or legitimacy may hang on the final outcome of the Bhopal problems.

The first half of this article, which includes part 1, "Disaster," and part 2, "Governmental Interventions," covers the basic aspects of the disaster and its aftermath. These sections outline the historical facts and controversies but pay particular attention to the role of the Indian government, its convoluted relationship to UCC and to the United States government, and to the logic of its relief efforts in Bhopal. Part 3, "Survivors' Movements," looks at the evolution of the survivors' movement in Bhopal and their progressive politicization and articulation of rights, developed in relation to the combination of official negligence, corruption, and governmental patronage that they have endured. Finally, part 4, "Impacts," discusses the Bhopal crisis as a stimulus for the formation of new networks, alternative activist formats, and expanded targets for activist intervention. In sum, I show how the constellation of government, corporate power, and development projects have laid the groundwork for a marginalized group of people from central India to form the center of a political movement, which incorporates their daily crises into a powerful and international critique of the chemical industry and the corporate system.

### **Part One: Disaster**

#### **1. Hazardous Production**

In the late 1960s, Union Carbide Corporation built a small factory at the edge of the city of Bhopal, India. It formulated the carbamate pesticide Sevin for sale on the Indian market, and imported its most hazardous components, phosgene and methyl isocyanate, in small batches. In 1972, company engineers proposed upgrading the facility so that they could also produce these hazardous ingredients on site, and thus increase output of Sevin. The plans for the upgrade were drafted by Union Carbide USA, and vetted by, among others, the company's future CEO, Warren Anderson. The technology proposed for the upgrade was inferior to that utilized in UCC's American operations, and the proposal detailed inherent risks to this plan that could have been mitigated "had proven technology been used throughout."<sup>[2]</sup> The UCC designers also noted that the proposed waste disposal system, solar evaporation ponds, posed the "danger of polluting subsurface water supplies."<sup>[3]</sup> In addition, highly unstable MIC was to be stored in an unnecessarily large tank — constructed despite internal objections — in part because UCC policy provided pay incentives to the board for producing larger infrastructure.<sup>[4]</sup>

Bhopal is the capital of Madhya Pradesh ("middle province"), a lush agricultural state sometimes referred to as the "breadbasket of India." Union Carbide viewed India, especially Madhya Pradesh, as the next big market for Sevin. At the time of the Bhopal disaster, the government of the Republic of India, a young democracy, was struggling between the desire to industrialize and attract foreign investments, and the need to manifest independence and autonomy from foreign interference. A few years earlier, the Indian parliament had passed the Foreign Exchange Regulation Act (FERA), which aimed to increase state control over foreign business ventures. The act reduced the amount of equity that a foreign corporation could provide to any given project, in order to dilute foreign ownership of Indian-based firms. The bill also strongly encouraged the transfer of proprietary production technology to Indian firms, rather than just the formulation and sale of products, so that it could lay the groundwork for eventually nationalizing such technologies.

In the case of the Bhopal plant however, UCC wanted to retain control of both the project and the technologies they had invented. While FERA did not allow foreign corporations to be the majority stakeholder in a project, an exception was made for UCC on the grounds that it was bringing in "special technology." In order to retain their 50.9 percent stake in the undertaking, UCC cut the cost of construction from \$28 million to \$20 million dollars, primarily by using substandard technology and cheaper materials.<sup>[5]</sup> Although UCC claims that its plant in Bhopal was built to the same safety specifications as its American facilities, when it was finally constructed there were at least eleven significant differences in safety and maintenance policies between the Bhopal factory and its sister facility in Institute, West Virginia. For example, the West Virginia plant had an emergency plan, computer monitoring, and used inert chloroform for cooling their MIC tanks. Bhopal had no emergency plan, no computer monitoring, and used brine, a substance that may dangerously react with MIC, for its cooling

system. The Union Carbide Karamchari Sangh (Workers' Union), a union of Bhopal workers that formed in the early 1980s, recognized the dangers at the factory but their agitation for safer conditions produced no changes. [6]

## 2. "Green Revolution"

The economic rationale for the construction of the Bhopal factory was the demand for pesticides engineered by the "green revolution," a massive, internationally sponsored shift in agricultural practices. The "green revolution" was set in motion in India (and other developing nations) during the 1960s and 1970s by an alliance of governments, multinational corporations, and world development and trade agencies. Under the banner of the eradication of food shortages, the "green revolution" purposefully disrupted the small-scale, manual, multicrop, organic agriculture that had developed in India over thousands of years, in favor of large-scale, monocrop, chemically and mechanically maintained agriculture.

Unfortunately, the "green revolution" did not succeed in eliminating hunger, and by the late 1970s many had already become disillusioned with its promises. The economic, political, and health toll of these often unsustainable initiatives became quickly apparent. Most of these costs were borne by peasant farmers, who were displaced from their small plots of land when mechanized agriculture began to demand huge land holdings. In Madhya Pradesh, the peasant population migrated to cities like Bhopal, settling densely on the outskirts in illegal squatters' colonies (*bastis*), and doing day labor to survive. Though usually tolerated by the government as potential labor pools and vote banks, these settlements were not entitled to state services like sewage, piped water, or roads, and could be demolished at the whim of an official. Additionally, most of those who lived there did not possess the documents of citizenship, like birth, marriage, or death certificates, which would later become crucial to proving the right to state services. Few who lived in the *bastis* had ever received much in the way of services from the government.

The UCC factory was on the Kali parade grounds outside Old Bhopal. Old Bhopal was the traditional Muslim center of the city, while wealthier New Bhopal, in the hills on the other side of the Upper and Lower lakes, had arisen after 1956, when Bhopal was made capital of Madhya Pradesh. When UCC decided to upgrade the Bhopal facility from formulation to production, they fell in violation of the municipal zoning regulations due to their proximity to human settlement and major infrastructure, such as the train and the city bus station. However, when The Municipal Administrator served notice on to UCC, requiring them to relocate outside the city boundaries, they did not move. Instead, the administrator was suddenly transferred from his post, and the issue was dropped (Keswani in Hanna et. al.). [7] Meanwhile, however, the *bastis* kept growing, filling in most of the available land on the outskirts. Although the Kali parade ground had been farmed for many generations, the population had never before been so dense. . By 1980, when production at UCC's factory was finally completed, the slums had expanded to meet the walls of the new factory, and the government had recently granted many residents their one crucial document: a *patta*, which gave them rights to the land they lived on.

Although the safety of the plant was the responsibility of its operators, the safety of the city was the responsibility of the Indian government. Without transferring all responsibility to the state, it is important to note here that the Indian government repeatedly violated its own laws — from FERA, to zoning restrictions, to ensuring comparable safety standards — in their dealings with UCC. Neither repeated complaints of worker injuries, the 1981 death of Mohammed Ashraf, employed in the Bhopal MIC unit, letters from concerned citizens (sent to the local and national government, and to UCC's offices in Bhopal, Bombay, and it's U.S. headquarters in Danbury, Connecticut), or the huge fire that raged through the alpha-naphthol unit in 1982 prompted the government to take any regulatory action. [8] Amnesty International's report on the disaster on its twentieth anniversary notes that they were "unable to find evidence that the central or state government took adequate steps to assess the risk to local communities or the environment, or to press Union Carbide to review safety mechanisms." [9] Instead, politicians looking for votes happily granted *pattas* to illegal residents next to the factory, never informing them that it posed an immense hazard. [10] This close and legally slipshod relationship between UCC and the Indian government set the stage for the disaster.

## 3. The Gas Leak

Sevin failed to perform as well on the Indian market as hoped, but by May 1982 the factory had received a damning report from the safety audit team sent from the U.S. In fact, the huge new factory had ceased production by the middle of 1984 when UCC was reportedly shopping it around for sale. None of the plant's six safety systems, including the refrigeration for the MIC, which must be kept at 0 degrees Celsius, were functioning. Some had been turned off to save money —\$30 per day in the case of the refrigeration system. At midnight on December 3, 1984, while most of the city was sleeping, a rupture disc failed on a 40-ton tank of MIC, which escaped the tank as a low, poisonous cloud that drifted south. Over 500,000 people lay in the path of the gas, which traveled most thickly over the slums closest to the factory, thinned out slowly over Old Bhopal, and finally began to disperse above the lake toward New Bhopal.

The number of people who died that night, like the number of chronically ill and genetically damaged, continues to be a contested and highly politicized issue. Very few of those closest to the factory were likely carrying identifying documents, many were itinerant, and would not have been accounted for in a census, and large numbers were summarily buried in mass graves or cremated immediately. The government has legitimized only the documented and registered individual deaths, a process which required autopsy and registration with the police. The current official death toll is therefore less than 7,000 total, of which 3,000 died in the immediate aftermath. Estimates based on the number of burial shrouds and wood for cremation purchased in the aftermath could bring the estimate as high as 10,000 immediately. [11] Amnesty International confirms that 7,000 people died immediately, with additional deaths to date of 15,000, and with at least 100,000 chronically ill. [12] Over twenty years later, 4,000 registered gas victims still present themselves for treatment to government hospitals every single day, according to the state government's annual reports.

## Part Two: Governmental Interventions

### 1. *Forum non convenes*

In the immediate aftermath of the gas disaster, American personal injury lawyers flocked to Bhopal, signing up victims by the thousands. They uniformly promised gigantic rewards, often took with them the victims' only documents, and sometimes hired local goons to "recruit" clients. In part to stem these unscrupulous practices, and in part to expedite the legal process, India passed the Bhopal Gas Leak Disaster (Processing of Claims) Act of 1985. This act appointed the government sole representative of and negotiator for all gas victims in *parens patriae*. Legally, this labeled the victims "juridically incompetent," a status usually reserved for the very young or the mentally ill. In fact, most of the gas victims did not have the resources or even the language (in this case, English) necessary to fight the legal battle for themselves, but the Bhopal act included no provisions for victims to communicate with their sole representative, the government, and no recourse for remedying poor representation. The government, assuming the legal role of a parent in relation to the gas survivors, robbed

them of their legal right to pursue Union Carbide individually, while technically establishing their right to be provided for, and advocated for, by the government.

