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To the Graduate Council:

I am submitting herewith a dissertation written by Nikhil Deb entitled "Slow Violence and Movement Resistance by the Gas Peddit in Neoliberal India." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Sociology.

Paul Gellert, Major Professor

We have read this dissertation and recommend its acceptance:

Stephanie Bohon, Harry Dahms, Jon Shefner, Raja Swamy

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Slow Violence and Movement Resistance by the *Gas Peddit* in Neoliberal India

**A Dissertation Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville**

**Nikhil Deb
August 2019**

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For Mukhor & Tuli

Acknowledgments

Mentors. Writing this dissertation has been socially and intellectually collaborative work. This dissertation has been indebted to more people than I can mention here. For his unflinching support, I extend my sincere gratitude to my mentor and committee chair, Dr. Paul Gellert, whose scholarship has ceaselessly impressed me since I joined the UTK sociology Department in 2015. Without his guidance and crucial support, this dissertation would not have reached its current form. It's been an excellent opportunity to be supervised by him, although he started chairing the dissertation committee after the sudden passing of Dr. Scott Frey in December 2018. Frey's contribution to my Ph.D. journey is enormous. It has been an honor to be working with him very closely over the last four years. Not only that he was very generous and helpful, but also he kept me engaged with Bhopal. Completing this dissertation is a sign of his active presence in my academic journey. I want to express my gratefulness to Dr. Stephanie Bohon, who never stops encouraging me to explore and examine educational opportunity that I'd otherwise dare to pursue. I must also note that Bohon was always available when I needed help and advice. Dr. Harry Dahms offered invaluable help along the way in this journey. Dr. Dahms taught me a countless lesson about the importance and nuances of social theory. His valuable theoretical insights, along with his comprehensive worldviews, influenced not only this dissertation but also my other scholarly works. I want to extend my appreciation for Dr. Jon Shefner, who, despite being busy leading the Department of Sociology, always provided vital support through this challenging journey. He offered me useful insights into social movements that enriched this dissertation. I highly appreciate Dr. Raja Swamy for his scholarly and heartening engagement, using the lens of his research on marginalized groups in India. Finally, I

express my appreciation for many faculty members and peers of the Sociology Department for their support along the way.

Family. Writing dissertation robbed me of my social life. I must note that nobody deserves more thanks than my 4-year old, Mukhor, and my wife, Tuli. They had to endure lots of sacrifices for years, especially during my field trips in Bhopal, as well as for the last couple of busy months when I was deeply engrossed in writing. My son's incredible support moved me emotionally; I consistently made negative reply every time he attempted to pursue me to play with him. Eventually, he understood the tenacity required for writing a dissertation. I also thank my siblings, my mom, and my relatives. They are proud that I—who was born in a highly disadvantaged rural area, a place deprived of necessary human conditions—have a Ph.D. now!

Miscellaneous. I thank the people who helped me during my fieldwork in Bhopal. I thank Rachna Dhingra and Satinath Sarangi (Sathyu) from Bhopal for offering valuable helps to gain access to victims and activists in Bhopal. I am happy that my bond with them extended beyond this academic work. I thank my interviewees for their keen insight on the disaster, its consequences, and movement resistance. It was an extreme privilege to hear their voices that enriched this dissertation. I would also like to thank all of my friends who read part of the dissertation over time. Finally, I express my thanks to Adam Simmons for reading and commenting on the dissertation. Special thanks are due to the SSSP Graduate Student Racial/Ethnic Minority Fellowship, the Yates Dissertation Fellowship, the McClure Scholarship, and the Penley-Thomas-Allen Fellowship, for the funding that supported this research.

Abstract

The Bhopal disaster that caused at least 25,000 deaths and over 600,000 injuries, health defects, socioenvironmental destruction, and other ailments is remembered almost exclusively by the spectacle of its immediate aftermaths. Yet few are cognizant of the way in which the slow violence of biosocial and environmental destruction continues to affect marginalized people living in Bhopal, as well as their struggles for social and environmental justice, including clean up of toxic zones, compensation, health care, and importantly, recognition of their rights and memories. More than three decades after the disaster, children are born with mental and physical disabilities, and women and girls are plagued with reproductive health problems. To this day, many dangerous chemicals left in the abandoned factory continue to contaminate soil and groundwater, affecting more and more marginalized Bhopalis. This dissertation goes beyond the spectacle-driven understanding of the tragedy by examining both the disaster and its ongoing adverse consequences as the outcomes of political and economic dynamics that create conditions for catastrophes and render invisible the lingering devastation affecting vulnerable populations in peripheral countries. This dissertation uses structural fieldwork methods, which continued for a total of 4 years. Based on 60 interviews with Bhopal gas and water sufferers (*Gas Peddit*) and activists, field observations, archives, and official and independent reports, this dissertation argues that a) the disaster that happened under a shrinking developmental state was the outcome of a long chain of global political economic development; b) prolonged biosocial and environmental destruction is characteristic of India's neoliberal regime; and c) the process of marginalization of affected Bhopalis in neoliberal India has created a new kind of politics for social and environmental justice, evident in the Bhopal Movement, the longest-running social movement in postcolonial India. Findings of this dissertation suggest that Bhopal is the

embodiment of slow violence in neoliberalism, not only because the enduring consequences elude political, judicial, and medical discourse and restitution from governments and corporations, but also because neoliberal actors have tried to suppress the legitimacy of the sufferers' crises in Bhopal.

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List of Abbreviations

BGIA	Bhopal Group for Information and Action
BGTRRD	Bhopal Gas Tragedy Relief and Rehabilitation Department
BMA	Bhopal Medical Appeal
BMHRC	Bhopal Memorial Hospital and Research Center
CBI	Central Bureau of Investigation
CRS	Center for Rehabilitation Studies
CSE	Center for Science and Environment
DRDE	Defense Research and Development Establishment
FERA	Foreign Exchange Regulations Act
GOM	Group of Ministers on Bhopal
ICJB	International Campaign for Justice in Bhopal
ICMR	Indian Council for Medical Research
IMCB	International Medical Commission on Bhopal
IEP	India Environment Portal
JNH	Jawaharlal Nehru Gas Relief Hospital
MIC	Methyl Isocyanate
MP	Madhya Pradesh (Central India)
MPPCB	Madhya Pradesh Pollution Control Board
NEERI	National Environmental Engineering Research Institute
NaTS	Sodium thiosulphate
NIREH	National Institute of Environmental Health
OEHHA	Office of Environmental Health Hazard Assessment
OSHA	Occupational Safety and Health Administration
PAN	Pesticide Action Network
SEP	Solar Evaporation Ponds
STS	Science and Technology Studies
UCC	Union Carbide Corporation
UCIL	Union Carbide India Limited

Chapter One: Introduction

We are not expendable. We are not flowers offered at the altar of profit and power. We are dancing flames committed to conquering darkness and to challenging those who threaten the planet and the magic and mystery of life.¹

- Rashida Bee, gas survivor, who lost five gas-exposed family members to cancers

Do you think I should receive compensation for being a water victim? The same corporation that came to kill us left us with contaminated water, and we have been drinking this for decades. Where is the law and compensation for me?

- Sabina Bai, gas and water victim. Interview. December 8, 2018.

\$500 is plenty good for an Indian.

- Kathy Hunt (2002), Dow Public Affairs Specialist, referring to average compensation granted the Bhopal victims.

Introducing the Terrain

A lethal cloud of chemicals drifted over the sleeping city of Bhopal, India, on the night of December 3, 1984. An explosion at the American multinational corporation Union Carbide's pesticide plant in Bhopal caused an enormous gas outflow, releasing approximately 45 tons of methyl isocyanate (MIC) gas, a substance 500 times more toxic than hydrogen cyanide. At least 23 other poisonous chemicals were released that 'apocalyptic' night, smothering nearby shanty towns in a toxic blanket. Four to eight thousand were instantly slain, hundreds of thousands were injured, and 20,000 died from complications in the ensuing decades, leaving many ongoing

¹ Rashida Bee, riddled with permanent health defects, is one of the significant figures fighting for justice in Bhopal. She is also one of the co-founders of the Chingari Rehabilitation Centre, a community clinic built to provide treatments to children born with disabilities because of their parents' exposure to gas. The Chingari was founded in 2006 using the money Rashida Bee (and Champa Devi Shukla, another survivor activist) received as part of the Goldman Environmental Prize in 2004. This statement was part of the speech Bi delivered while accepting the prize.

adverse social, health, and environmental consequences.² More than three decades later, children are born with mental and physical disabilities, and women and girls are plagued with reproductive health problems – miscarriages, infertility, and early menopause. To this day, more than 2,000 tons of dangerous chemicals that were left in the abandoned factory continue to contaminate soil and groundwater, affecting at least 40,000 marginalized people in Bhopal. Beyond counting the effects of the 1984 gas explosion, this dissertation examines the long-term slow violence that continues to severely affect these communities and the strenuous efforts of activists, particularly women activists, who struggle for justice.

The escaped gas from Union Carbide’s Bhopal plant spread over 40 square kilometers, decimating great swathes of local wildlife. Those who resided in the factory’s shadow, such as in Jai Prakash Nagar (JP Nagar), were the worst affected. Why the company chose to station their hazardous pesticide factory in the poorest part of the city, disregarded basic safety conditions, and evaded liability afterward has as much to do with profit as it does marginalized populations. The disaster made Bhopal a battleground between the exploiters and the exploited, and no other event quite captures the essence of this dynamic as the “war-like situation”³ that unfolded the night of the massacre. A cacophony of frantic cries filled the air as multitudes awoke to a burning torment in their lungs and eyes. Mouths frothing, their whole bodies writhing in agony, men, women, and children trampled each other in the darkness, running desperately toward the breeze while friends and family collapsed alongside.⁴ MIC is water-soluble, bonding with any

² The estimate of total deaths, based on most reliable sources, is no less than 25,000. Most recent research claims that around 7,000 to 8,000 died within a few days and 15,000 to 20,000 deaths occurred in the following years which make it around 25,000. Although the Indian government in stopped official counting of deaths in 1993, there is a constant agreement among health experts and researcher that people in Bhopal continue to die because of their direct or indirect exposure to gas. I use 25,000 as the most reliable figure. For death toll estimates, see Amnesty International (2004); Fortun (2001), Jasanoff (2016), Mukherjee (2010), and Sarangi (2002).

³ One of the interviewees, Chandana Bi, used this phrase when describing from her memory the night of the disaster.

⁴ Even a simple step or guidance such as running against the direction of the wind and covering the faces or house with wet clothes might have saved some lives on that night.

moisture it comes across and leaving all unfortunate people and animals to choke on their own bodily fluids.

The city of old Bhopal—its streets, hospitals, and narrow shanty towns—became a vaporous torture chamber (Figure 1.1). Countless bodies were taken away in municipal trucks and instantly buried or cremated, that is, until Bhopal ran out of cremation/burial sites. The exact count of the total immediate casualties of the disaster has been impossible to discern.⁵ Even after Union Carbide was informed of the vast carnage, it used its spending power and monopoly on knowledge—under the pretext of trade secrecy—to forego publishing its test results on the effects of MIC. And the effects of other chemicals later discovered in the factory’s residue were totally unknown. In one of the company’s own recently discovered reports, MIC was shown to be highly dangerous, inflicting residual damage on the exposed regardless of prompt treatment.⁶

The Bhopal disaster was, on the one hand, just one more stroke in a barrage of global political economic developments (Chapter Two), and on the other, the start of a tragedy without resolution. This dissertation focuses on the disaster in Bhopal as unending. The effects of the disaster have passed to new generations, and there is no sign that the calamitous chain is ending. Besides 25,000 casualties, Bhopal continues to bear the brunt of the disaster. Hundreds of thousands in Bhopal are chronically ill. People suffer from pulmonary, ocular, gynecological, immunological, neurological, and psychological diseases (BGIA 2018; Hanna 2014; Eckerman 2005; ICMR 2010; Narayan 1990; Sriramachari 2006; Varma 1987).⁷

⁵An auto-driver in Bhopal, old enough to remember the 1984 event, told me this when I asked him about the scene and immediate casualties of the disaster. Similar stories are told by many of those who witnessed and/or are affected by the disaster in Bhopal.