In 1985 the Indian government took their case against UCC to the Second District Court of New York, arguing, poignantly, that "the interests of justice required the case to be tried in the United States on the grounds that [India's] own legal system was backward and procedurally outmoded, lacking any class action device or other provision for representative suits, burdened with the legacy of colonialism, and subject to massive delays caused by endemic docket backlogs."<sup>[13]</sup> At a moment when American legal justice seemed applicable to Bhopali survivors, the Indian government strategically confessed to the inability of its own infrastructure — legal, and as it would turn out later, medical, scientific, political, social, and economic — to grasp or adequately address the ramifications of this catastrophe.

The presiding judge in the case, Judge John F. Keenan, however, summarily dismissed the government's argument to try the case in New York on May 12, 1986, based on *forum non convenes*, literally, inconvenient forum. As Rajan Sharma, a legal expert on Bhopal, and the primary litigator in a current civil case brought against UCC/Dow (under the Alien Tort Claims Act) on behalf of several Bhopal survivors, has written, Keenan's "decision rested, in part, on the notion that trying the case in the U.S. courts would amount to 'yet another instance of imperialism' imposing foreign legal standards upon a developing country with 'vastly different values,' different levels of 'population' and 'standards of living.'"<sup>[14]</sup> The message from Keenan's court was unambiguous: American courts are for American citizens. The criminal acts committed by Americans abroad did not and would not function to bestow American-style rights on their victims. The representatives of the Indian government went home with a new agenda: damage control. From then on the fate of the Bhopal victims would be directly tied to India's reputation as a corporate and investment friendly market.

## 2. Legal Compromises

In 1989, the Indian Supreme Court approved a "full and final" settlement between UCC and the Indian Government for \$470 million dollars in the civil litigation over the Bhopal disaster. The government had previously estimated the damage at \$3 billion dollars.<sup>[15]</sup> The settlement was based on an estimate of 300,000 people affected by the gas, although the amount would eventually be disbursed to over 500,000 who could prove victimhood (this would average to approximately \$500 per person for lifelong injury or disability). No stipulations for treatment, research, or economic rehabilitation for the thousands who had lost the ability to work were included in the agreement. In addition, the court quashed the criminal charges of culpable homicide against UCC, its former CEO Warren Anderson, UCC's Indian subsidiary, and all seven Indians implicated in the disaster. Union Carbide's stock rose in response to the dual victories — over half of the settlement was covered by their insurance. No survivor representation or testimony was accepted in the case, and the news of the deal caused an immediate uproar among observers worldwide. Survivors flooded into New Delhi and protested on the steps of the Supreme Court, and women's unions from Bhopal spontaneously entered and trashed Union Carbide's Delhi offices in a rage.

In 1991, in response to a revision petition challenging the settlement, filed by survivors and support organizations, the Supreme Court revisited the settlement issue. Rather than increasing the amount payable by the corporation, the Supreme Court instead stipulated that were the amount to be deemed insufficient in the future, the government of India would make up the difference. Explicitly, for the first time, and under the guise of a generous revision, the government established its own structural motivation to shortchange the survivors and downplay the long-term consequences of gas exposure. Although they were jettisoning the possibility of further financial remedy from the corporation, the Supreme Court did, however, succumb to public pressure and reinstate the criminal charges against UCC, Anderson, and the accused from India, unable to justify their dismissal. This move crucially reactivated the possibility of criminal justice for the survivors of the disaster. These two capitulations to the protests of the gas victims and their supporters, reinstating warrants and accepting governmental responsibility, were perhaps due to the influence of the leftist Janata Dal party, which was briefly in power in India in the early 1990s, and had made rectifying the settlement one of their central platforms. The political will to accept the responsibility the government took on during this period has since been lacking.

As of 2006, warrants remain outstanding for both UCC and its former executive, Warren Anderson, who was arrested in Bhopal in 1984, released after posting less than \$2000 bail, and has never returned. An investigation by Greenpeace and the Daily Mirror, a British newspaper, found Anderson living in New York in 2002, and in 2003 India finally delivered the arrest warrant for Warren Anderson to the United States Justice Department. Nearly one year later, despite the joint extradition treaty between India and the U.S., the Justice Department declined to extradite Anderson. Meanwhile, India's Central Bureau of Investigation (CBI), charged with prosecuting the case, has repeatedly tried to dilute charges against all of the accused. Survivor's groups succeeded in preventing the CBI from reducing the charges against Anderson and UCC from culpable homicide to criminal negligence, but failed to prevent the same reduction of charges against the Indian accused, who are finally, twenty one year later, appearing to testify in the slow-moving Bhopal court. The government has failed to hold anyone accountable for this man-made disaster, and those in Bhopal embody this failure yearly as fiery effigies that bear the names of the accused and the governments that protect them. The lack of criminal justice in the Bhopal case, while certainly not the most pressing issue, may finally be the most demoralizing one to a community that will never be the same.

Although the legal response to the disaster in India has fulfilled the government's own negative expectations, it has not always been clear whether this failure is strictly legal or a result of a political reluctance to irritate UCC or the American government. The combined effect of these legal and political failures has been to demonstrate India's inability and unwillingness to protect her citizens from foreign and corporate interests. Willing to treat survivors as children via *parens patriae*, the government has failed to care for them. Obligated to charge the guilty, the government has failed to successfully criminally prosecute a single individual or corporation. They have attempted to cover for the corporation by grappling with the crisis themselves. To protect UCC, the Indian government promised to facilitate a social welfare and rehabilitation project that they remain loathe, and poorly equipped, to execute effectively. Uninterested in protecting the vulnerable, they have been even less interested in the difficult work required to heal them.

## 3. Compensation

In her excellent 1995 book on the Bhopal issue, Critical Events, the anthropologist Veena Das discusses the processes that led up to the civil settlement, including the Bhopal Act and the technologies of medical categorization that were used to identify the health impact of the disaster. One of the dynamics she identifies is the manner in which the legal process was used by the government to transform the Bhopal victims from "sufferers" into "malingerers." In her analysis, the government's rhetorical monopolization of the poverty and acute suffering of the survivors became a way to rob them of their rights by declaring them *non sui juris* (without the legal capacity to act for themselves). According to this thinking, the victims needed a more expedient resolution to their problems than they could achieve individually because of

their poverty and illness. Yet, via a circular logic, their poverty and their outsider status in the proceedings were then repeatedly used to cast suspicion on their injury.

Das notes that in this case the suffering of the survivors was transformed into something that they deserved or were inventing, by reference to their preexisting suffering and medical conditions, such as tuberculosis or malnutrition, which made codification of their “new” symptoms difficult. Methyl isocyanate was known at the time to be the most potent pulmonary and sensory irritant among industrial isocyanates, and what little else was known suggested that long-term effects of exposure to MIC could include chronic respiratory, corneal, and immune problems, with potential carcinogenic and second-generation effects. The science, however, did not yet exist for victims to “prove” the causal relation between their specific symptoms and MIC. As Das points out, the government claimed that “the subjective symptoms did not correspond with the known objective indices of disease.... In effect, victims were responsible for the fact that their disease was not understood by modern medicine.”<sup>[16]</sup> This suspicion and lack of knowledge was combined with a flawed system of medical categorization, one which lacked any framework for conceiving of the total toxic insult to a person’s system or the long-term dangers of exposure to MIC. In fact, those who did not have evidence of having received medical treatment during the chaotic weeks of the crisis itself were considered “uninjured,” despite the facts of their condition in 1989.<sup>[17]</sup>

The inability of the government or scientific community to understand or diagnose the collective and unprecedented condition of the gas victims allowed the transformation of the victims’ right to justice into the rights of the “greater good of greater numbers.”<sup>[18]</sup> Das quotes the Attorney General of India, defending the Bhopal Act against a challenge by petitioners and survivor groups as to its constitutionality: “When rights are curtailed, permissibility of such a measure can be examined only upon the strength, urgency, and preeminence of rights and the largest good of the largest number sought to be served by curtailment.... If the contentions of the petitioners are entertained... rights may be theoretically upheld — but ends of justice would be sacrificed.”<sup>[19]</sup> In this case it appears that the “greater good” was not the good of the survivors, but the good of those who stood to gain from India’s soft stance on corporate crime. This entrenched position became clear when, upon revisiting the settlement in 1991, the Supreme Court noted that the government’s categorization system had been inadequate, the numbers low, and their understanding of MIC’s potential effects severely limited, and yet they still refused to adjust the settlement amount.

It was on these terms — amid accusations of false claims and invented symptoms against the victims — that the Supreme Court drafted the guidelines by which compensation would be disbursed to the survivors after 1991. The process they developed was overly bureaucratic, founded on suspicion, and plagued by corruption. Praful Bidwai, an investigative journalist in India, contended at the time of the distribution of funds that the compensation guidelines were “flawed by a fundamental confusion about what is being compensated. In tort law, the principal damages are paid for injury or discomfort caused by (past) civil wrong, such as negligence. Loss of earnings is a second, consequential factor. Further, if a disability arises and necessitates fresh expenditure or loss of earnings, that is yet another factor.”<sup>[20]</sup> Rather than awarding the (already inadequate) settlement money to the victims, the compensation process required each victim to prove their own suffering and medical problems, despite the poor understanding even among professionals about the etiology of gas exposure. Obtaining this proof often required victims to present significant bribes to medical officers. This exchange, quoted in Kim Fortun’s book on Bhopal, is representative:

*Judge:* You have been categorized as “C” which entitles you to 25,000 rupees in compensation. Do you accept?