⁶ Carbide’s recently uncovered 1974 Safety Report for the MIC plant in Bhopal gave MIC the most dangerous rating of five. The report says, “MIC is a highly dangerous material by all means of contact” (p.22) and “major residual injury is likely in spite of prompt treatment” (p. 16). Despite UCC’s knowledge on the consequences of MIC, it refused to share the information to the doctors working to understand the causes of death and devastation in Bhopal.

⁷ Research also suggests cancer incidences caused by gas exposure (Bhagat 2007; Eckerman 2005; Hanna 2014), although official research do not offer any conclusive link about the higher rates of cancer among the exposed.

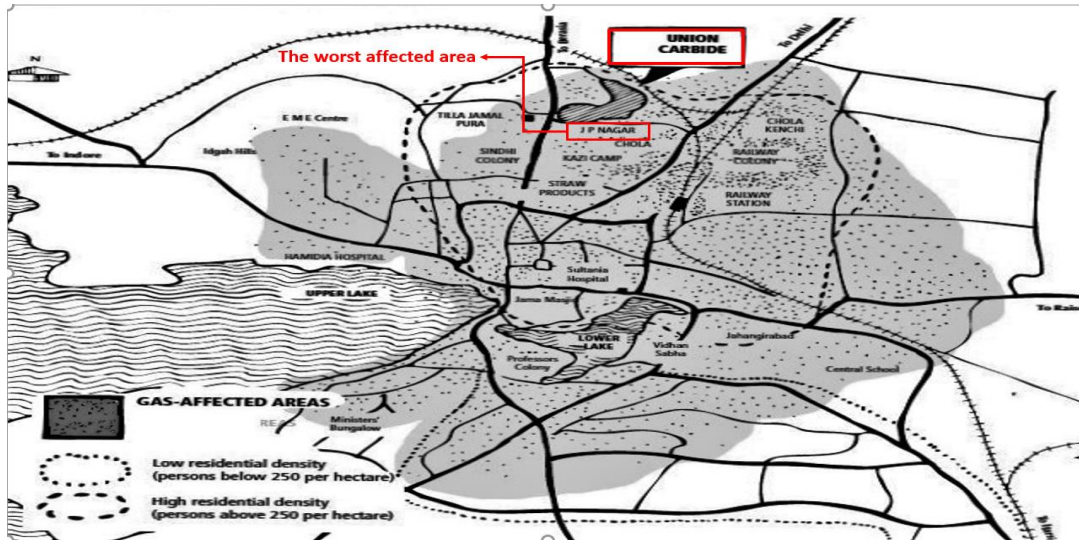


Figure 1. 1 Area Blanketed by MIC. Source: India Environmental Portal⁸

Besides the woe of the survivors of the gas leak, Bhopalis who live nearby Union Carbide’s abandoned factory suffer many health problems because of ongoing environmental contamination. For instance, the locals have been drinking the polluted groundwater for the past decades, which was caused by the waste dumped, as well as chemicals left uncleaned, by the factory. Several thousand people living next to the factory are directly and indirectly exposed to many poisonous chemicals and metals. The abandoned factory site, which still contains thousands of tons of toxic chemicals, stands as a symbol of how state managers, both Indian and American, and corporations, Union Carbide and Dow Chemical, colluded against the gas-sufferer, evading their culpability, and more importantly, making invisible the long-term consequences of the disaster.

Despite numerous biosocial and environmental dimensions of the lingering devastation, the Bhopal disaster seems remembered only by the spectacle of its immediate aftermath, evoking strong memories of death and injury. Long-term biosocial and environmental destruction in

⁸The India Environmental Portal (IEP) offers open access to information about environmental issues in India. I edited the image to highlight the location of Union Carbide’s Bhopal plant and the area worst affected by the leaked gases.

Bhopal remains highly understudied and underemphasized.⁹ Most of the research on Bhopal has highlighted the proximate causes and the technical and legal aspects of the disaster, but the findings of these studies, more often than not, generate uncertainty, since they are replete with confusing facts and figures. The disaster in Bhopal was avoidable (Chapter Two); however, the disaster provided an opportunity for the involved actors and agents of the disaster to rectify their mistakes by adequately addressing the lingering catastrophes in Bhopal. Instead, neoliberal India by rendering long-term destruction invisible aggravated their suffering. The gas sufferers, moreover, have been failed, not only by the corporations and complicit state managers, but also by biomedical experts, lawyers, politicians, and academics.

The epidemiological studies conducted between 1985 and 1994 by the Indian Council of Medical Research (ICRM), the highest government body for biomedical research in India, hoodwinked the public about the biological harm caused by the disaster, offering no “concrete conclusions” (Lochan 1991:796). ICMR terminated its epidemiological studies in 1994 without giving any proper explanations, ignoring the recommendations of independent health experts to provide long-term care and monitoring of the affected Bhopalis. Such an expression of hegemonic power to produce uncertainty about the ongoing destruction is commonplace in Bhopal (Eckerman 2005; Visvanathan 2001). It is also shocking to discover that sociological research on the political economic and ecological aspects of the worst industrial catastrophe in modern history is very scant.¹⁰ Disaster studies, more particularly, failed to capture the structural

⁹ Guy Debord (1967) popularizes the term spectacle by offering a critique of mass media and consumer culture. He emphasizes the way in which images in contemporary society obfuscate reality. For a somewhat different analysis on political spectacle, Murray Edelman (1988) illustrates how the peoples’ general perception and understanding of political phenomena systematically embolden the dominant political ideologies and existing inequalities. I use this term in the context of the Bhopal disaster, the prolonged devastation of which remains highly underemphasized while immediate casualties continue to evoke strong memories of the event.

¹⁰ Anthropologist Ravi Rajan (2002) criticizes his colleagues for their failures to mediate between government and victims, although he gives credit to some scholars, including Veena Das, who in 1995 wrote on the medical consequences of the disaster. Hanna’s (2014) dissertation might have filled this hiatus in medical anthropological

drivers of the causes, of breadth, and of consequences of the Bhopal disaster.¹¹ Little academic attention has been given to the underlying forces that not only created the conditions for the disaster but also continue to overshadow its long-term, adverse socioenvironmental consequences. There is no systematic study linking the event of the disaster and its long-term, adverse consequences to India's political economic trajectory before and after the disaster. For instance, while the disaster took place when India was transitioning from its Nehruvian developmental state¹² (1947-1966) toward the decline of developmental state under Indira Gandhi (1967-1989), the neoliberalization of the economy in the 1990s has further marginalized the affected Bhopalis. In the 1970s and 1980s, UCC engaged in high-level political interference to obtain permission to transfer corroded MIC technologies from its West Virginia plant to the Bhopal factory. UCC also was able to take drastic cost-cutting measures when the scheme proved less successful than projected (Chapter Two). With India's neoliberal reform in the 1990s, the Indian state has abandoned the issue of proper compensation, rehabilitation, biosocial harms, ongoing environmental contamination, extradition of Warren Anderson, and Dow's

aspect of the disaster. Hanna (2014:85) makes a scathing remark on a famous ethnographer on Bhopal, Kim Fortun. Hanna writes: "Fortun [2001]..memorably sidesteps this question [of conspiracy] by, firstly, studying activism itself, and secondly, through an act of ventriloquism. In her ethnography she uses primary text (in full versions), to present the ideologies and allegations of the activist movements. In this way she leaves the recitation of detail and conspiracy to her (mostly activist) sources, freeing her to interpret, comment, and gently draw conclusions from the remainder. She relegates idealism, conspiracy, and hope to the texts of her informants' documents: her own scholarly voice only expresses analysis and skepticism." Similar critiques can be made against sociologists in general. Rajagopal, a young sociologist, went to Bhopal in 1985 and became involved with the Bhopal Group for Information and Action (BGIA). He, however, had to leave India because of the government's repression. No other significant sociological studies address the political economic analysis of the lingering catastrophes in Bhopal.

¹¹ I carefully depart myself from mainstream Disaster Management Studies (DMS) for several reasons. Mainstream disaster scholars treat all disasters, natural, social, political, equally, without highlighting the spatiotemporal and political economic aspect of the disasters. It seems, to disaster scholars, there is an abstract, universal discourse to explain (and manage) everything and anything. Moreover, disaster research, as Baxi (2010:24) writes, fails to address the complex set of events of large disaster "such as the practices of colonization, the histories of the Cold War - or wars generally - and episodes/events of genocidal political formations - in short, to the narratives of political cruelty and mass atrocity and narratives of the destruction of natural resources and ecological heritage." DMS largely avoid underscoring structurally-driven deprivation and injustices (poverty, class, marginalization) that have scourging effects on humans and the environment.

¹² Jawaharlal Nehru, the first Prime Minister of India, was in office until 1964. Development state during his regime focused on secularism, economic planning for establishing a welfare estate, and the policy of non-alignment. He was one of the major figures who led the Indian independence movement against British rule.

disregard to a repeated court summons. This dissertation goes beyond the spectacle-driven understanding of the event by examining the ways in which political and economic dynamics created the conditions for the disaster and render invisible the long-term consequences affecting vulnerable populations in peripheral countries. It also demonstrates that the process of marginalization of affected Bhopalis, both under the shrinking developmental state and neoliberal India, has created a new kind of politics for social and environmental justice, evident in the Bhopal Movement, the longest-running social movement in postcolonial India.

Multiple Catastrophes

The technical complexity that triggered the chemical reaction in the Bhopal plant is now abundantly clear. Forensic investigations indicate that water entering the MIC tank caused exothermic, chemical reactions that resulted in increased pressure, with temperature reached 200⁰C, in the tank, eventually triggering the explosion by turning the liquid (MIC) into gas (Chapter Two). Once that reaction started, the situation turned uncontrollable: Newly-formed, heated gases flooded the assembly throughout the 50 feet high structure and, filtering out two open pipes, fused in the winter air. All safety systems that were supposed to prevent accidents failed or were not in working condition. The leakage of MIC gas from the tank, which continued for several hours, dispersed across densely populated, shanty towns in Bhopal, leaving behind scenes, as one of my respondents says, “as though from an apocalypse.”

These technical details,¹³ however, only offer a partial explanation of why the accident happened in the Bhopal plant. The gas leak in the Union Carbide Bhopal plant was long predicted by journalists and chemical engineers prior to the disaster (Jones 1988; Mukherjee

¹³ These technical complexities might remind us the notions of “normal accidents” (Perrow 1984) or global “risk society” (Beck 1986). But there is an overwhelming evidence to suggest that impoverished, minority populations bear the disproportionate burden of social and environmental harms. I discuss this through the dissertation.

2010; Sinha 2009). Research has shown that acts of negligence were pervasive in the factory; thus, if preemptive measures had been taken, the Bhopal tragedy might have been avoided (See *BBC: One Night in Bhopal* 2004; Chouhan 1994; Jasanoff 1994; Keswani 1982; Morehouse 1986; Mukherjee 2010; Ranjan 2001; Sarangi 2005; Sinha 2007).