*Plaintiff:* Sir, I have already spent that much on medicines.

*Judge:* Do you wish to contest?

*Plaintiff:* Sir, do what you think is fair.<sup>[21]</sup>

Analysis after the fact found that most people received the minimum amount of compensation or less than was established by the government guidelines for each gradation of injury, and that those closest to the factory received less on average than certain wealthier neighborhoods farther away. There was no recourse for survivors denied compensation due to the onerous documentary requirements, and by the end of the compensation process, in the mid nineties, the government had given away less than half of the money, and remained sitting on the rest — attempting to use it for several pet projects — until a court order in 2003 confirmed that it belonged to the victims.

#### 4. Medicine

A survey found that despite the intention of tort law, much of the compensation money was eventually used to cover medical expenses. Medical care was guaranteed free to survivors by the government, though not to their children born after the disaster. However, in part because of the near nonexistence of scientific literature on MIC exposure, the health care system does not seem to have made much advancement in treatment since 1984. Patients report poor quality of care at the government hospitals and often are forced to buy the medicines that legally should be provided free of charge. Meanwhile, Bhopal has seen a proliferation of hospital construction: as of 1994 it had 1.25 beds per one thousand persons, exceeding the World Health Organization standard of one bed per thousand.<sup>[22]</sup> But despite the proliferation of certain kinds of infrastructure, there is still no official treatment protocol for gas exposure. Most of the treatment remains symptomatic because of official disinterest and a poor understanding of disease etiology. Many doctors perceive gas syndrome as an imagined (or invented) symptom of poverty, despite the consistent excess mortality and morbidity in badly affected areas.

In 1985, twenty-four long-term medical studies were initiated by the government affiliated Indian Council of Medical Research (ICMR) to document the effects of the unprecedented exposure. These studies could potentially have provided a precise picture of symptom and disease trends that constitute gas exposure, along with a picture of the predicted damage in the second generation. However, by the late 1980s a number of the studies had already been quietly closed, and the last study was ended prematurely in 1992, against the protests of its chief investigator and just as evidence of second generation effects were emerging. A technical report was released in 2004, asserting that more research was necessary. The ICMR clinical and toxicological studies have yet to be published.

#### 5. Contamination

Union Carbide knew even before they built their production facility that their design posed the “danger of polluting subsurface water supplies in the Bhopal area” and that in order to prevent this, “new [disposal] ponds will have to be constructed at one to two year intervals.”<sup>[23]</sup> In addition, even before the solar evaporation ponds were constructed, the formulation plant had been indiscriminately burying chemical waste all over the site. Residents were complaining of cattle deaths and damage to crops even before the disaster, and UCC’s own documents show that they knew of leaks from their disposal ponds as early as 1981. Internal correspondence from April of that year notes that “continued leakage from evaporation pond [is] causing great concern,” but UCC never warned the community.<sup>[24]</sup> Evidence

that has emerged since then, including evidence disclosed in several studies by Greenpeace, has confirmed that there are dangerous chemicals and heavy metals disposed around the site. One Greenpeace research team tested the drinking water of nearby communities and found that high levels of contamination made well water in the area unsuitable for drinking. Substances that exceeded WHO and EPA standards included carbon tetrachloride, chloroform, trichloroethane, tetrachloroethane, dichlorobenzenes, and heavy metals. The Greenpeace researchers concluded in 1999 that the presence of these contaminants is "undoubtedly due to the long-term industrial contamination of surrounding environment from this plant. Consumption of water, contaminated by chemicals that have been found in this study, for long periods could cause significant health damage."[\[25\]](#)

In 1991, survivors and activists had presented the government with information that showed that there were dangerous substances potentially leaking from the factory. In fact, the Madhya Pradesh State Research Laboratory produced reports between 1991 and 1996 that found that water near the factory was "unfit for drinking" but declined to warn the residents, release their reports, or act on their findings.[\[26\]](#) Meanwhile, a government agency, the National Environmental Engineering Research Institute (NEERI), produced several reports on the factory site, all of which were rife with methodological problems and omissions.[\[27\]](#) One of these, funded by Eveready Industries India Ltd. (one of the subsidiaries formed in India by the UCC split), famously, and groundlessly, asserted in 1997 that contamination would take twenty-three years to reach the ground water.[\[28\]](#) Even Arthur D. Little, UCC's consulting firm, commented internally that NEERI's weaknesses included ignoring standard sampling processes, and also expressed serious doubts as to the validity of NEERI's conclusions, based on the inferior quality and misinterpretation of data. However, internal correspondence indicates that UCC chose to work with NEERI because they expected to have "an opportunity to participate and put forward our views during the progress of study, and try to protect company's interest."[\[29\]](#)

In 1994, in response to a petition by Ian Percival (submitted in December 1993) the Indian Supreme Court allowed Union Carbide USA to sell its 50.9 percent share in its Indian subsidiary, Union Carbide India Limited (UCIL), despite the fact that the Indian government had declared UCC to be an absconder from justice in 1992 and had frozen its assets. Then, in 1998, UCIL, under its new name Eveready Industries India Ltd. (EIL), handed over the factory premises to the Department of Industries.[\[30\]](#) During this time the contamination was spreading north from the factory at an estimated rate of 300 to 700 meters per year, and by 2006 it had extended at minimum 3 kilometers away from the factory. In total, an estimated 20,000 people live in the contaminated area, approximately 90 percent of whom have no other source of drinking water. According to a small study by Sambhavna Trust, 50 percent of residents of the affected *basti* Annu Nagar suffer from "a multitude of symptoms," most commonly "abdominal pain followed by giddiness, pain in chest, headache and fever."[\[31\]](#) The Fact Finding Mission on Bhopal of 1999–2004 found bioaccumulation of toxins in vegetables and breast milk. Lead, mercury, nickel, volatile organic compounds (VOCs), hexachlorocyclohexane (HCH, formerly known as benzene hexachloride, or BCH) pesticide, and halo-organic compounds were found in soil, water, vegetables, and breast milk samples from ten residential sites close to the plant.[\[32\]](#)

Nongovernmental organizations struggled for years to build up the documentation and momentum necessary to motivate the government to address the water contamination issue. Finally, in May 2004 the Indian Supreme Court ordered that clean, piped water be supplied to the affected communities. However, the municipality never supplied more than 10 percent of the water necessary — less during the monsoon — and only provided water by tanker rather than piping it in. Although the ongoing civil suit on behalf of gas-affected Bhopal residents in the New York court has pushed the Indian government to clarify their position on the contamination issue (caving to activist pressure and a hunger strike in 2005, they sent a letter to the court agreeing that UCC could be compelled to clean up the factory in India), they still have not chosen to register their official support of the lawsuit.

The environmental and contamination issues in Bhopal have been ignored and marginalized for as long as possible because they disrupt an official discourse about Bhopal as an event that was "fully and finally" ended as of the 1989 settlement. Similarly to the process of neglecting or marginalizing medical research and the victim's access to it, the official narrative of the contamination has been directed by the flawed presentation of data and expertise controlled by the government and influenced by the corporation. This lethal combination of negligence and deceptiveness by both parties has occurred at the expense, again, of those living in Bhopal who by and large do not have access to these scientific discourses. Yet it may be that this double insult and the victimization of a new generation has made explicit the consequences of irresponsible development that the Bhopal situation illustrates. Today's activists, both in Bhopal and abroad, have experienced a renaissance - both of protest tactics, and techniques for scrupulous documentation and collection of data to counter the official numbers.

### **Part Three: Survivors' Movements**

#### **1. Rights and Rehabilitation**

To date, over 1.2 billion rupees (approximately \$41 million dollars, if taken at the average 1994, rather than 1984 or 2006, rate of exchange) have been spent on rehabilitation projects for gas-affected persons in Bhopal.[\[33\]](#) In total, according to government reports, 274 million rupees have been spent on environmental rehabilitation, 457 million rupees on social rehabilitation, 258 million rupees on economic rehabilitation, 173 million rupees on administrative expenses, and 59 million rupees on other associated expenses. But of the hundreds of millions spent on income-generation projects, today these projects employ fewer than two hundred people, and are profitable ventures for the proprietors of them. Hundreds of millions of rupees have also been spent on housing projects, but thoughtlessness and carelessness have plagued these ventures. For example, homes for gas widows were constructed as blocks of four-story apartments on the far edge of town, and many widows, chronically breathless, cannot manage the stairs, much less afford to get into the city. Over 2.6 billion rupees (approximately \$86.7 million dollars) have been spent on "free medical care," yet the victims are as sick as ever. Hospital wards lie empty for lack of staff, expensive, never-used machinery is commonplace (purchased on commission, of course), and none of the hospitals keep records of their patients for long-term tracking and monitoring of results. The Supreme Court Hospital Monitoring Committee, formed in 2004 as a result of activist pressure, made a recent surprise visit to a Bhopal hospital and in an hour and a half of waiting were unable to locate a single doctor.

Add these failed attempts to the failures of compensation, research, and criminal justice and a vivid picture emerges of the official attitude toward Bhopal. The stated goals of initiatives on behalf of the gas victims have remained unrealized. Efforts have been uniformly plagued by lack of oversight and accountability, characterized by thoughtlessness, or prematurely terminated. Corruption, lack of transparency, an unwillingness to communicate with or listen to the needs of the survivors, and the lack of an overseeing body, such as the demanded

"National Commission on Bhopal," has allowed for the misuse of much of the money earmarked for relief, and contributed to the failure of the government as the guardian of the survivors.