More than three decades after the Bhopal disaster, the narratives on the causes, consequences, including the number of people who died and were injured, and legal measures taken afterward remain highly contested. Three major stakeholder groups—corporations, the Indian state, and the victims—provide three different narratives of the disaster and of its long-term social and environmental consequences. Union Carbide Corporation never accepted responsibility and never disclosed information on the effects into the consequences of MIC. And its report on the technical details of the Bhopal disaster was shrouded in secrecy. To date, UCC maintains its unsubstantiated narrative of industrial sabotage as the cause of the disaster.¹⁴ The Indian government has been seemingly complicit in the cover-up, failing to ensure justice for the victims of the disaster.

Where the Indian government's loyalty laid was made clear when it granted bail on a non-bailable charge—culpable homicide—to the then chairman of UCC, Warren Anderson, immediately after the disaster. Indian authorities then strictly forbade medical researchers from sharing evidence of the health effects of the disaster, drove foreign researchers out of the country, and repressed independent researchers, doctors, and advocacy groups who sought to defend the victims. In 1989, UCC settled the issue for a lumpsum *ex gratia* payment in an agreement with the Indian government which dropped all criminal charges against the accused. However, following a massive outcry, in 1991, the Indian government reinstated criminal

¹⁴ See Union Carbide's narrative of sabotage here: <http://www.bhopal.com/>

charges but simultaneously shifted the charge against Union Carbide from culpable homicide to the lesser charge of criminal negligence (see, Baxi 1986; Hanna 2014; Edwards 2014).

Twenty-five years later, in 2010, the Group of Ministers (GOM) on Bhopal, which was initially created by an order of the Department of Chemicals and Fertilizers in 2004 to reevaluate the issue of Bhopal, announced that the 1989 civil case for compensation was legally flawed, asking the Indian government to file a Curative Petition for additional compensation (Chapter Seven). The Indian government filed the recommended Curative Petition before the Supreme Court in 2011, but the death and injury figure it used was grossly underestimated, even compared to those of the government's research organization ICMR. Legally, UCC disappeared from the scene as the agent of the disaster after its merger with the Dow Chemical Company in 2001. Nobody from UCC was ever convicted, and Dow chemical repeatedly denied all responsibility for the actions of the UCC before the merger.

The gas-sufferers (*Gas Peddit* in Hindi)¹⁵ and impacted communities, by contrast, have been straight-forwardly challenging the state-corporate narrative for the last three decades. They have fought for social, health, and environmental justice for as long as they have entreated their government to hold the culprits accountable. Survivors blame the corporations, both Union Carbide and Dow Chemicals, as well as their own and America's government, for their continuous suffering. A further insult to their already irreparable injury is that the Bhopal survivors were used without their proper consent as clinical subjects in for-profit drug trials

¹⁵ *Gas Peddit*, loosely translated to gas-sufferers, is the term the "survivors" prefer to be called. Many of the respondents told me the same. First, using the notion "victim" takes away the agency of those who survived. Second, saying them survivors, which is also commonly used in Bhopal, also hides the continuous social and environmental suffering of the disaster. I try to consistently use the words gas-sufferer and survivor in this dissertation, although it still does not capture the pain caused by the ongoing environmental contamination. It may be that Bhopal-sufferer is the appropriate term. Thus, I occasionally use "the Bhopal-sufferer" to represent their experience of multiple catastrophes in Bhopal. *Gas Peddit* is used as an inclusive term to describe the affected Bhopalis, both by the disaster and by ongoing consequences.

funded by Western pharmaceuticals, AstraZeneca and Glaxo Smith Kline, causing the deaths of 14 survivors. This is just one of the many episodes of betrayal and travesty discussed throughout the dissertation. To the *Gas Peddit*, Bhopal is an ongoing disaster, and its catastrophic—yet slow—socioecological consequences continue to ravage their life. In the face of the disaster’s long-lasting, adverse social, economic, health, and environmental consequences and to resist the dominant narrative structure from the corporations and the states, the affected people and activists created a new form of politics, distinct from both from labor and identity politics.

The Bhopal disaster is, therefore, multiple catastrophes.¹⁶ First was the gas explosion (Chapter Two), caused by a terrifying safety condition in the plant, that killed 25,000 people and displaced and maimed hundreds of thousands more. Second was the litigation catastrophe (Chapter Seven) at the local and international levels: the Indian government settled the issue with the Union Carbide Corporation for an *ex gratia* lump-sum, the money never properly reached the real victims, and did not pursue the issue of extradition of CEO Warren Anderson for the sake of maintaining a healthy investment climate. The sudden settlement, which reduced a complex, individualized exposure to a simplified monetary categorization, affected all the Bhopal litigation proceedings and medical research happened to date. Third is the ongoing adverse biosocial and environmental consequences that continue to ravage the life and well-being of marginalized Bhopalis (Chapter Five). Fourth is the way in which the Indian and US governments and the corporation, Dow, continue to exercise their hegemonic power over the ‘victims’ of the worst industrial catastrophe in modern human history (Chapter Seven).

¹⁶ I hereafter frequently use the term the Bhopal catastrophes, instead of disaster, to capture the catastrophes that have been unfolding before, in, and since the initial explosion of 1984.

Issues at Stake

Although the catastrophes in Bhopal has already hit the third generation, although five to six *Gas Peddit* continue to die Bhopal die every day, although soil and groundwater contamination continues to spread in new localities in Bhopal, and although the gas-affected have been fighting for justice for more than three decades, nobody from Union Carbide Corporation has ever been convicted. At issue are the political economic forces that not only created the conditions for the catastrophe, but also continue to exacerbate the conditions of vulnerability for poor, marginalized populations living in Bhopal, rendering invisible the long-term biosocial and environmental consequences and resistance to these consequences. Siting a highly hazardous chemical factory in shanty towns in Bhopal was part of a process of selecting productive zones in poor places for corporate business expansion. The disaster was a result of dismantling essential safety measures during India's shrinking developmental period for maintaining profit, marking the lives and well-being of marginalized people in Bhopal expendable.¹⁷ Moreover, the Indian government's out-of-court settlement with the Union Carbide, which placed 93 percent of the exposed into the lowest category—minor injuries, (Chapters Five and Seven), reveals how the state sided with the corporations against the suffering of the affected. Slow poisoning in Bhopal, i.e., long-term social, health, and environmental destruction, continues to torment the victims. In a broader political-economic term, the Bhopali *gas-sufferer* is part of yet another *oppressed group* that modern India has added to its existing vocabulary: class, caste, religion, gender, indigeneity, and race and ethnicity.

¹⁷ Bale (2004) traces many examples of disposable people across the world in the global economy. The *Gas Peddit* people may not be completely disposed, but their continuous suffering make them sort of a *homo sacer* (Agamben and Heller-Roazen 1998) not only because suffering has become their only future that is foreseeable, but also because, as I discuss in Chapter Five, they have to die to prove their illness.

A growing body of scholarship on social and environmental destruction shows that a constant drive for accumulation, production, and profit results in social and environmental degradation (Bunker 1985; Bunker and Ciccantell 2005; Davis 1998; Faber 1998; Foster 2002; Foster, Clark, and York 2011; Gellert 2019, 2010; Gould, Pellow, and Schnaiberg 2015; Marx 1883; O'Connor 1994; Salleh 2010; Smith 1984). Even further, some scholars convincingly argue that world-economies are in fact ecological projects; therefore, capitalism as an ecological regime should be studied as a world-ecology because the accumulation of capital and the organization of nature happen in “dialectical unity” (Gellert 2005, 2019; Moore 2015, 2011; Patel and 2017). Ecological unequal exchange scholars, drawing inspiration from the world-systems tradition (Chase-Dunn and Grimes 1995; Wallerstein 1974, 2004), argue that although the globalized world is a hierarchically-structured economic arrangement, the outcomes of this order extend beyond economic matters such as society and environment. For this reason, those living in poorer countries face more extreme social and environmental outcomes than those living in developed nations (see, Bunker 1984; Castleman 1983; Davis 2005; Frey 2012, 2015; Jorgenson 2016, 2007; Martinez-Alier et al. 2016; Schuller 2008; Urry 2014).

Despite the critical purchase of these perspectives, scholars have paid insufficient attention to the ways in which the slow violence of social and environmental destruction affects marginalized groups in peripheral countries (Chapter Three). Rob Nixon (2011:3) defines slow violence as an incremental violence “that occurs gradually and out of sight,” creating a prolonged destruction that continues over time and space yet usually is not seen as violence. The conventional approach to violence refers to images of overt, sudden atrocities; it is, therefore, unmistakable. However, such a view does a great disservice to the oppressed people who are subject to slow violence in peripheral nations. Due to the relative invisibility of these people, due

to unequal power relations, and the withholding of information by government and bureaucratic agencies, such as UCC's refusal to divulge the information on the consequences of MIC and the indeterministic finding of official medical research, many social and environmental consequences could fester and continue, with an agonizingly slow pace. Bhopal under neoliberal India continues to be a site of suffering and devastation, affecting poor and minority people living in old Bhopal (Banerjee 2013; Baxi 2010; Lapierre and Moro 2003; Mukherjee 2010; Odysseos 2015; Sarangi 2002). In other words, Bhopal, as the epitome of slow violence, demonstrates the ways in which the forces of neoliberal globalization operate on marginalized groups in the wake of a devastating industrial disaster in a peripheral country, India.

Spatiotemporal Dimensions of Injustice

Spatiotemporal dimensions are integral to the event and aftermath of the Bhopal catastrophe. Old/north Bhopal, the site of the disaster, has been denied any substantial development for decades while new/south Bhopal has taken the lion's share of public and private investments. Since India's independence in 1947, virtually all development-related funds in Bhopal had gone to the new economic sectors dominated by Hindu elites in the southern part of the city, with the exception of this dangerous chemical factory which, to date, stands in old Bhopal as a symbol of spatiotemporal injustice in peripheral countries. The Bhopal catastrophes, in this sense, made deprivation of poor and minority populations visible, bringing the question "development for whom?" into the forefront. If the gas had not dissipated before hitting new, prosperous Bhopal, the legacy of the disaster—medical, environmental, and legal—one might argue, would have been different.

Environmental justice scholars illustrate the disproportionate effect of socioecological harms on marginalized groups (see, Bullard 1996; Brulle and Pellow 2000; Downey 2010;

Mohai and Bryant 1992; Punjabi and Johnson 2019; Randall 2014), and their insights are relevant to this dissertation. However, they rarely address the specific characteristics of socioenvironmental destruction in peripheral countries and the process and dynamics of marginalization outside the US. The so-called “preexisting” conditions of poverty and poor health conditions in the global South, which were both cause and product of experiments by India’s developmental state (and colonialism before that), ironically have been used to undermine the *Gas-Peddler* peoples’ claims for rehabilitation and compensation.¹⁸ Moreover, instead of remedying the ensuing crises, the local and national ruling class in neoliberal India became friendly if not obsequious to responsible corporations. It was for the same reason that no investigations were conducted after a series of leak events prior to the disaster (Chapter Two).

In addition to it being impossible to study space in isolation, critical analysis is also inextricably linked to time (Castree 2000; Harvey 2006; Kaup and Gellert 2017; Nixon 2011). The demographics of old Bhopal have been shaped by many historical political economic developments, including Green Revolutions. But more importantly, the disaster in old Bhopal took place when India’s Nehruvian developmental state had been on the decline under Indira Gandhi’s rule and neoliberal reform was in the offing. Thus, if the disaster was provoked and made possible by India’s weakening developmental state, or the transition from developmental phase to neoliberalism, the continuation of corporate catastrophes and political suppression in Bhopal is symptomatic of neoliberal India. Counter to much scholarship on neoliberalism (Brown 2015; Harvey 2005; Parr 2014; Wacquant 2009), the state is a major actor in neoliberalism in India, and it has colluded with corporations against its own people, making the survivors of Bhopal a set of “nameless victims” (Visvanathan 2001).