According to the survey conducted by the Indian Council of Medical Research, 68 percent to 86 percent of those affected by the gas were from a very depressed socioeconomic class, a large percentage of whom were Muslims and low-caste persons. In general, the very poorest neighborhoods were hit the hardest. This fact had complex consequences. On the one hand, these poor communities suddenly had a special right to health, different from the rights of other poor communities (and wealthier communities), and also were allotted previously unavailable social guarantees. The Supreme Court has agreed that for Bhopal victims the right to health care equals the right to life, and the right to life is guaranteed in the constitution (Article 21). On the other hand, these poor communities' exposure to the gas was, to begin with, due to their vulnerability. The government used this assumption of their lack of power to become their representative, *via parens patriae*, a status which means that they are *by definition* marginalized, disenfranchised, and "unfit" to articulate their own needs. Their "right" to treatment, compensation, and justice is translated by its executors as charity for the undeserving poor, much in the same way that their suffering was described in the Indian legal case. Discrimination and lack of education from all quarters contribute to this attitude toward the gas victims. Professor Suroopa Mukherjee, characterizes the stated attitude of bureaucrats and doctors in the wealthier, unaffected part of Bhopal, who are the service providers for the victims, as follows: "A large section of this population has become lazy and greedy. We cannot get domestic help in Bhopal because that section of society lives on the dole. NGOs and activists back them. They take to the streets and voice their complaints. Every gas victim in Bhopal is a politician who takes advantage of a corrupt system."[\[34\]](#)

Certainly there have been some false claims, but statistics on registration and compensation show that it is likely there were greater numbers of real claims excluded. It has been clearly established that the Indian government was willing to subvert its own laws by allowing UCC to build the factory; to betray its own legal system through the settlement with UCC and instantiating the Bhopal Act; and risk the lives of tens of thousands in order to avoid confronting the contamination issue and the question of corporate liability. This failure to protect Indian gas victims, alongside the development of a dysfunctional welfare system, has damaged, politicized, and educated the Bhopal survivors, whose movements have grown — movements that are troubled but increasingly powerful — to demand far more than their health.

## 2. Women's Work

Amnesty International notes in their report on Bhopal that "it is clear that the gas leak radically altered the social fabric and economics of every day life, and entrenched existing poverty and social disempowerment."[\[35\]](#) After the gas disaster everything was different, and that meant that those who survived did not have the physical strength or endurance to do the type of hard labor that most had been engaged in previously. Immediately, this meant that victims and their families went hungry.

Bhopal had almost no tradition of political organizing or union work prior to the disaster, particularly within the *bastis*, and certainly not among women, many of whom were confined to their homes. Immediately after the disaster, relief, and political efforts were therefore dominated by outside (Indian) activists who had the training and resources, not to mention energy, to fight the necessary battles. The survivors asked for jobs. In 1985 the Madhya Pradesh government created thirty-eight income generation projects to employ gas-affected women. (Men were not offered employment by the government, ostensibly because many of them had been driven to alcoholism by their losses or their sudden physical inability to provide for their families.) These workshops trained women in printing, the production of leaf cups and plates, leatherwork, sewing, and crafts.[\[36\]](#)

In 1986 however, the government closed these workshops, claiming they were no longer necessary, although nothing had changed materially about the situation of the survivors. (It would be several more years before they would win any interim relief.) Six hundred women in one facility organized and successfully agitated for the reopening of the workshops, obtaining jobs for 2300 women.[\[37\]](#) The organization these women formed, Bhopal Gas Peedit Mahila Udyog Sangathan (BGPMSU), or the Bhopal Gas-Affected Women Workers' Organization, would become the largest organization of female gas survivors in Bhopal, with membership in the tens of thousands. Around the same time, Champa Devi Shukla, a Hindu, and her Muslim coworker, Rashida Bi, began to agitate for better wages and conditions at their government workshop, which employed one hundred women. This agitation led to the creation of the Bhopal Gas Peedit Mahila Stationery Karamchari Sangh (BGPMSKS), or Bhopal Gas-Affected Women Stationery Workers' Union.

The Women Workers' Organization and the Women Stationery Workers' Union, though rarely working together and occasionally at odds, grew to become the core of rights agitation for Bhopal survivors.[\[38\]](#) Women, chosen for the governmental employment schemes on the basis of their traditional roles — in other words, because of the cultural taboo against women drinking alcohol, among other reasons — took a small step out of these roles when they began working at the factories. Many of these women had never left home unaccompanied by a man before, or without a veil. Many had recently become heads of households as a result of the disaster.

These women-led organizations formed bases through which these survivor-activists could ferment a variety of claims, such as their right to adequate compensation, medical care, and rehabilitation, — and in some cases, personal rights claims, such as the right to move about without a burka. The strategies of the unions included protests against government action and inaction, and weekly meetings that helped keep the focus on the story of the gas disaster as well as on economic rights (income generation). They also provided a face and a base for establishing a survivor perspective in the global conversation about Bhopal, and industrial disasters in general. However, like many of India's poor, as Kim Fortun notes in her work on Bhopal advocacy, "most Union women never expected to be provided for by the state in a positive sense. Nor, however, did they expect a relationship with the state by way of the negative. Insufficiency could be lived quietly. Asphyxiation could not."[\[39\]](#) Rights, particularly as something guaranteed by the state, were not something presumed by the survivors. But beginning with their rights as laborers, women responded to the progressive promises and failures by the government by identifying and demanding their rights, as gas survivors, Indians, and humans. Eventually, through the unions and the education provided by their contact with, their demands expanded from labor to rehabilitation, justice, compensation, medical care, safe environment, and finally, to global corporate accountability.

However, the path has been necessarily indirect. Women activists in Bhopal not only had to overcome obstacles of health, socioeconomic status, and lack of information, but also had to deal with basic issues of gender rights. The Bhopal Gas-Affected Women Workers' Organization took on a male convener, Abdul Jabbar, because, as a man, he had more freedom of movement than they did. He was also literate, and so he became their representative, framing their meetings and directing protests — the first of the many layers of translation and mediation that the women's message would often have to pass through to reach its target.[\[40\]](#)

### 3. Protests

Although the Bhopal survivors' movement has not been composed only of women, its predominately female composition has framed its techniques. In India, male police officers cannot touch women. A separate police force of female officers is required to physically subdue a women's protest, and these officers are often not as rigorously trained or quick to violence as their male counterparts. Similarly, female protesters have been consistently underestimated in terms of their ability to cause damage. Although they have often been led by men, and many have noted that it would be simplistic to call the movement "feminist," their strength and spontaneity has become legendary. A knack for overwhelming the police, comfort with the aggressive edge of "nonviolence," an ability to consistently surprise, and an eye for the visually symbolic — in particular gendered symbols and weapons — have all been characteristic of their techniques.

Spontaneously walking 700 kilometers is one example. On June 1, 1989, seventy-five women from the Bhopal Gas-Affected Women Stationery Workers' Union began walking from Bhopal to Delhi. They were demanding regularized factory salaries and wages in the stationery workshop where they had been trained to produce paper products. They had just discovered the stipulations of the Factories Act and the Minimum Wages Act, and were determined to receive their legal due for their work. Having failed to secure jobs at the legal rate of pay, they decided to walk to Delhi to meet the prime minister, Rajiv Gandhi.

They didn't know where Delhi was, or how to get there. They decided to go although they had not made provisions for food and shelter along the way. They did not have the wherewithal to notify either the press or the prime minister's office of their journey. When they arrived in New Delhi, after a long march filled with hardships, they did not have funds to stay there and did not know how to contact the prime minister. After making inquiries, they were told that the prime minister was away for the weekend, and would then be traveling for ten days. Suresh Pachauri, the minister from their own state, came and assured them that once they got back matters would be resolved and promised personally to take care of their case and get their demands met. He convinced the women to return to Bhopal. With the minister's assurance, the women decided to return home. The promises were not kept. A while later Rajiv Gandhi visited Bhopal to address a public meeting. The women forced their way in, despite attempts by the police to stop them. They interrupted the meeting and told Prime Minister Gandhi their grievances and their story. In the end they won a victory. Today, these 100 workers earn salaries of around 2000 rupees each (about \$50), on a fixed basis, in the paper press. In this case the survivors walked to Delhi with no support and no media attention. They had no channels through which to gain access to those in power, and their experience and reception contrast starkly with the 2006 *padyatra*, or protest, which many of the same women joined. It was only through their trademark forcefulness, and with a bit of luck, that their demand (simple enforcement of the law) was met.

Other examples echo these dynamics. After the announcement of the government's 1989 settlement with Union Carbide, hundreds of people jumped illegally onto trains bound for New Delhi, and spontaneously trashed the UCC offices in rage. A witness describes policemen running from crowds of women armed with chili pepper and jumping on passing buses to escape. Each anniversary of the disaster survivors and activists burn effigies of the corporation, the government, or Warren Anderson, or some combination thereof. Bhopali activists have been twice sued by Dow for "disrupting business" by protesting outside their Mumbai offices. Hunger strikes have been levied effectively by activists seeking attention to gas victim's demands. And as they have organized, Bhopal's victims purposely relabeled themselves. They are now *survivors*.

The Bhopal Gas-Affected Women Workers' Organization met every Saturday in a park off Hamida Road to retell their stories. They had not been able to tell them in court, and so weekly they told them to each other, sharing and solidifying the injustice of their ordeals, and expounding theories of responsibility. In these speeches that they gave each week, they connected their experience to global systems and powers, as Brian Mooney has discussed in his dissertation, [The Bhopal Disaster: Discourse and Narrative in the Ethnography of an Event](#). But what was next, after the civil compensation case was over? During the period when the government was dispensing the UCC compensation money, Mooney quoted a survivor, discussing fading graffiti that said "Hang Warren Anderson," as noting that "the graffiti is fading — we're fading."<sup>[41]</sup> Mooney attributed this sentiment to the palliative effect of the compensation moneys, and temporarily, perhaps, this was true. The government succeeded in closing most of the workshops that served as Women Workers' Organization bases after the compensation was disbursed.