¹⁸ A lawyer for UCC, in a 1986 hearing before Judge Keenan, said that the affected people had diseases before the gas leak, thus each individual “history has to be examined...” carefully. He continued; we expect there would be a huge number of “fraudulent claims.” See Morehouse (1986).

There is a significant difference between industrial disasters with long-term consequences in developed countries like the US and peripheral ones like India. Table 1.1 summarizes all industrial disasters from 1984 to 2014, categorized by the length of consequences. It shows that although developed countries have the larger concentration of industrial disasters, disasters with slow violence, i.e. prolonged social and environmental destruction, are more often found in peripheral and developing countries. For instance, industrial accidents that have consequences for more than 15 years are concentrated in peripheral countries. The same holds true, as previous research demonstrates, for industrial disasters with high numbers of casualties.¹⁹ The average period for long-term biosocial and environmental consequences in poor countries is 13 years while only 4 years in developed countries.

*Table 1.1 Industrial disaster by length of recognized consequences*²⁰

Countries	Consequences (1-4 years)	Consequences (5-9 years)	Consequences (10-14 years)	Consequences (15+ years)	Total
Developing	27	28	11	13	77
Developed	64	10	1	2	79
Total	91	38	12	15	156

¹⁹ Mihaildou et al.'s (2008) paper on major industrial disasters since 1917 shows that although the number of major industrial disasters is higher in developed countries, the number of casualties caused by industrial disasters are higher in developing world. Also, see Beck (2016). See Appendix A and Chapter Four for details.

²⁰ I combined information from several data sources to create the list of all major industrial disasters since 1984 that have long-term social and environmental consequences. Two recent articles in particular—Mihaildou et al. (2008) and Beck (2016)—provided valuable information on all major industrial accidents. However, I collected and included information about slow violence caused by industrial disasters. For a detailed description of dataset and operationalization, see Chapter Four/Data and Methods.

As a matter of fact, the Bhopal disaster, in addition to Chernobyl, defines the beginning of slow violence under neoliberalism. It was during this period that neoliberal capitalism reached its hegemonic scale of influence, a transition that was evident in India at the time. The Bhopal catastrophe is widely considered the worst industrial disaster in modern human history both for its immediate consequences and, as I detail from here on, the continuing consequences affecting the most vulnerable populations in Bhopal while unilateral power/knowledge dynamics serve to cover the tracks of perpetrators and suppress the legitimacy of the ongoing crisis.

Resisting Socioenvironmental Destruction

Although the slow violence of ongoing social and environmental harms is bereft of the spectacle of the first catastrophe, this violence is not without resistance. Frantz Fanon (1963) rightly mentions that human liberation in marginalized countries should not be confined to the nationalist paradigm because rulers of these nations sell out their authority to domestic and international capital, leaving their country strangled in hunger in addition to social and environmental destruction. Masses in postcolonial societies often move away from nationalist framings, refusing the premise that they are incapable of governing themselves. Additionally, as social movements in peripheral countries emerge because of the so-called development activities of the state, Partha Chatterjee (1993, 2004), shows that “political society,” a domain in which subaltern groups engage the state for ad-hoc solutions, questions the development ideology of the state and aim to create an alternative source of legitimacy for the state (Chapter Three). The state, as the Bhopal Movement reveals, is a fragmented terrain of contestation (Chatterjee 2004). However, what scholars, such as Chatterjee, fail to underline the overarching characteristics of a new “political society” in neoliberalism created by the Bhopal Movement, which refuses to accept any negotiations and continues its fight to hold responsible actors liable for long-term

social, biological, and environmental suffering in Bhopal. This new political society, unlike the “civil society” that Chatterjee sees as part of hegemonic capital, like Gramsci (1937), engaged with the state demanding that the state live up to its universalist claims to serve all Indians.

The Bhopal Movement, therefore, demonstrates that governmental and corporate practices, although seemingly entrenched power structures, are contestable and can be turned into what Foucault (1980) calls a “focus of resistance.” Over the past three decades, the *Gas Peddit* and activists have demonstrated that when neoliberal, global forces have devastated their lives and well-being and contaminated the environment in which they live, they continue their fight against these forces. Similarly, when adverse social and environmental consequences of the disaster continue to affect poor and marginalized populations living in neoliberal India, they sustain and multiply their mobilizations and challenge the prevailing framework of justice. The Bhopal Movement is a blend of struggles over material resources (such as economic and medical compensation), symbolic resources (such as cultural practices), and environmental health (such as water and soil). More importantly, I argue that serving as a decisive refusal to forget or accept the social and environmental assaults on the city’s marginalized communities, the Bhopal Movement has created a new form of politics in India, distinct from labor and other kinds of politics that have been captured in the sociology of social movements.

Research Questions

This dissertation offers a political economic and political ecological analysis of the Bhopal catastrophe and its slow, yet catastrophic, socioecological consequences that continue to ravage the marginalized populations living in Bhopal. This dissertation is, thus, a critical examination of

the structural enablers of the immediate causes and the long-term social and environmental consequences of and grassroots resistance to the 1984 Bhopal disaster.

The specific analytic imperatives of this study are threefold. First, the Bhopal catastrophe that happened under a shrinking developmental state was the outcome of what Sewell (1990, 1996, 2008) calls a long chain of global political economic story. Second, the disaster's ongoing adverse consequences stemming from the neoliberal dynamic that overshadows the slow violence of social and environmental harms affecting vulnerable populations in peripheral countries. Third, the politics of long-term, intergenerational suffering in Bhopal, different not only from labor and identity politics, but also from various types of environmental justice movement that have been theorized highlighting only material, visible, and spectacular short-term consequences. The dissertation addresses the following five questions:

1. What are the historical and structural forces that led to the Bhopal disaster, and what political economic factors explain the Bhopal disaster?
2. What are the short-term and long-term biosocial and environmental destruction, and what overshadows these consequences?
3. How has the unequal application of the law, i.e., the political economy of the Bhopal litigation, achieved in handling the Bhopal case?
4. How has the process of marginalization of the affected Bhopalis created the longest-running movement in India, the Bhopal Movement, a new political society in neoliberal India?
5. What are the theoretical and policy implications of the Bhopal disaster?

The theoretical perspectives that underpin the analysis are political economic and ecological approaches that deal with social and environmental destruction. Illustrating how existing

approaches do not specifically capture the myriad ways in which most long-term destruction affects poor, minority groups in peripheral countries, this dissertation integrates the notion of slow violence (Nixon 2011), a violence that occurs gradually and out of sight, creating a prolonged destruction that is itself not usually seen as violence. The dissertation also argues that existing approaches to political agency do not capture the specificity of the politics of socioenvironmental destruction affecting marginalized groups in neoliberal peripheral countries, such as India. This dissertation relies primarily on structural fieldwork methods, which continued for a total of 4 years. This research draws data from 60 interviews with Bhopal gas and water sufferer²¹ and activists, field observations, as well as archives and official and independent reports. The dissertation also makes use of a cross-national dataset on industrial disasters with long-term social and environmental consequences. The dataset consists of all major industrial disasters since 1984 and facilitates the examination of the overall vulnerability of poor countries to the slow violence of social and environmental destruction.

Overview of the Dissertation

This dissertation confronts the erasure of the event; its continuing consequences; and the ways in which the catastrophes have been misconceived in political, judicial, and academic discourse. For doing so, it is organized to critically examine the following array of factors: political, economic, and ecological contexts of the proximate causes and consequences of the Bhopal disaster; the long-term biosocial and environmental destruction attributable to the Bhopal

²¹ Water sufferer are those who have been drinking contaminated water caused by the waste dumped or left uncleaned by the factory. Groundwater around the factory, a primary source for drinking water for many thousands in Bhopal, is contaminated with highly poisonous chemicals and is spreading in new localities. See BGIA (2018), CSE (2009).

disaster; the resistance to social and ecological devastation in Bhopal; and the legal catastrophes in Bhopal.

Chapter Two provides a historical account of the Bhopal Disaster, presents a chronology of major events, and identifies the structural drivers of the disaster's proximate causes and consequences. It also analyzes the event as a product of the long chain of associated global political-economic developments. Chapter Three offers a range of theories, providing a critical inquiry into major theoretical perspectives/concepts that inform the dissertation. It critically encounters relevant political, economic, and subaltern approaches, describing the nexus between neoliberalism, social and environmental destruction, and resistance in peripheral countries. Chapter Four provides a detailed account of the data and methods employed in this research, including structural fieldwork (interviews and observation) and archival research.

Chapter Five examines the Bhopal disaster as the epitome of the slow violence of social and environmental destruction, paying particular attention to the ways in which the ongoing and incremental adverse consequences further the marginalization of the marginalized in Bhopal. Chapter Six critically examines the three-decades-long social and environmental justice movement, referred to as the Bhopal Movement. Chapter Seven highlights how the law has proved unable to safeguard the gas-afflicted and marginalized in Bhopal, critically analyzing the litigation process surrounding the disaster. The final chapter summarizes the dissertation, draws conclusions in terms of theoretical and policy implications, specifies limitations, and identifies directions for future research.

Chapter Two: “Everyone of us to Die”: Political Economy of the Bhopal

Catastrophe

...we can attempt to make our more local studies contribute to an understanding of the whole in some way beyond producing empirical bricks to be added to the grand edifice sometime in the indefinite future. We should be mindful of the multiple and contradictory temporalities of capitalism and of how they are manifested in the institutions or problems we study.²²

- William H. Sewell (2008), “The Temporalities of Capitalism.” P. 535

An event or a thing at a point in a space cannot be understood by appeal to what exists only at that point. It depends upon everything else going on around it.

- David Harvey (2006), *Spaces of Global Capitalism: Towards a Theory of Uneven Geographical Development*. p. 124.

It was midnight in Bhopal, Madhya Pradesh (Central India), on December 3, 1984: a dense, white fog of chemicals from the American multinational Union Carbide’s pesticide factory stole over the slumbering city, leading to what many researchers have described as the worst industrial catastrophe in modern times (Everest 1986; Eckerman 2005; Fortun 2001; Jasanoff 2016; Jones 1988; Lapierre and Moro 2001; Mukherjee 2010; Patel 2015; Sinha 2009; Sarangi 2002; Visvanathan 2001). The explosion at the Bhopal plant released approximately 45 tons of methyl isocyanide (MIC) gas, in addition to many other byproduct chemicals.²³ About 5,000 to 8,000 people died on that fateful night, and hundreds of thousands were permanently injured (Amnesty International 2004; Baneerjee 1986; Lapierre and Moro 2005; Greenpeace 1999; Jones 1988).

²² Sewell (1996:841) in an earlier article, “Historical Events as Transformations of Structures” states: “Despite the prominence of events in historical narratives, the event has rarely been scrutinized as a theoretical category.” In this article and other earlier writings his argument, however, was more deterministic than what I used as an epigraph quote. He in those earlier articles sided with scholars who find a cyclical and repetitive logic of capitalist expansion.

²³ Several researchers suggested that released gas contained cyanide as well. Drawing on autopsy results, Dr. Heeresh Chandra, then head of the Department of Forensic Medicine and Toxicology at Gandhi Medical College, stated immediately following the disaster that cyanide poisoning was the main cause of death. For details on the cyanide controversy see Rajagopal (1987), Hanna (2014), Sriramachari (2010). I discuss this matter further in Chapter Five.

The factory, which sat within the city's shanty towns, was built to stimulate India's Green Revolution; its impact on the people living in Bhopal, however, was anything but beneficial. On the contrary, due to the long series of social, environmental, and legal catastrophes since 1984, Bhopal has come to be known as a site of enduring corporate destruction.

The winter winds spread the toxic gases through roads, offices, and nearby shanties. People, even from miles away, woke up coughing and choking with their eyes burning. They initially thought—as many *Gas Peddit* (gas and water sufferers) and witnesses later retold the story — “it must be someone burning chilies.”²⁴ The escaped gas dispersed over approximately 40 square kilometers and affected people living as far as eight kilometers downwind. The poor people who lived in the shadow of this hazardous factory were the most affected. The residents tossed restlessly, writhing in pain; they scrambled in mad desperation, clueless about where to run.²⁵ Dogs, goats, and cows ran aimlessly for their lives. The people were so frightened and in shock that some even left their children behind (Figure 2.1).²⁶ Numerous women, children, and the elderly were trampled to death in narrow alleys. “It was a scene of complete chaos, from an apocalypse,” recalls victim Chirongi Bai.²⁷

At daybreak the old city of Bhopal looked like a burial ground: mangled corpses covered the streets, and in some places “the dead were so many that it was impossible to walk without stepping on them” (Sinha 2009). Those who survived rushed to the nearest Hamida hospital, where weary bodies dropped in piles on the floor.

²⁴ The story of the night of the explosion has become mythical, many of my respondents shared a similar story. As people ran haphazardly around, some also thought a riot or war had begun in their neighborhood. The anti-Sikh riots around India earlier that year may have prompted such suspicions.

²⁵ Running might have saved some lives but only if they had known that they were not supposed to run in the direction of the wind. People who lived nearby the factory were not even aware of such small acts that might have helped them.

²⁶ The source of these two images is Raghu Rai. Raghu Rai was the first photographer to arrive in Bhopal to capture the scenes of the disaster.

²⁷ Field interview, July 11, 2018. Chirongi Bai is a gas survivor who lost several members of her family and some of her family members still sufferer many health problems.



Figure 2. 1 Images of the Bhopal Disaster. Source: Raghu Rai.

As a result of the gas poisoning, people drowned in their own bodily fluid. However, at first, nobody knew what was causing it. Due to the massive fatalities, the city of Bhopal ran out of cremation sites for Hindus and burial grounds for Muslims. Yet Union Carbide was obdurate and refused to provide information on the chemical composition of the cloud, claiming only that the gas was a mere “irritant” (see, Baxi 2010; Hanna et al. 2005; Mukherjee 2010; Eckerman 2005; Nixon 2011; Sinha 2007).

The city of Bhopal, once renowned for its scenic lakes, was turned into a place of destruction of society and environment. What made this devastation possible in the late 20th century has troubled researchers to this day.²⁸ There is a plethora of literature describing the technical complexities leading to the disaster in Bhopal (Ball 2001; Chouhan 1994; Everest 1986; Jones 1988). This literature highlights that pouring water into tank 610 caused exothermic, chemical reactions that resulted in increased pressure in the MIC tank, which converted the

²⁸ In 2014 Bridget Hanna’s dissertation produced a detailed analysis of the “toxicological indeterminacy” in Bhopal. Hanna studied “the ways that ideas of relief, treatment, and illness have been constructed by experts (in science, medicine, policy, and social science), lay activists, and gas survivors” (2014:26). Hanna also observes that there have been fewer academic works on Bhopal than expected.

liquid into gas. Technological advance arguments have noted that in the aftermath of the 1984 explosion, useful advancement of industry safety standards and accident preparedness have occurred (Chapter Eight). These improvements in technical governance during a period of neoliberalism did not result in the structural transformation of global or local capitalism. Although technical factors played a role in the explosion, the event of the Bhopal catastrophe requires theoretical analysis that pays attention to the event occurring at a time when India's developmental state was shrinking. This chapter aims to fill the need to consider the Bhopal catastrophe as a theoretical category by examining the event of the Bhopal catastrophe as the outcome of a long chain of political economic decisions and prior events. To make this argument, I draw on Sewell's (2008, 1996a, 1996b) analysis of historical events.

Sewell (1996:844) argued that a historical event is a "ramified sequence of occurrences," which lead to a notable change of structures. However, in a 2008 article, he qualified his initial conception of the historical event and underscored the heterogeneity of time, which equally implies a causal heterogeneity. Against scholars who identify a universal, recurrent cycle or logic of capitalism (see, Arrighi 1994; Braudel 1979; Schumpeter 1939; Tilly 1986; Wallerstein 1974), Sewell (2008:518) argues that "the consequences of a given act are not intrinsic in the act, but rather will depend on the nature of the social world within which it takes place." In a similar vein, I argue that the event of the Bhopal catastrophe must be understood not only by linking it to the recurrent cycle of global corporate capitalism but also by the ways in which both US and Indian state managers and a corporation created the conditions for the catastrophe to happen.

To elaborate, India's political economic history can be divided into three historical periods: the Nehruvian developmental regime (1947-1966); the weakening of the developmental regime (1967-1989), coinciding in part with the rule of PM Indira Gandhi; and the neoliberal

period (since 1990). The 1984 Bhopal catastrophe occurred during the transition from the second to the third period. To expand its business in India, Union Carbide Corporation capitalized on the trends supporting global production and domestic change in India to set up a MIC unit in its pesticide plant in Bhopal. However, when the plant did not succeed as the corporation projected, UCC was able to take drastic cost-cutting measures in this already dangerous plant, sowing the seeds for a catastrophe with enduring consequences for generations to come. The event of the catastrophe, as I show in this chapter, is tied to a broad political economic dynamic, both local and global.

I illustrate my arguments in three steps. First, I underscore how India's developmental state beginning from 1947 shaped the spatiotemporal dynamics of the city of Bhopal. Second, I examine the political economic aspects that shaped the proximate causes of the Bhopal catastrophe, highlighting how Union Carbide exercised political influence in order to set up a MIC unit in Bhopal that ignored basic safety standards in a plant located in the shadow of shanty towns. Finally, I conclude with a brief discussion of whether the Bhopal catastrophe has led to a transformation in the structures of global or local capitalism.

Bhopal at a Crossroads²⁹

Bhopal, the state capital of Madhya Pradesh, is located approximately 480 miles south of India's capital, New Delhi. The population of Bhopal today is 1.8 million. In 1984, its population was nearly 900,000. Bhopal is India's 14th largest city and has long been one of the major rail intersections in India, which was one reason why Union Carbide located its plant there. It is also

²⁹For more relevant information on the history and culture of Bhopal, see sources: <https://www.bhopal.net/what-happened/setting-the-stage-for-tragedy-1969-1984/a-short-history-of-the-city-of-bhopal/>; <https://www.mapsofindia.com/bhopal/history.html>; Mittal's (1990) "History of Bhopal State."

the home of India's largest mosque, the Taj-ul-Masajid, and has a number of elaborate Hindu temples, symbolizing its history of cultural and religious diversity. Since India's independence in 1947, the city of Bhopal has grown highly segregated along class and religious lines.

Diversity to Segregation

The city of Bhopal has always been reputed for its green landscape, especially its picturesque lakes surrounding the city. Some say the city was named after the king Bhoj, who proposed to form the lakes bordering the city. However, the city as it looks today is believed to be founded by an Afghan explorer, Mohammad Khan. It is still home to the second largest Muslim proportion (35%) population in India, second to Aligarh and Hyderabad (40 %).³⁰ Under British rule, Bhopal was the largest Muslim principality. The city became a princely state (native state, ruled by a local ruler) in 1818 upon signing a contract with the British East India Company. During a famous mutiny against the British regime in 1857, Bhopal sided with the British and supported the British government to crush the revolt. People in this area did not even participate in the Indian independence movement. It, therefore, can be said, that Bhopal's history was one of political apathy towards nationalism and subordination to the foreign colonizer.

Bhopal has an unusual history as a dynasty of Muslim women has ruled it since the time of the Begums in the 19th century. Qudisa Begum, the first woman ruler of the dynasty, was known for the generous treatment of her subjects, and several historical and archaeological sites were built during her regime (Khan 2000). Qudisa prepared and educated her daughter, Sikander, to follow her footsteps, eventually leading what is known as a "golden" age of Bhopal. As with her mother, many famous architectural and artistic developments in contemporary Bhopal were

³⁰ India's population includes approximately 200 million Muslims representing 14 percent of the country's total. Bhopal was ruled by Muslim rulers, known as the Nawabs of Bhopal, first, during Mugham Empire from the beginning of the 18th century, and second, during British rule, from around 1820 to 1947. Female rulers in Bhopal were known as Begums of Bhopal. See Khan (2000).

constructed during Sikander's rule. In 1926, Sikander relinquished the crown to her son, Hamidullah Khan, who ruled Bhopal until 1947, the year of India's independence. In 1956, Bhopal became the state capital of Madhya Pradesh.

Bhopal is now a tapestry of old and new (Figure 2.2). While old portions of Bhopal savor past Muslim rulers, new developments boast of a modern Indian city inhabited by Hindu elites. This dynamic of the geography of Bhopal aptly exemplifies why space ought to be understood by not only what exists at that point but by other historical and political economic events (Harvey 2006). In the old, predominantly Muslim and Dalit quarter one finds marginalized, impoverished minorities. Since India's independence in 1947, the largest share of developmental investment has been set aside for the new part of Bhopal.

Figure 2.2 shows that the city, based on its development and demographic features, has three geographical areas. The old part stands north, where marginalized people reside; the central part is where the affluent live and the government offices are located; and the south is an industrial township, in which most of the engineering firms are situated. Bhopal's current urban plan is an embodiment of what scholars call geographies of injustice which, "paradigmatically vary across global North and global South - and indeed, across peoples who constitute the South in the North and the North in the South" (Baxi 2001: 26; see also Grant et al. 2010; Harvey 2006, 2003; Smith 1984). One might speculate that if the released gas did not dissipate before hitting new, affluent Bhopal, perhaps the devastation would have been rectified more forcefully. Instead, the 1984 disaster not only uncovered the prevailing, development-induced geographic injustice in Bhopal, but it also furthered the marginalization of the marginalized with the rise of India's neoliberalization since the 1990s.

mechanization of agriculture caused by Green Revolutions. The gas leak and ongoing soil and water contamination continue to affect the poor and minority people living in old/north Bhopal.³²

“Every one of Us to Die”: Union Carbide in Bhopal, India

In 1984, Union Carbide Corporation (hereafter UCC) was the seventh-largest chemical company in the world, operating almost 700 manufacturing industries in 137 countries (Agarwal et al. 1985; Fortun 2001; Lapierre and Moro 2009; Mukherjee 2010; Rajagopal 1987).³³ UCC had \$10 billion in annual sales and 120,000 employees (Browning 1993; Mukherjee 2010). In India, UCC worked through a subsidiary, Union Carbide India Ltd. (hereafter UCIL), which operated 14 plants in India and \$200 million in sales. As one of the largest companies in India, one that employed more than 10,000 people, UCIL was powerful enough to circumvent the local administration’s objections to the placement of the factory.