However, the UCC settlement was a huge blow to both morale and organization. Some interim relief had been procured as a result of activist work, criminal charges were crucially reinstated in 1991, and the government was forced to pledge support to the survivors in lieu of the corporation. But despite the creative and energetic work that survivors groups put into fighting them, the most important battles seemed to have been lost during that period. Since 1996 however, the stakes seem to be slowly changing as a new configuration of activists has emerged in relation to Bhopal. As the legal battle appeared to be over, the government and the corporation consolidated their positions and attempted to forget all about it. The government unceremoniously stopped counting gas deaths in 1992, although evidence shows that approximately twenty persons still die each month as a result of exposure. The Union Carbide Corporation, on the other hand, slowly evaporated. Although their Indian assets, including the factory site, had been attached by the Bhopal District Court pending the resolution of the criminal case, Justice A.M. Ahmadi (who later became the trustee of the "Bhopal Medical Trust," set up by UCC) allowed UCC to transfer their shares in 1994. Having disposed of its assets, UCC then split its Asian sections into several subsidiaries under different names, and finally, in 2002, the parent company in the US was absorbed as a fully owned subsidiary of the Dow Chemical Company.

On the ground, this period was a time for regrouping, strategizing, and often disagreeing. The faces of the movement began to shift: the pitched and creative protests that the organizations were known for needed much greater infrastructural support once the civil case in India was closed. The survivor organizations and their support groups began to change in the face of the continuing need to generate new and alternative protest formats, scientific and medical data, and media messages. The use of new technologies for networking, the involvement of new generations of activists in India and abroad, and, of course, the continuing but increasingly inexcusable crisis on the ground, now including water contamination, would all become crucial to this evolution.

#### Part Four: Networks

##### 1. Information and Translation

Hundreds of outsiders, individuals, and organizations arrived to help with relief work in the chaos of the immediate aftermath of the gas disaster. Confusion ruled the day. Doctors had no information about how to treat the thousands of victims filling the hospitals, no one knew for certain how far the gas had gone or who it had taken. Union Carbide refused to release the studies they had done on MIC's impact on

living systems. Immediately, the divisions between relief work, justice work, and research work became treacherous. Which was the most important, and who got to decide?

Most of the first initiatives for justice and rehabilitation were spearheaded by middle-class, leftist Indian activists from outside Bhopal. In terms of class and background, these activists had more in common with the government functionaries or corporate officers they were fighting against than they did with the poor and working-class victims for whom they were fighting. Some had their own political agendas. Miscommunication with, stereotyping of, and discrimination against the victims occurred regularly. The organizations that formed immediately to advocate for the victims rarely had victims in them, and never had victims in positions of power. All of the groups formed by activists and led by volunteers who were not gas-affected, collapsed within two years due to political disagreements and internal conflicts, including the most influential group, known as the Morcha.

However, these activists were fluent in the many idioms of this truly international disaster. They were capable, crucially, of engaging in the many fronts on which Bhopal was fought: in at least two countries, with many types of expertise, against corporate, governmental, and media targets, in several languages, particularly English, and using the concepts and terms of science, medicine, technology, and law. The Bhopal Group for Information and Action (BGIA) emerged in 1986 out of the contradictions inherent in having outsiders speak *for* the survivors. [42] Formed from the wreckage of Morcha, it searched for ways to assist the nascent survivors groups with translation, research, and documentation needs, and was conceived of as a volunteer organization of activists that could interpret and mediate between Bhopal and the rest of the world.

The normal differential in power between a large multinational corporation and poor communities, like the *bastis* in Bhopal, is huge. However, the technological aspect of this unprecedented chemical exposure made that divide much more radical. Bhopal was unprecedented. No one knew what the consequences would be for long-term health. It was expected that doctors and scientists would determine the scope of the damage, and yet neither the Indian government nor Union Carbide had an interest in producing a balanced assessment, and the private sector could not take up the slack for such a large problem. Survivors would need to develop their own experts and BGIA did its best to facilitate this. Its activists tried to act (though always inadequately, in its own estimation) to bridge the legal, research, and media divides between the survivors and the objects of their activism, the government of India and Dow/Carbide. But neither UCC nor the government has appreciated having activists in place capable of doing this work. In 1986, for example, they arrested three BGIA activists for tape-recording the contents of a (public) doctors meeting on the status of health in Bhopal. They were accused of being "Carbide agents" and all of the medical and legal documentation their offices had collected was confiscated and destroyed. Despite many setbacks such as this, their consistent intervention, however, particularly in the legal realm, has been crucial.

## 2. International Allies

The Bhopal Group for Information and Action (although not the only support group) became, over the years, the primary contact and entry point for international activist involvement in the Bhopal issue. International involvement, however, dates back to the disaster. Around the world people were shocked, not only by the suffering in Bhopal but also by the potential parallels to it in their own backyards. The slogan "We all live in Bhopal," coined by George Bradford in 1985, attempted to universalize the implications of Bhopal — 'we are all responsible for Bhopal, and we are all (potential) victims of "a Bhopal,"' it told us. Kim Fortun notes that the environmental legislation and regulatory requirements enacted in the U.S. in the late 1980s were often referred to as "Bhopal's Babies," legislation that made those in the U.S. safer as a result of the Bhopal disaster's lessons in industrial risk. [43] Foreign actors, moved by both the specific and the universal elements of the story, offered connections to a wider network, access to communication technologies, and resources. Mostly consisting of a small core of committed individuals from the U.S. and the UK, they have worked over the years to create alternatives to the national and international legal and medical infrastructures that have chronically failed to accommodate the needs or realities on the ground.

The convening of a Permanent Peoples' Tribunal (PPT) session on Industrial and Environmental Hazards and Human Rights in 1992 was one such effort. It was an attempt to address the inadequacy of the legal response to the Bhopal disaster, by providing an alternative forum for the articulation of justice. In the PPT session, survivors could finally testify about their experiences. In the medical arena, as a result of PPT recommendations, the International Medical Commission on Bhopal (IMCB) was formed, visiting Bhopal in 1994 just as the government was prematurely closing the studies begun by the Indian Council of Medical Research. The IMCB was a group of independent doctors who attempted to assess the scope of the damage ten years after the gas leak, and whose investigations highlighted the inattention of groups like the World Health Organization to the world's worst industrial disaster. The medical commission issued their report in 1994, noting, among other things, that "Bhopal's current, hospital-based delivery of health care is inappropriate for the chronic nature of the disease" which necessitates consistent and accessible community based care and monitoring, rather than crisis based hospital infrastructure. [44] However, due to internal conflicts and the overwhelming scale of the problems, the IMCB soon disbanded. While they flagged the inappropriate nature of the health-care work being done in Bhopal, as a nongovernmental group of volunteers they did not have the resources or power to correct it.

The International Campaign for Justice in Bhopal (ICJB), a coalition of survivors and local and international activists emerged in its current form strongly in the late 1990s — though several more diffuse and smaller international networks with similar names had existed over the years. There are several crucial differences, however, between ICJB and its predecessors. First, the ICJB formalized an internal structure that included survivors' groups, a refreshing inversion of the earlier history of the movement when activists of all kinds struggled with the problem of how to directly represent those on the ground. The ICJB thus consists of groups and individuals abroad who coordinate with four survivor groups in Bhopal (with the Bhopal Gas-Affected Women Stationery Workers' Union as convener). Another crucial difference of the ICJB is its ability, in the last ten years, to finally raise funds to pay for several full-time international campaigners, allowing them to work more quickly than groups depending on weary volunteers for twenty years. While the International Campaign for Justice in Bhopal, in its many forms, has always been important to Bhopal, these two innovations, along with the expanding technological opportunities provided by the internet, have increased their impact and effectiveness.

The ICJB maintains an unbending anticorporate stance in accordance with the wishes of the survivor groups, which has impeded some efforts at collaboration with more moderate corporate-reform groups. Part of developing this network has been reaching out internationally to many different types of organizations. This has meant making connections to other grassroots and labor groups. (One of the ICJB's predecessors, the International Coalition for Justice in Bhopal, organized a tour by several survivors of the disaster through Japan, Holland, Ireland and the U.S. — a "toxic tour" of meetings with other affected communities.) It has meant allying with trade unions in many

countries, and creating networks of chemically affected groups in Asia. More recently, it has meant forging alliances with some very high profile advocacy groups, such as Greenpeace and Amnesty International.

While entry into each of these networks has positively impacted the ability of the Bhopal survivors to reach different audiences, it has also in some cases reframed their issues. Greenpeace, for example, concentrates on the water and soil contamination problem (where their work has been crucial), rather than health, justice, or economic rehabilitation, in order to fit their environmental aims. They also have also come into conflict with campaign groups because their centralized command structure and overriding concern with media representation has at times prevented their representatives on the ground from participating in actions the survivors considered crucial and pressing. This has caused some friction. Similarly, Amnesty International interprets Bhopal as a "human rights" issue. Though their research is excellent their interpretation of the legal and humanitarian violations that constitute the disaster weighs heavily on analyses of the international agreements and human rights treaties to which India is signatory, on targeting embassies, and on the official channels that are only one aspect of the work done by the activist groups. Bhopal is both an international issue and a local one, and as such the relationship between the Bhopalis and these international advocacy groups is mutually beneficial, and also inherently fraught by problems of translation, differing priorities, and issues of representation. What is more important, cleaning up the factory, criminal justice, or economic rehabilitation? Is the Bhopal disaster represented better a pure victimization, the face of a dead child being buried, long the archetypal image of Bhopal, or as "flames, not flowers," (as some chant), or by a photo of women warriors on a campaign to "jhadoo maro Dow ko" ("hit Dow with a broom")?

Today, ICJB campaigns on both local issues — contaminated water, police brutality, court battles — and global issues, like corporate accountability, environmental standards, the safety of others affected by Bhopal. It is bolstered by a burgeoning student movement called Students for Bhopal (SFB), made up of about seventy chapters in the U.S. and close to twenty more around the world. SFB functions as an arm of the ICJB, but many of its activists are younger than the gas disaster, newly incensed that the Bhopalis have been waiting their whole lives for justice. Their work includes campaigns to force their universities to disinvest from Dow Chemical, and targeting Indian embassies in the U.S. Another crucial network that supports ICJB is the Association for India's Development (AID), a lively network of students and professionals of Indian origin with seventy chapters in the U.S. and twenty more around the world. A recent example of a joint ICJB campaign was, "Neend Udaao" (Drive Sleep Away), which involved women from various communities in Bhopal banging on pots and pans outside the homes of uncooperative local officials at night, while international allies in other time zones woke officials with phone calls at odd hours (there were even accounts that female supporters abroad were calling the homes of bureaucrats at night and giving the wives of these uncooperative officials the wrong impression about their marital fidelity).

It was international support that gave the survivor groups and the Bhopal Group for Information and Action the leverage to make something like the 2006 *padyatra*, the march from Bhopal to Delhi, a protest on many fronts and with widespread impact. Fax actions, relay hunger strikes, active Web sites and rich online archives, connections to many other movements, and the aggressive student campaign are just some of the tools that have been able to supercharge the work of the survivor groups. Daily blogging and photo updates from volunteers walking alongside the *padyatris* allowed thousands around the world to track the daily troubles and victories of the marchers. Meanwhile, the message they brought to other contamination-affected communities along the march route was a global one, about the rights of these communities in the face of corporations such as Coca-Cola and Hindustan Petroleum. One American in Texas, Diane Wilson (famous for her own environmental battles) launched an indefinite hunger strike in April to put pressure on the Indian prime minister. And when Bollywood superstar Aamir Khan visited the Delhi protest site to show support, Champa Devi Shukla took Khan to task for his sponsorship of Coca-Cola, given the corporation's behavior in the state of Madhya Pradesh. (Champa Devi had lost her husband and both her sons to the gas; one daughter also became paralyzed, and her granddaughter was born with no palate or upper lip.) On April 15, 2006, the *Calcutta Telegraph* reported that Aamir Khan was "tak[ing] up the [pollution] issue with Coke," as a result of his conversation with Shukla. [45]

## 2. Corporate Accountability

On February 6, 2001, Union Carbide Corporation became a fully owned subsidiary of the Dow Chemical Company, the largest chemical company in the world. However, this did not neutralize the campaign for UCC to admit responsibility for the Bhopal disaster. Rather, this merger strengthened the Bhopal movement by uniting it with a growing network of other groups victimized by Dow. Bhopalis now stood in solidarity with the Agent Orange victims of Vietnam (including U.S. veterans), with Nemagon victims from Nicaragua, and with Dioxin-affected communities at Dow's headquarters in Midland, Michigan, just to name a few. This has opened new frontiers for Bhopal, as well as for the other groups. Lawyers have challenged Dow over Bhopal through filings with the U.S. Securities and Exchange Commission, alleging that Dow misrepresented UCC's liabilities when it purchased UCC. Shareholders have introduced resolutions at the Dow annual general meeting calling for it to resolve the Bhopal liabilities (the resolution received 6.3 percent of the vote in 2006). Activists have delivered "Bhopal water" to the homes of Dow trustees, and have developed a knack for humiliating both Dow trustees and CEOs. In at least three recent cases, officials have resigned within weeks of being humiliated. Most recently, Harold Shapiro, a Dow board member and Princeton faculty member, resigned the day after his university office was deluged with faxes implicating him personally in the suffering of the Bhopalis.

The recent accomplishments of the *padyatris* and their allies are hugely significant. Their demands in 2006 are not significantly different than the demands that the survivors' organizations and the Bhopal Group for Information and Action made to the government in the wake of the 1991 settlement review, but their ability to exert pressure on the government and provide the necessary data to back up their claims has finally become significant enough — fifteen years later — to guarantee their victory. The momentum of a number of important victories won since the International Campaign for Justice in Bhopal regrouped has also been very important, and many of these victories have significance beyond Bhopal, in the greater realm of corporate accountability. In January 2005 the Bhopal court issued a summons to Dow USA (whose subsidiaries do business in India), asking why it could not present the absconder, UCC, to the Bhopal court. Activist pressure in 2005 motivated the Indian Oil Company (a state-owned industry) to cancel a multi-million dollar technology purchase contract with Dow that summer. The Indian Oil Company justified its withdrawal on grounds that Dow had misled them: the proprietary technology in question had not been developed by Dow, but rather by the absconding corporation, Union Carbide. Autonomously, on the twentieth anniversary of the Bhopal disaster, the Yes Men, a media-activist duo, impersonated Dow on the BBC international television news channel, taking full responsibility for Bhopal, causing temporary panic and lasting anxiety among shareholders and corporate officials, and helping reinstate Bhopal as a contemporary concern, particularly in the United States.

In turn, Dow has shown itself, even perhaps out of proportion to these attacks, to be very threatened by them. The company is the largest user of the International Campaign for Justice in Bhopal Web site ([www.bhopal.net](http://www.bhopal.net)). It pays for Google advertising links for any Internet

reference to Bhopal, sending the user to [www.bhopal.com](http://www.bhopal.com), the corporate version of the Bhopal events. In 2003, Dow conducted a drill outside one of their New Jersey factories in which peaceful Bhopal protesters turn out to be "terrorists" who storm the factory and are subsequently "killed" by the police, a maneuver that earned them the [Multinational Monitor's](#) Lawrence Summers Memorial Award. [46] In 2004, Dow hired the public relations firm Burson-Marsteller to assist them in coping with the Bhopal issue. Union Carbide's Web site (which disappeared at the time of the merger) suddenly reemerged, along with a specious identity as a semi-separate entity. Primarily a vehicle for "Union Carbide's" statement about Bhopal, it simultaneously functions to deflect attention from Dow and to reiterate their position that Bhopal is long over. As they state, "In the wake of the release, Union Carbide Corporation worked diligently to provide immediate and continuing aid to the victims and set up a process to resolve their claims. All claims arising out of the release were settled 16 years ago at the explicit direction and with the approval of the Supreme Court of India." [47] An article in *Forbes* magazine titled "Dow's Pocket Has a Hole," commented: "Is there no end to the legal liability a corporation incurs for making chemicals? There probably is no end, indeed, and the sickly stock price of Dow Chemical, at \$26 down 13% so far this year, is testimony to the problem. Dow made the mistake in February 2001 of buying Union Carbide, the company that owned 51% of an operation in India that suffered a catastrophic poison gas leak in 1984 in Bhopal." [48]

As Bhopal has haunted its survivors, so, it seems, it will continue to haunt the corporation(s) that caused it. Although Prime Minister Manmohan Singh, even as he granted his recent bonanza of requests to the survivors, refused to pursue any "extralegal" options in going after Dow or Union Carbide, many legal options remain open, not least the criminal prosecution against UCC in the Bhopal courts. Meanwhile, government officials have reported that they have been in conversation with Dow on the subject of the UCC factory. Dow officials, concerned about legal liability, do not want to pay for the cleanup of the Union Carbide site as a result of any legal pressure, but have expressed interest in paying for the cleanup, via a nongovernmental organization or foundation of some kind, as a "charitable gesture." Survivors' groups say that's fine, as long as Dow is paying for the cleanup. Meanwhile, the U.S.-based Cherokee Corporation wants to clean up the site with corporate donations and World Bank funds, in what may be a preliminary strike against the possibility of a precedent-setting action in which UCC/Dow might be forced to follow the "polluter pays" principle — a precedent that wouldn't be good for any multinational corporation. Cherokee, known for similar cleanup operations in the U.S., teamed up with the chairman of the Madhya Pradesh Pollution Control Board, Dr. P.S. Dubey, and brought him to Duke University in June 2006 to discuss Cherokee's plans for Bhopal. Besides the pollution control board's obvious neglect of the contamination issue in Bhopal, the BGIA and survivors' groups have also unearthed evidence of Dubey's improper financial dealings, and his conduct during a botched "cleanup" effort in 2005 (which churned chemical waste into the air and sent dozens of local residents to the hospital), which illustrate Dubey's generally unconcerned attitude toward the health of survivors. The ICJB learned of Dubey's appearance at Duke University from the Association for India's Development network, and a team of activists arrived in time to heckle Dubey for his neglect and poor performance (by the end, Cherokee was distancing themselves from their star, while in Bhopal, the BGIA had already approached Dubey's boss about why he wasn't at work). With confrontations like this flaring up all around the world, the stage is set for the next big battle and the Bhopal survivors may yet make a dent in global corporate misbehavior. However, the question is no longer "Will there be a clean up?" but rather "Will Dow and UCC be forced to accept liability for the site?"