Though UCC began its industrial activity at the end of the nineteenth century, it was not until the 1920s that it gained commercial prominence through buying other companies – companies that dealt mostly in battery production. It became the world’s biggest producer of batteries. UCC’s industrial reputation and growth were founded on petrochemicals, hydroelectric power, and most importantly, mining steel and uranium as part of the World War II (WWII) nuclear weapons project. In 1920, UCC built the United States’ first commercial ethylene plant in West Virginia. In the post-war era, UCC’s business in other countries in Asia, Africa, Latin

³²Although there exists no conclusive statistics on the demographics of the affected, it is a recognized and indisputable fact the factory’s vicinity has been inhabited by poor and religious minorities, such as Muslims and Dalits. ICMR in 1985 showed that approximately 50 percent of the population lived in the vicinity of the factory were Muslims. In 1984, more than 80 percent of the population lived with approximately \$5 per month, well below India’s poverty line: \$12/month, and almost 70 percent did not have any permanent housing. This fact was corroborated by my observation of patients coming to receive treatments at the Sambhavna Trust Clinic, where most victims are Muslims, women, and lower caste Hindus. I noticed similar demographic characteristics of the affected during my fieldwork in Bhopal.

³³ See UCC’s website: <http://www.unioncarbide.com/about-us>

America, and the Middle East became a major source of profit – 40 percent by the year of the Bhopal disaster. Importantly, with centralized decision making, UCC exercised strict managerial control over its foreign subsidiaries. As its official charter states, the management of UCC was set up to deliver centralized, unified “corporate strategic planning direction and control.”

Centralized Decision Making

Although UCC was operating via its Indian subsidiary, UCIL, UCC controlled all major decisions in its Bhopal plant.³⁴ Management directives over the Bhopal plant came directly from UCC’s headquarters in the US (see, Eckerman 2005; Edwards 2014; Morehouse and Subramaniam 1986). Nevertheless, statements made by UCC officials during the 1987 US court proceeding contradicted this fact, successfully forwarding the legal claim that UCIL had full authority over the plant’s construction and regulation (see Chapter Seven).

Several factors show the role of the American parent company in India. UCC executives constituted the majority membership of the UCIL board. UCC’s Bhopal plant was under the divisional control of Union Carbide’s Agricultural Products, Inc., and all of their major expenditure, budget, and policy decisions required prior approval by UCC headquarters (Edwards 2014). The detailed design of the Bhopal plant, moreover, was drafted, carried out, and bankrolled by UCC. Amnesty International (2004) reported that UCC was in charge of providing “the necessary technology and process design” for its subsidiaries outside the US. Unquestionably, operational decisions regarding technical and safety matters at the Bhopal plant were UCC’s responsibility. In fact, UCC’s chairman at the time, Warren Anderson, later admitted, “the truth is that the plant in India was built under our design criteria” (Edwards 2014).

³⁴Union Carbide’s Eastern Division in Hong Kong was overseeing UCIL, but all major decisions were approved in UCC’s headquarters in the US (Banerjee 1986; Morehouse and Subramaniam 1986).

Targeting India's Pesticide Market

Although UCC was not known for pesticides production, the booming pesticide market in Asia led it to invest widely in the Indian economy. UCC began working in India in 1905, but only after India's Independence in 1947 did it start to produce chemicals and plastic in Kolkata (formerly Calcutta), the state capital of West Bengal, and other large cities. It built several dry cell factories between 1940 and 1965 in large districts including Madras, Lucknow, and Hyderabad. Figure 2.3 shows that in 1968, targeting the pesticide market, UCIL moved its agricultural division from Mumbai to Bhopal (Agarwal et al. 1985; Bisht 2013; Bogard 1989; Mittal 2016; Mukherjee 2010; Trotter et al. 1989), primarily because of its strategic location in central India.

In 1976, due to the high demand for pesticides, the Bhopal factory started producing the pesticides Sevin and Temik. As part of its expanding pesticide business, a unit was set up in 1979 to produce methyl isocyanate (MIC), an ingredient in Sevin, with planned production of over 5,000 tons per year. The unit was set up using corroded machinery from the West Virginia plant. Although Bhopal to date bears the brunt of the disaster, India's pesticide market continued to enjoy enormous growth, gradually making it the largest pesticide producing country in Asia. Neoliberal India has become more friendly to corporation activities that damage the ecosystem. The growth of pesticide production occurred despite evidence that pesticides contaminate the ecosystem and contribute to health problems, as well as directly causing deaths (see, Bhardwaj and Sharma 2013; Forget 1993; Jeyaratnam 1990; Devi 2010).³⁵

³⁵ As of 2011, the Indian pesticide industry was the largest in Asia and 12th in the world, producing approximately 70,000 tons annually. The production capacity of pesticides in India rose to 139,000 tons in 2017 (??). Pesticide production is projected to continue to grow 12 percent per annum and reach \$7 billion in 2020 (Devi et al. 2017; Forget 1993). Ecosystem damage developmental state was not a major concern to the developmental state. It is not a dominant concern now either.

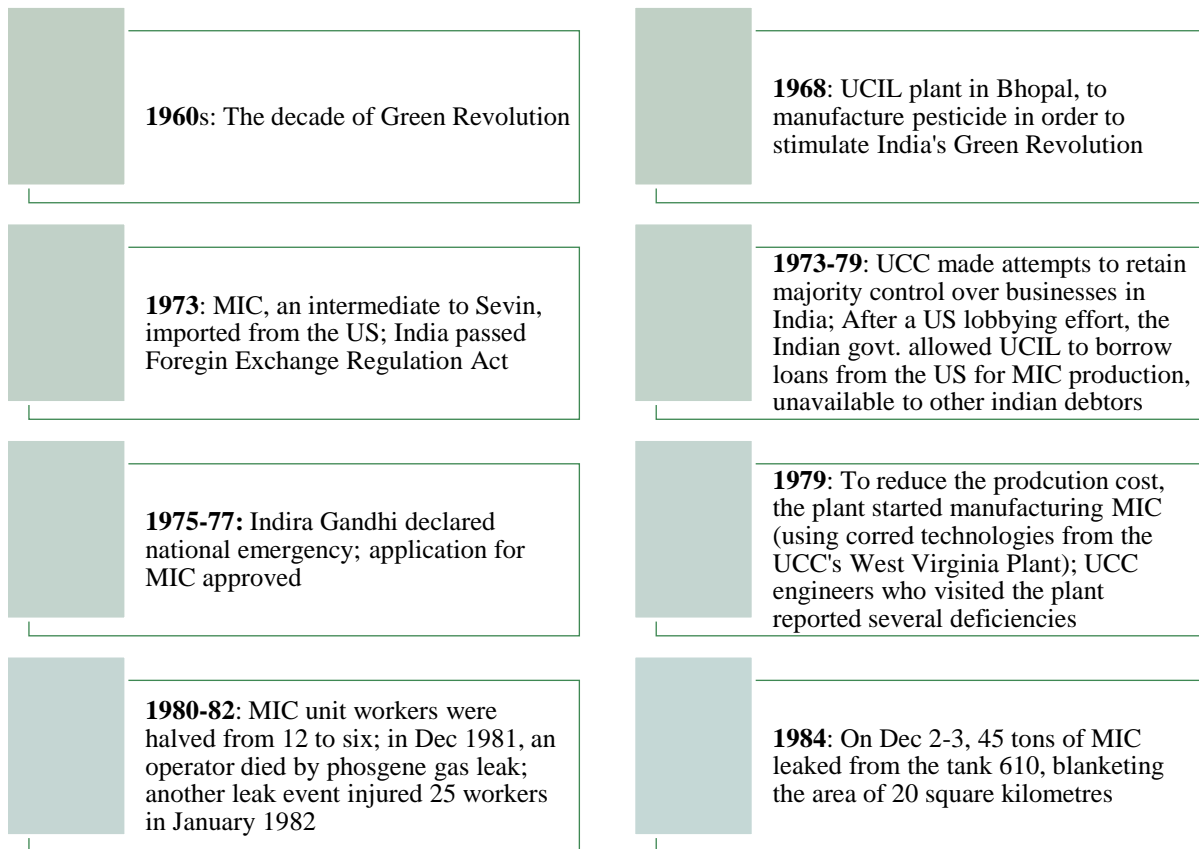


Figure 2. 3 UCC: Background to the Disaster

MIC: Liquid Dynamite

Methyl isocyanate (MIC) is colorless but has a pungent smell. It is produced by the reaction of phosgene and monomethylamine to methycarbamoyl chloride and hydrogen chloride.

Methycarbamoyl is then pyrolyzed to produce MIC and hydrogen chloride. Because of its highly volatile and unstable nature and of its ability to kill thousands in a single blow, it has been referred to as “liquid dynamite” or “Molotov cocktail” (Banerjee 1986; Dhara and Dhara 2002; Eckerman 2005; ICMR 2010).

MIC is dangerously toxic, capable of breaking down DNA in the skin, eyes, and respiratory system. When paired with water, MIC can be absorbed and distributed throughout the entire body (Ball 2011; Dhara and Dhara 2002; Sriramachari and Chandra 1997). MIC penetrates tissues and interacts with bodily protein. The California Office of Environmental Health Hazard Assessment (OEHHA) has shown that MIC primarily harms the respiratory and reproductive systems and is capable of disrupting vital biomolecules.³⁶ Due to its extremely lethal characteristic, the US Occupational Safety and Health Administration (OSHA) does not recommend exposure to more than 0.02 ppm during an 8-hour period (Varma and Varma 2005).

UCC’s own research in the 1970s – but only revealed later – concluded that MIC is highly hazardous and that exposure to MIC causes “residual damage” even if people are given immediate treatment after exposure.³⁷ Chemical engineers strongly advise against storing it in a tank for long (but unspecified) periods. MIC exposure from the Bhopal plant explosion is linked to deaths, miscarriage, incapacitation for life, genetic disorders, developmental disorders, congenital malformations, and impacts on epigenetic factors (Blake 1982; Dhara and Dhara 2002; Eckerman 2005; ICMR 2010; Gassert 1986; Misra et al. 2009; Samarth et al. 2013).

³⁶ See the analysis here: <https://oehha.ca.gov/proposition-65/chemicals/methyl-isocyanate-mic>

³⁷ The research report gave it the most dangerous rating of 5 (see UCC’s document on MIC here: <https://www.bhopal.net/wp-content/uploads/2019/03/10-MIC-Safety-Report-1974.pdf>).

MIC in the Bhopal Plant

Because using MIC to produce Sevin (a carbaryl pesticide) was cheaper, the Bhopal plant shifted from alpha-naphthol to MIC in 1979. In other words, ramping up pesticide production at a cheaper rate was the reason behind setting up a MIC unit in the Bhopal plant. MIC was used during the first World War as a chemical weapon, and UCC first used it in the 1960s at its pesticide plant in West Virginia.³⁸ Initially, MIC was shipped from the West Virginia plant to other locations, including France, India (Bhopal), and Brazil. Ignoring the warning from its engineers, UCC built the MIC unit in Bhopal by what is known as the “backward integration” of questionable manufacturing technology from its plant in Institute, West Virginia. UCC engineers had concluded in 1972 that all major items in the West Virginia unit had “failed and been replaced....If another facility [were to be] built to produce MIC based on the process used at Institute,” the report continued, it must be handled with extreme care (see, Edward 2014; Mukheerjee 2010).

UCC, however, ignored the risks identified by its engineers, likely due to its desire to expand its business while also retaining majority equity control in India. During India’s confusing transition from the Nehruvian development model to economic neoliberalization, UCC’s drive to retain majority ownership over its entire business in India created the perfect storm, so to speak, for the disaster. The events described below not only help us understand the direct role and responsibilities of states and corporations and their interrelationships before and after the disaster, but also reveal that the Bhopal disaster is a moment in a longer, intricate political economic story.