### 3. Alternative Formats

In 1992 the government stopped counting gas deaths, and in 1996 the Sambhavna Trust Clinic and Documentation Centre opened. [49] Their first project was to begin what they called "verbal autopsies," which commenced recording oral histories from family members about the circumstances of the decline and death of their loved ones. This was the first of many ways in which Sambhavna now challenges the obfuscatory techniques employed by the government in the wake of the disaster. Satinath Sarangi, the Bhopal Group for Information and Action activist who founded Sambhavna, had organized many clinics, particularly in the immediate aftermath of the disaster. None lasted more than a few months, in a few cases because of government intervention and arrests, but more generally because they were dependent on volunteer labor and had no consistent funding source. Funding has always been a thorny issue in Old Bhopal, a neighborhood victimized by the only foreign entity (UCC) that had ever significantly invested in it. Taking government money would be counterproductive to producing an alternative to the government models, and corporate or foundation money usually comes with invisible strings (not to mention the distrust with which such funds were regarded by many of the Bhopalis that could be served by them)

Fortuitously, in 1996 Sarangi met a British adman who had been working with Amnesty International. He said he could raise money from ordinary, newspaper-reading folk in the UK through fundraising ads. Sarangi said he would use the money to start Sambhavna, and put together a trust for the purpose. The idea behind Sambhavna is that medical care must be connected to initiatives in community health, research, and documentation because community involvement and information are necessary if exposure is to be *healed* rather than simply treated. The trust, responding to the unscientific, unsympathetic, and palliative treatment that survivors received in government hospitals, presents alternative care and measures the outcomes of treatment. Patients (gas- and water-contamination-affected) can choose between rational allopathic treatment, traditional Indian Ayurvedic treatment, or yoga and *pranayama* (yogic breathing) techniques as forms of treatment. A thorough registration and history-taking process allows the clinic to track the health and health trends of their patients (shockingly, none of the government hospitals or the corporate hospitals keep accessible records of their patients) as well as the efficacy of different treatments for different complaints. Nearly 16,000 people have so far registered, and many receive long-term care at the clinic, which is within walking distance of the most severely affected *bastis*.

As Sambhavna treats more patients, as more patients come to prefer Sambhavna's treatment to the government options, and as the clinic's documentation refutes claims that the crisis has ended, the its existence increasingly challenges the government's standards of care. [50] Also, in part because of their use of a fundraising model that is dependent on connecting with individuals through published appeals, the clinic has developed an international following and volunteer base. International volunteers of all stripes bring skills to the clinic, and take away with them a passion for the issues it raises and the people it serves.

In 2004, Champa Devi Shukla and Rashida Bi of the Bhopal Gas-Affected Women Stationery Workers' Union were awarded the prestigious Goldman Award (known as the "Green Nobel prize") for their activism. With their prize monies they established the Chingari Trust, a foundation to sponsor the medical or surgical care of children born to parents exposed to gas, to award fellowships to woman activists fighting corporate crime, and to create a scholarship program for gas-affected children. Chingari Trust, along with six other organizations, sponsors a people's museum to commemorate the disaster. Joined in the trust by Sambhavna and a number of other support and survivors groups, Bi and Shukla finally have the opportunity to take a leadership role pursuing forms of economic and social rehabilitation, as well as in commemorating the Bhopal disaster and its survivors. Memorialization has been a charged issue for a long time: government neglect has

competed with the occasional delirious plan conceived by the state to turn the factory into a disaster amusement park (the latest ideas include encasing of Union Carbide plant in glass, with human dummies operating it). The survivors want memorialization, but on their own terms. Having finally won a concession from the prime minister in April 2006, which requires that survivors be included in any belated commemorative projects, perhaps this time they'll get the memorial they want, though twenty-two years late.

### Conclusions

Union Carbide brought in technologies and chemistries that even they admitted were unproven and poorly understood. These technologies were installed in India in contravention of Indian laws precisely because the Indian government wanted foreign corporations to raise the bar on technological development in India, and were vulnerable to pressure from the World Bank, the U.S. government, and U.S. corporations that were driving the so-called Green Revolution. Disaster struck because both the Indian government and UCC were willing to treat safety as a dispensable concern in the Bhopal factory project. The aftermath became long, grueling, and explosive because neither party was willing to establish any precedent that might change or challenge the priorities that caused the disaster. Although the government stated at the time that their response to Bhopal would constitute "a model for future disasters," it has in fact been exemplary only in its ability to avoid the problem.<sup>[51]</sup>

What is particularly painful and disappointing about Bhopal is that an astute pessimist, familiar with the situation on the ground, could have foreseen it all: the disaster, the refusal of the U.S. to resolve it legally, the limitations of the Indian judicial system, the victims being robbed of legal power, the Indian governments' selling out to UCC, and the neglect and suspicion that have characterized the relief efforts. It is a sad, appalling story, but it is not a terribly surprising one. Around the world it is most often the poor and the powerless that suffer as a result of industrial accidents or environmental contamination, and most of their stories will never be heard. Those in Bhopal have been lucky, at least, that the magnitude of the disaster was undeniable, and that under Indian democracy justice must appear to have been done. Surprisingly, the Bhopalis have managed to expand the definition of the disaster imposed by the government and corporation, and their movement for justice has become, nearly twenty-two years later, "a sure-footed and able-bodied movement in the prime of its youth, poised with the stamina required to carry on the fight until justice is done."<sup>[52]</sup>

Bhopal activism, at its best, has centered around representing Bhopal as a continuing disaster that challenges truisms about poverty, health, justice, and the tolerated parameters of corporate behavior. Effective campaigns aside, however, Bhopal remains in crisis. Initiatives like those carried out by Sambhavna and the Permanent Peoples' Tribunal can only function as examples and possibilities, they cannot replace functioning international and national structures. The prime minister's recent promises are the best sign yet for a lasting resolution to Bhopal's problems, but they are still only promises. Bhopal groups have struggled to prevent the elimination of their tenuous rights by developing broad-based support across borders, and constantly challenging the Indian government to both stand up to its proclaimed responsibility to the gas survivors, and to place some of that responsibility on Dow/Union Carbide, where it belongs. In this long, sad story, hope is greater than it has ever been that both of these possibilities will be realized.

Bhopal is both exemplary and exceptional, and sadly reflected (on differing scales) in the experiences of millions of people worldwide. It is therefore crucial to understand the problems that have become explicit in the varied responses to the Bhopal gas disaster, because a sophisticated balancing of these tensions remains necessary to the conception of permanent solutions. First, the inadequacy of government and corporate responses helped stimulate a now global discourse of rights within (particularly female) survivor groups, transforming their own sense of entitlements, and enabling them to focus their resilience, savvy, and rage on global targets that embody injustice and impunity. Second, in attempting to surmount, under great duress, the extremity of the structural inequalities that constituted (and, it could be argued, caused) the disaster, survivors and activists have found themselves alternately caught within these structural frameworks, and singularly liberated to change and subvert them through democratic processes. The problems and rewards of translation between cultures and classes, and the subversion of legal and scientific bodies, have marked Bhopal as a locus for global innovation in communication, community health, and activism. Finally, Bhopal survivors and activists have refigured the terms of engagement on both chemical and corporate issues, forcibly and constantly refuting government and corporate efforts to define the continuing catastrophe as a discrete "event," and effectively strengthening and rearticulating demands against Dow and UCC precisely at the moments when they attempt to dissolve their responsibility and liability.

The recent capitulation of the Indian government to all of the substantive demands of the 2006 *padyatris* for support and services may mark the end of a period of denial about the costs of development in India, a period that began well before the gas disaster when Union Carbide planned its "unproven" factory and the landless Bhopalis swelled to meet its walls. Although this article has focused mainly on the relationship between the government of India and survivors of the Bhopal disaster, the story of the corporate and international pressures that helped cause the chemical and, later, environmental disaster in Bhopal is an equally important one, but one that is largely still to be told. Corporations remain poorly regulated and are characteristically opaque, while the underlying aims of the World Bank and the U.S. government are also difficult to track in a country like India. Tracking them has not been my purpose here, but neither has it been to lay the final blame for this continuing tragedy at the doorstep of the Indian government alone. It has been rather to note the interactions between the government and its constituents that have arisen from the Bhopal disaster, and to point out both the opportunities and limitations that activists face in attempting to put pressure on corporations or governments beyond their own borders.

Bhopal illustrates the consequences of a model for progress and a global system in which governments continue to prefer picking up the (potentially endless) costs of remediating an industrial disaster rather than taking action against its perpetrators. As a result of activist pressure, the Indian government seems finally to be acknowledging that development has a cost, and that whether or not they attempt to prevent developmental damage, they will be responsible for paying for it if they cannot adequately regulate foreign actors. Whether the activism around Bhopal, the tenacity of the survivors, or the outrage of their supporters can bring about a sea change in international justice, environmental policy, or corporate accountability remains an open question. Similarly, whether it can change the Indian government's policy of turning a blind eye toward multinational corporations at the expense of the poor or vulnerable, is also an open question, though a question suddenly clearly visible to everyone, all the way to the prime minister. Dow Chemical, meanwhile, poised to accelerate a major expansion of its operations in India, is encountering a bit more resistance than Union Carbide found when they arrived many years ago. Regardless of Dow's enormous power as the largest chemical company in the world, the Bhopal survivors will ensure that from now on, nothing goes unnoticed about its actions in India and beyond, hopefully with the help rather than the hindrance of the government of India.

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Many thanks to Satinath Sarangi in for all of his help on this article. For more information about the Bhopal campaign, please visit [www.bhopal.net](http://www.bhopal.net).

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- [1] Amnesty International, Clouds of Injustice: Bhopal Disaster 20 Years On (London, UK: Amnesty International Publications, 2004), p. 12. A complete copy of the report is available in PDF at <http://web.amnesty.org/library/Index/ENGASA200152004?open&of=ENG-IND>.
- [2] Union Carbide Corporation, internal memorandum (excerpt), Dec. 2, 1973, UCC 04206. Many excerpts from UCC documents, which were obtained and published during the discovery phases of lawsuits brought against UCC, and documents seized by the Central Bureau of Investigation (CBI) from Union Carbide India Ltd., are available online at International Campaign for Justice in Bhopal, <http://bhopal.net/oldsite/poisonpapers.html> and <http://www.bhopal.net/oldsite/citations-full.html>.
- [3] Union Carbide Corporation, internal memorandum (excerpt), July 21, 1972, UCC 04129.
- [4] Joshua Karliner, India: Setting the Record Straight. A Conversation with Edward A. Munoz, former Managing Director of Union Carbide India, Ltd. VHS. Oakland, CA: CorpWatch, 1994. Transcript of the interview available at CorpWatch, <http://www.corpwatch.org/article.php?id=11735>.
- [5] Himanshu Rajan Sharma, "Proof from Carbide Itself: Interview with Himanshu Rajan Sharma, U.S.-based Attorney," Frontline (India), Dec. 21, 2002. Available online at <http://www.frontline.in/fl1926/stories/20030103003809800.htm>. Sharma is the U.S.-based attorney representing Bhopal plaintiffs in a suit brought against the Union Carbide Corporation in the Southern District Court of New York.
- [6] Amnesty, Clouds, p. 44. See also T. R. Chouhan and others, Bhopal, the Inside Story: Carbide Workers Speak Out on the World's Worst Industrial Disaster, new ed. (Mapusa, India: Other India Press; New York: Apex Press, 2005).
- [7] See Rajkumar Keswani, "Bhopal, Sitting at the Edge of a Volcano," in Bridget Hanna, Ward Morehouse, and Satinath Sarangi (eds.), The Bhopal Reader: Remembering Twenty Years of the World's Worst Industrial Disaster (New York: Apex Press, 2005), p. 14.
- [8] Suketu Mehta, "Bhopal Lives," Village Voice, Dec. 3, 1996.
- [9] Amnesty, Clouds, p. 5.
- [10] Kim Fortun, Advocacy After Bhopal: Environmentalism, Disaster, New Global Orders (Chicago, IL: University of Chicago Press, 2001), pp. 161–62.
- [11] Dominique Lapierre and Javier Moro, Five Past Midnight in Bhopal: The Epic Story of the World's Deadliest Industrial Disaster (New York: Warner Books, 2002), p. 376.
- [12] Amnesty, Clouds, pp. 1 and 12.
- [13] Himanshu Rajan Sharma, "Catastrophe and the Dilemma of Law," Seminar 544 (Dec. 2004), p. 21.
- [14] *Ibid.*, p. 21.
- [15] Amnesty, Clouds, p. 61.
- [16] Veena Das, Critical Events: An Anthropological Perspective on Contemporary India (Delhi; New York: Oxford University Press, 1995), p. 155.
- [17] *Ibid.*, p. 162.
- [18] *Ibid.*, p. 159.
- [19] *Ibid.*, p. 158.
- [20] Praful Bidwai, quoted in Claude Alvarez, Ten Years Later, in Chouhan et al., Bhopal, the Inside Story, p. 126.
- [21] Kim Fortun, Advocacy After Bhopal: Environmentalism, Disaster, New Global Orders. (Chicago. University of Chicago Press, 2001), p. 45
- [22] Ingrid Eckerman, The Bhopal Saga: Causes and Consequences of the World's Largest Industrial Disaster (Hyderabad, India: Universities Press, 2005), p. 151.
- [23] UCC 04129.
- [24] Union Carbide Corporation, telex, April 10, 1982, UCC 01736. A copy of this telex can be viewed at International Campaign for Justice in Bhopal, <http://www.bhopal.net/oldsite/excerpts.html>.
- [25] Iryna Labunska, Anjela Stephenson, Kevin Brigden, Ruth Stringer, David Santillo, and Paul Johnston, The Bhopal Legacy. Toxic Contaminants at the Former Union Carbide Factory Site, Bhopal, India: Fifteen Years After the Bhopal Accident (Exeter, UK: Greenpeace Research Laboratories, 1999), p. 23.
- [26] Amnesty, Clouds, p. 24.
- [27] Bhopal Group for Information and Action, Interim Application before the High Court of Madhya Pradesh, Writ Petition no. 2802/2004, Aug. 11, 2005.
- [28] National Engineering Environmental Research Institute (NEERI), Assessment of Contaminated Areas Due to Past Waste Disposal Practices at EIII (Nagpur, India: NEERI, 1997), UCC 01099-01100.
- [29] C.K. Hayaran to A. Chakravarti, Feb. 14, 1995, "Re: Disposal of Sevin and Naphthol Tar Residues Lying at Our Plant," UCC 02148. Sambhavna Trust Documentation Center, Bhopal, India.
- [30] The proceeds of this sale were used to set up the Bhopal Memorial Hospital Trust in the UK. Eventually these funds went toward building a huge, lavish, specialty hospital in Bhopal, far on the outskirts of town. According to Vibha Varshney, "Sick Berth." Down to Earth, May 31, 2006, p. 42, the Bhopal Memorial Hospital and Research Centre, "built specifically for Bhopal gas victims...has become a centre for systematic discrimination against them"; it also has a reputation for money laundering that benefits senior doctors and trustees, and poor treatment of all of its other employees.
- [31] Sambhavna Trust Clinic, Findings of survey of Annu Nagar (groundwater contaminated), 2003 in Hanna et al., The Bhopal Reader, p. 156.
- [32] Ravi Aggarwal and Amit Nair, Surviving Bhopal: Toxic Present, Toxic Past (New Delhi: Fact Finding Mission on Bhopal, 2002). A PDF of the full report is available online at Fact Finding Mission on Bhopal, <http://www.bhopalffm.org/Environment.htm>.
- [33] The translation of these figures directly into dollars is complex, because the exchange rate has varied tremendously over the past twenty-two years. Currently, the exchange rate is about 46 rupees to a dollar, which would make the total amount spent approximately \$26.6 million dollars. However, in 1984 the rate averaged 10 rupees to the dollar, and in 1990, about 20 rupees, with inflation climbing steadily since then. The figure given here is therefore likely much larger, as most of the money was spent during the late 1980s and the 1990s. However I do not have a definitive breakdown of these numbers.
- [34] Suroopa Mukherjee, "Twenty Years After: Anger and Denial on the Streets of Bhopal," InfoChange Agenda, Dec. 2004, InfoChange News and Features, <http://www.infochangeindia.org/agenda1.jsp>.
- [35] Amnesty, Clouds, p. 18.
- [36] Satinath Sarangi (Bhopal Group for Information and Action), in discussion with author, 2005–2006.
- [37] Fortun, Advocacy After Bhopal, p. 219.

- [38] There are, however, other important groups, such as Bhopal Gas Peedit Mahila Purush Sangharsh Morcha, led by Syed M. Irfan, a gas survivor, and Bhopal ki Aawaaz, a small organization of children orphaned by the disaster and led by Shaheed Noor, a gas orphan. Today, both of these organizations work with BGPMSKS and the International Campaign for Justice in Bhopal (ICJB), while BGP MUS primarily works autonomously.
- [39] Fortun, *Advocacy After Bhopal*, pp. 224–25.
- [40] For more on this topic, see Brian Mooney, *The Bhopal Disaster: Discourse and Narrative in the Ethnography of an Event* (PhD dissertation, University of Michigan–Ann Arbor, 2002).
- [41] *Ibid.*, p. 167.
- [42] The processes and difficulties of the necessity for translation between survivors and advocates is addressed in fascinating detail in Kim Fortun’s book, *Advocacy After Bhopal: Environmentalism, Disaster, New Global Orders* (Chicago: University of Chicago Press, 2001).
- [43] Fortun, *Advocacy After Bhopal*, p. 15.
- [44] Birger Heinzow, M.D. “Report of the International Medical Commission on Bhopal (1994)” in Hanna et al., *The Bhopal Reader*, p. 139.
- [45] “Enter: Aamir the Activist,” *Calcutta Telegraph*, April 15, 2006, [http://www.telegraphindia.com/1060415/asp/frontpage/story\\_6102578.asp](http://www.telegraphindia.com/1060415/asp/frontpage/story_6102578.asp).
- [46] The *Multinational Monitor* explains the award as follows: “In a 1991 internal memorandum, then-World Bank economist Lawrence Summers argued for the transfer of waste and dirty industries from industrialized to developing countries. ‘Just between you and me, shouldn’t the World Bank be encouraging more migration of the dirty industries to the LDCs (lesser developed countries)?’ wrote Summers, who went on to serve as Treasury Secretary during the Clinton administration...‘I think the economic logic behind dumping a load of toxic waste in the lowest wage country is impeccable and we should face up to that....I’ve always thought that under populated countries in Africa are vastly under polluted; their air quality is vastly inefficiently low [sic] compared to Los Angeles or Mexico City.’ Summers later said the memo was meant to be ironic.” See *Multinational Monitor*, “Lawrence Summers Memorial Award,” <http://www.multinationalmonitor.org/mm2006/012006/front.html#LARENCE>.
- [47] Union Carbide Corporation, Bhopal Information Center, [www.bhopal.com](http://www.bhopal.com) (accessible via the “Bhopal Information” link at [www.unioncarbide.com](http://www.unioncarbide.com)).
- [48] Phyllis Bergman, “Dow’s Pocket Has a Hole,” *Forbes*, March 13, 2003, p. 34, <http://www.forbes.com/forbes/2003/0331/078.html>.
- [49] “Sambhavna” means “hope” or “possibility.”
- [50] For example, a study by Sambhavna on the health of the children born after the disaster to gas-affected parents found significant growth retardation in boys. Boys were found to have smaller upper bodies and developmental difficulties, while girls had increased incidences of hormonal disorders. See Nishant Ranjan, Satinath Sarangi, V.T. Padmanabhan, Steve Holleran, Rajasekhar Ramakrishnan, and Daya R. Varma, “Methyl Isocyanate Exposure and Growth Patterns of Adolescents in Bhopal,” *Journal of the American Medical Association* 290, no. 14 (2003), p. 1857.
- [51] Claude Alvares, *Ten Years Later*, in Chouhan et al., *Bhopal, the Inside Story*, p. 133.
- [52] Nityanand Jayaraman, *Twenty Years Later*, in Chouhan et al., *Bhopal, the Inside Story*, p. 158.