³⁸ Additionally, it became popular after other environmentally harmful chemicals, such as DDT, had been banned in the US (Agarwal et al. 1985).

UCC's Majority Control and India's Shrinking Developmental State

In 1956, during a period of support for economic nationalism and a developmental state, the Indian Parliament enacted a bill imposing limits on investment by foreign corporations. The ownership of UCC decreased from 100 to 60 percent as Indian citizens were recruited as board members of its Indian subsidiary, UCIL. In 1966, in its effort to reduce food dependency on other countries and to ensure food sovereignty in India, the Indian government developed a range of policies, including reducing crop losses to pests. UCIL built an agricultural products division in a central Indian town, Bhopal, to meet the demands of the growing Indian market for fertilizers and pesticides. Building the factory in Bhopal was to reduce transport and communication cost required for pesticide production, thereby speeding up the circulation of capital and thus decreasing the costs of transport. The State of Madhya Pradesh leased land to UCIL for 99 years in an area two miles from the old Bhopal railroad station and also near two large lakes. In 1969, UCIL's Bhopal plant began production, manufacturing raw fertilizer and pesticides. In an effort to push domestic industrialization, the Indian government asked UCC and UCIL to shift from using imported chemicals to creating a full-production facility.

In 1973, the Indian Parliament adopted the Foreign Exchange Regulations Act (FERA), including a provision to control Indian companies' decision on recruiting foreign employees. The same year, UCC, under a Design Transfer Agreement, provided UCIL the basic design to produce Sevin pesticide and train local operators of the plant. A 1973 memorandum of UCC outlined the details about the technology transfer from West Virginia to Bhopal, including the approvals required from the US side.³⁹ UCIL's Indian engineers then visited the UCC technical

³⁹ A list required approval by UCC for myriad matters, including plant capacity or performance, raw material specifications, basic equipment design, materials of construction, and equipment construction quality and standards, as well as major elements of the process configuration or piping, equipment layout, valve and piping specifications, and mode of instrument control (Edward 2014).

center in West Virginia to learn about the process prior to building the facility in India. What followed were two significant events between 1974 and 1976. In 1974, UCC's share in the Bhopal plant decreased to 50.9 percent, then the legal maximum share for a foreign company working in India. UCC took on a host of technological risks (because the technology was listed as a high priority area) thereafter due to its desire to maintain majority equity control over its Indian subsidiaries (Edwards 2014).⁴⁰ In 1976, as the city of Bhopal built a separate zone for hazardous industry 15 miles away from the center, UCIL somehow convinced the local Bhopal authority to categorize the Bhopal plant as a harmless, general industry facility, thereby allowing the plant to remain in its original location in the densely-populated northern center. Such signs of India's weakening developmental state and the neoliberalization of the economy—based on two pillars, deregulation and privatization—would grow over time.

In 1977, the Bhopal plant began production and expanded alpha-naphthol fabrication to include Sevin fabrication. Two years later the plant changed to MIC processing for the production of pesticides as it was cheaper and more efficient. This technology transfer from West Virginia to Bhopal involved serious political and economic negotiations. Why UCC took this technological risk going against the recommendation of its own engineers may be found in its desire to maximize profit and to maintain its majority control of the Bhopal plant and other business in India. On the one hand, through a backward integration of MIC technologies to Bhopal, UCC aspired to save at least 75 percent compared to the cost of constructing a new facility. On the other hand, India's FERA act, which stated that business not investing in priority

⁴⁰ Under the 1973 Indian FERA act, any foreign corporation working in India should seek loans from the state-owned or other local financial institutions; but, as these loans come with strict regulations and burden (such as foreign investment would be subject to equity dilution), UCC moved to secure loans from the US. As a result of US lobbying, UCIL managed to secure external loans, on the condition that 45 percent of this loan must come from the EXIM bank, the official export credit agency of the US government. As India embarked on a state of emergency in 1975, high-level political interference became easier.

areas could have no more than 40 percent foreign ownership,⁴¹ threatened UCC's majority equity. UCC wanted to stop that from happening by any means. UCIL's attempt to get an exemption from the FERA act was declined in 1975; however, UCIL convinced the Indian government that its proposed project would bring "60 percent of its total business activities into the high priority areas, such as in technology, of FERA's new guidelines" (Edward 2014:60).

However, the application remained pending for five years until October 1975, when India was under an indefinite period of national emergency, declared by the then Prime Minister Indira Gandhi. It has been recently discovered from US diplomatic cables (released by Wikileaks) that the US embassy in Delhi lobbied on behalf of UCC to approve this application. An Indian civil servant made the following statement.

We are trying to take advantage of the opening provided by [M.G. of finance ministry] Kaul's interest in solving economic problems by asking for finance action to resolve a large variety of problems ... pending investment proposals such as Union Carbide...as well as an easing of the more onerous FERA guidelines.⁴²

The FERA act directed that all new direct overseas investments would be subjected to gradual equity dilution. Thus, in order to avoid a total direct investment, UCC aimed at loans to cover foreign exchange expenditures required for MIC production. However, as Indian government preferred loans to be secured from local institutions, and as they come with onerous conditions, including a requirement that part of the loan be transferred to equity capital, UCC had to find a way to escape this financial barrier. UCC successfully pursued external loans to avoid this potential problem. After a concerted US lobbying effort, the Indian government agreed to allow

⁴¹Some companies, including Coca-Cola, that do not have investments in defined priority areas left India. FERPA also declared that overseas investment is subjected to dilution, which would require all direct investments by UCC to diluted to UCIL.

⁴² See the statement here: www.wikileaks.org/plusd/cables/11975NEWDE12918_b.html.

UCIL to borrow loans from US-based financial institutions, on the condition that 45 percent came from the EXIM Bank, the official export credit agency of the US government. Part of the contact made with the US State Department by the US Embassy in Delhi reads: “..because of the US majority ownership involved. No other Indian applicant for Exim could put forward a similar case.”⁴³ This is something that was not available to Indian debtor.⁴⁴ After the Indian endorsement of the application, Secretary of State Henry Kissinger announced that EXIM bank was authorized to finance the required cost of the construction and production of MIC plant in Bhopal.⁴⁵ There remained no official barrier to transfer the unreliable MIC technology to Bhopal (Figure 2.4), India. R K Shahi, Former Deputy Director of the Indian Ministry of Industrial Development, told the following:

The entire department [the Indian Ministry of Industrial Development] was against granting the industrial license [for MIC production] ...We knew that it was discarded technologies being transferred [from Institute, WV] to India. It was obsolete in the United States, but it was being dumped in our country (*The Hindu* in 1994. Quoted in Tyabji 2012).

However, repeated monsoon failures during these years soon spelled drought for India, and farmers who needed government loans cut back on their pesticide purchases. The plant, which was expected to produce more than 5000 tons of pesticide, only produced 1000 tons (Banerjee 1986; Jones 1988; Mukherjee 2010). Facing this downturn in demand, UCC took substantial cost-cutting effort on this already risky hazardous MIC unit in Bhopal.

⁴³ See Wikileaks’ released document here: www.wikileaks.org/plusd/cables/1975NEWDE0I606_b.html.

⁴⁴ The following is available on Wikileaks. The US embassy in Delhi convinced the US State Department and suggested “Exim favorable consideration of full 45 percent participation in this borrowing. We do not believe it established a precedent and only arises because of the US majority ownership involved. No other Indian applicant for Exim could put forward a similar case.” See, www.wikileaks.org/plusd/cables/1975NEWDE0I606_b.html.

⁴⁵ See Wikileaks document here <https://www.bhopal.net/wp-content/uploads/Reports/Electronic-Telegram-Dated-January-5-1976.pdf>

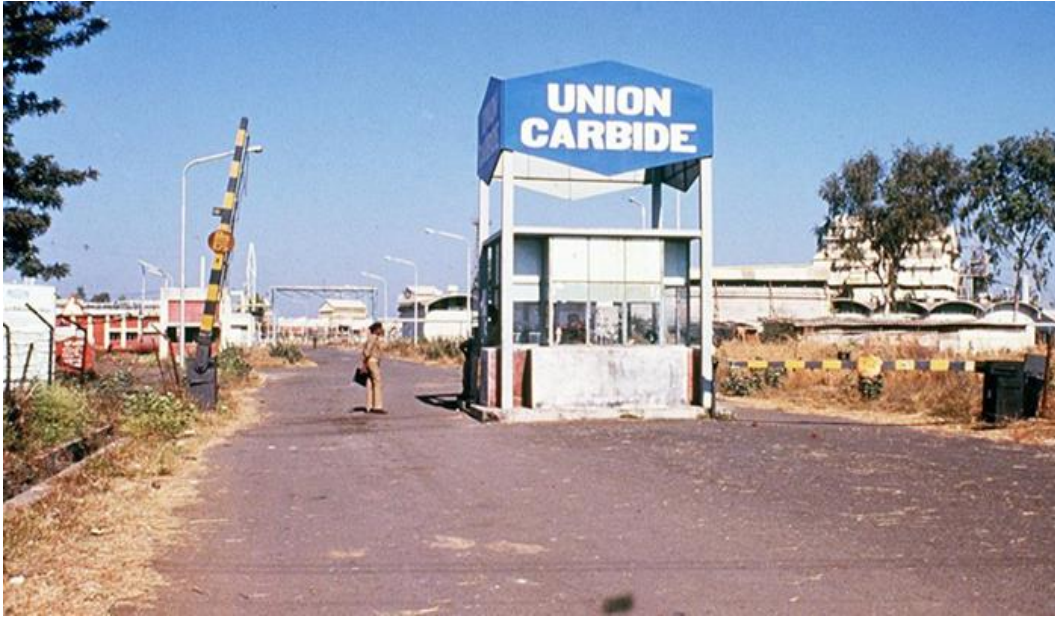


Figure 2. 4 UCC's Bhopal Plant before 1984. Source: AP Photo/Peter Kemp.

Harbingers of the Coming Catastrophe

The poor safety situation in the Bhopal had been uncovered well before the 1984 explosion. In 1978, a fire explosion in the plant took place, damaging public and private property.⁴⁶ In 1979, UCC engineers who visited the Bhopal plant for an inspection reported several deficiencies, including the absence of an evacuation plan in the event of a leak. Meanwhile, populations in shanty towns around the factory continued to swell.

In 1981, one of the three employees exposed to a leak during a maintenance activity died. This death was the first major sign of impending tragedy. A second UCC engineer visited the Bhopal plant in 1982 to assess conditions and admonished the facility for its absence of any contingency plans. UCC, however, continued undertaking massive cost-cutting measures. Only one UCC engineer remained in Bhopal in 1982; others returned to the West Virginia plant. In another leak event in 1982, 25 employees were injured and sent to a local hospital. A Bhopali

⁴⁶ In 1978, UCIL engineers went to the UCC's West Virginia plant for safety training.

journalist, Keswani,⁴⁷ managed to investigate the interior of the plant and reported the deadly conditions, but his warnings of a large-scale leak remained unheeded. In his 1982 article, Keswani cautioned: “It will take just an hour, at most an hour-and-a-half, for every one of us to die” (see, Hanna et al. 2005; Sinha 2009).

The Indian Labor Department also investigated the 1982 incident and recommended heightened safety measures. UCC engineers who visited the Bhopal plant reported numerous other risks, such as runaway reactions, and suggested initiatives to deal with it. The warnings remained unheeded. That same year a chemical engineer was injured by a splash of liquid MIC. After a month, three more employees who were injured due to leakages of MIC and other gases had to be hospitalized; 15 others received primary aid. Labor unions in Bhopal then brought the issue of safety and negligence to the Madhya Pradesh Ministry of Labor. Whether they were incompetent in their evaluation of safety conditions or utterly unconcerned with the problem, the labor department marked the plant as safe and criticized any opposition.

In 1983, several additional cost-cutting measures were undertaken. For instance, experienced workers were replaced with novice employees who were willing to work for lower wages. When the Madhya Pradesh Pollution Control Board (MPPCB) asked companies to share their emissions data, the corporation prevaricated, mentioning only carbon dioxide. But MPPCB failed to evaluate the veracity of these claims. Such de-regulation was the omen of India’s coming market liberalization regime. Animals were reported dying from contaminated water in the canal outside the factory. Meanwhile, chemicals from the Solar Evaporation Ponds (SEP), where the plant stored wastewater, leaked out to nearby land.

⁴⁷Keswani became famous for his reporting on Bhopal prior the disaster. He became interested in reporting the poor safety situation of the Bhopal plant when his friend died in a leak in the plant in 1982. He is now suffering from guilt. Keswani thinks he, like we all, failed the victims. He now maintains a reclusive life.

The profits of the plant continued to plummet in 1984, and it was met with the reduction of more employees: only one supervisor and six workers remained on duty in each shift in the MIC unit. This thin staff was in violation of the company's guidelines that the MIC unit had to be staffed with three supervisors and 12 workers (Jones 1998; NY Times 1985; Rajagopal 1987). In the middle of 1984, the Bhopal Town Planning Board (BTPB) maintained its previous stand on the list of hazardous factories, failing to include the UCIL plant; therefore, it was not under surveillance.

UCIL engineers reported the same year that gas scrubbers were in poor condition, communications were inadequate between production and maintenance workers, employees were not trained to deal with runaway reactions, and regular safety meetings were cut in half. These cost-cutting steps were part of UCC's decision to dismantle this unprofitable plant (Browning 1993). The last batch of MIC was produced in October and placed in two tanks: 45 tons in tank E610 and 22 tons in tank E611 (twice what UCC reported immediately after the disaster). After the MIC production unit was shut down, employees were transferred to other units and tasks. The second-shift supervisor position was eliminated shortly before the disaster. None of the major safety systems of the plant that were supposed to prevent accidents were in an operating condition.

The technical causes of the chemical reaction in the Bhopal plant are now abundantly clear. Forensic investigations indicate that the exothermic, chemical reactions, which resulted in increased gas pressure, were caused by water entering the MIC tank.⁴⁸ The leak eventually

⁴⁸ However, UCC's narrative of the event, or of how water entered the MIC tank, is markedly different from other existing accounts. To UCC, water from washing activities did not travel far enough to reach E610. In UCC's version of events, a disgruntled worker eliminated a pressure gauge on a pipe leading to the Tank E610 and connected a water hose to the coupler to enable water to enter the tank. UCC to date upholds this unsubstantiated victim-blaming narrative of industrial sabotage.

triggered the explosion by turning the liquid (MIC) into gas (see, e.g., Chouhan 1994; Fortun 2001; Hannah et al. 2005; Mukherjee 2010; Rajan 2001; Weir 1987). The operator who noticed the temperature increase in the control panel notified his supervisor, but once the reaction had started, the situation was virtually uncontrollable.

There were two main safety devices in the Bhopal plant: a scrubber to neutralize the gas with caustic soda and a flare tower to burn off the gas if the scrubber failed to neutralize it. Both devices failed the night of the disaster. Investigations later found that the scrubber in the Bhopal plant was poorly designed and incapable of neutralizing a large amount of escaping gas. The flare, on the other hand, failed to work because the pipeline from the vent scrubber to the flare tower was disconnected for maintenance. Other safety systems were either badly designed or missing. For instance, the water pipe that was used to burn off the escaping gas could not reach the height at which MIC was escaping into the atmosphere. The refrigeration system, to keep the MIC at 0° C, was shut down months before the disaster to reduce costs. Finally, in the Bhopal plant, where safety was presumably “nobody’s business,”⁴⁹ MIC, a dangerous substance used as an intermediary to produced pesticides, was stored in three different tanks. Leaving free tanks as the emergency backup was highly recommended by chemical engineers. It is important to note that in developed countries, other companies that used MIC at the time of the disaster, including Germany, Japan, and the United States, did not have these serious safety issues (Baxi 2010; Fortun 2001; Jeberaj 2016; Rajan 2001; Sinha 2009; Varma and Varma 2005). Moreover, unlike its plant in West Virginia, UCC had not installed a digitalized safety system in the Bhopal plant

⁴⁹UCC in its Bhopal plant used a famous safety notice, labeled “Safety is Everybody’s business.” Employees in the Bhopal factory barely knew English, thus posting safety notices in English is another indication of how little UCC was concerned about the reality on the ground.

(Baxi 2010), even though it produced and stored larger amounts of MIC in a factory situated in densely populated shanty towns in Bhopal.⁵⁰

Moreover, the residents of nearby areas had no idea about what the plant was producing and had not been trained or educated about the alarm system (*BBC: One Night in Bhopal* 2014; Eckerman 2003; Gonsalves 2016; Jasanoff 2016; Mittal 2016). Additionally, the absence of any evacuation plans left the affected people unprepared in the event of a disaster (Banerjee 2013; Sarangi 2002; Varma and Varma 2005).

Furthermore, although MIC is considered a highly toxic chemical, UCC consistently lied about the nature and effect of MIC following the disaster, even when *gas peddit* were in desperate need for medical help. For instance, UCC's medical officers told local residents that MIC was harmless and that putting a wet towel over patients' eyes would be sufficient. UCC's victim-blaming, moreover, knew no bounds. In 1987, the company, holding out on their tale, argued in court that if people had merely covered their faces, it would have saved them from inhaling released gases.⁵¹ Such fabrications contradict UCC's 1974 safety manual, which stated that MIC could inflict residual damage even if patients are given immediate treatment. UCC never disclosed details of the cloud's chemical composition.

Hourly Accounts of the Event

The technical causes of the chemical reaction in the Bhopal plant are now abundantly clear.

Forensic investigations indicate that the exothermic, chemical reactions, which resulted in

⁵⁰ The safety record of UCC factories in several locations, such as Puerto Rico, Indonesia, Brazil, Sri Lanka, Texas, West Virginia, and Oak Ridge (TN), was never beyond questions (Jones 1988; Izarali 2013). The West Virginia plant did not face any major explosions; however, there were at least 60 incidents of MIC leaks in the plant.

⁵¹This claim makes it seem as if it is the victims' fault for inhaling the gas. Similar stories of victim blaming unfolded over the ensuing decades. UCC's efforts to undermine the victims of the worst industrial disaster became clearer over the processing of compensation and categorization of the gas affected

increased gas pressure, were caused by water entering the MIC tank.⁵² The leak eventually triggered the explosion by turning the liquid (MIC) into gas (see, e.g., Chouhan 1994; Fortun 2001; Hannah et al. 2005; Mukherjee 2010; Rajan 2001; Weir 1987). The operator who noticed the temperature increase in the control panel notified his supervisor, but once the reaction had started, the situation was virtually uncontrollable. All safety systems that were supposed to prevent accidents failed or were missing, which is no surprise considering most employees found them to be highly insufficient. Although timelines of the disaster are still slightly debated, the following are widely supported by independent and government reports. These timelines are also consistent with the testimony of plant employees, victims, local residents, and national and transnational activists.

Four hours before the leak, around 8:30 pm, the temperature of the MIC tank had risen from its standard 0^o C to about 20^o C. The second-shift production superintendent asked the MIC plant supervisor to flush the pipes connected to the scrubber from the phosgene system via the MIC storage tanks. The maintenance department responsible for installing a solid disk in the pipe in order to prevent water from entering the MIC had not installed it, and MIC workers were unaware of this requirement. Water washing started two and a half hours before the disaster, and as one bleeder valve was blocked, the water began to accumulate in the pipes. Nonetheless, the supervisor ordered the washing to continue. By then the water went past a leaking isolation valve and entered the relief valve pipe 20 feet above the ground. Two hours before the disaster, it

⁵² However, UCC's narrative of the event, or of how water entered the MIC tank, is markedly different from other existing accounts. To UCC, water from washing activities did not travel far enough to reach E610. In UCC's version of events, a disgruntled worker eliminated a pressure gauge on a pipe leading to the Tank E610 and connected a water hose to the coupler to enable water to enter the tank. UCC to date upholds this unsubstantiated victim-blaming narrative of industrial sabotage.

poured from the relief valve pipe into the process pipe. Water then entered an open valve that was part of the nitrogen pressurization system, which allowed water to flow into the E610 tank.

One and half hours before the disaster, the third shift began working and continued washing. One hour before the disaster, the control room operator saw from the pressure gauge that the temperature in tank E610 had increased. As the temperature remained below the 'dangerous' level, however, nothing was done. About one hour prior to the disaster, workers noticed a MIC smell and leak near the scrubber. They water-sprayed the area to neutralize the leaking MIC and informed the control room operator about the situation (but he said he would look after the tea break). Around 12:15 am, the control room operator found that the temperature in the tank had reached its maximum reading. The operator then went to examine the situation. He heard a safety valve pop and rumbling in the container, which was releasing heat. When he returned to the control room to activate the gas vent scrubber, a cloud of gas had already escaped from the scrubber stack. It was around 12.45am, almost one hour after gas started releasing when the operator finally turned on the external sirens. The sirens were either inaudible to the residents of the sleeping city or overlooked as a regular thing used to notify construction or technical workers in the plant. In either case, the sirens were turned off after a couple of minutes. Workers turned on the fire water sprayers, but water could not reach the gas escaping from the top of the scrubber stack. The effort to cool down tank E610 was futile; the Freon had already been drained. Had UCC followed their guidelines, the spare tank E619 could have been used to relieve the pressure in tank E610 by transferring MIC, but it was not empty. Thus, 45 tons of MIC spread through the densely-populated, shanty towns for two hours.

Safety is Nobody's Business?

A considerable amount of literature shows that UCC was well aware of the weak safety conditions in the Bhopal plant. There were two main safety devices in the Bhopal plant: a scrubber to neutralize the gas with caustic soda and a flare tower to burn off the gas if the scrubber failed to neutralize it. Both devices failed the night of the disaster. Investigations later found that the scrubber in the Bhopal plant was poorly designed and incapable of neutralizing a large amount of escaping gas. The flare, on the other hand, failed to work because the pipeline from the vent scrubber to the flare tower was disconnected for maintenance.

Other safety systems were either badly designed or missing. For instance, the water pipe that was used to burn off the escaping gas was a dwarf and could not reach the height at which MIC was escaping into the atmosphere (Figure 2.5). The refrigeration system, to keep the MIC at 0° C, was shut down months before the disaster to reduce costs. Finally, in the Bhopal plant, where safety was presumably “nobody’s business,”⁵³ MIC was stored in three different tanks. Leaving free tanks as the emergency backup was highly recommended by chemical engineers. It is important to note that in developed countries, other companies that used MIC at the time of the disaster, including Germany, Japan, and the United States, did not have these serious safety issues (Bajpai and Singh 2011; Baxi 2010; Fortun 2001; Jeberaj 2016; Rajan 2001; Sinha 2009; Varma and Varma 2005). Moreover, unlike its plant in West Virginia, UCC had not installed a digitalized safety system in the Bhopal plant (Baxi 2010), even though it produced and stored larger amounts of MIC.

⁵³UCC in its Bhopal plant used a famous safety notice, labeled “Safety is Everybody’s business.” Employees in the Bhopal factory barely knew English, thus posting safety notices in English is another indication of how little UCC was concerned about the reality on the ground.

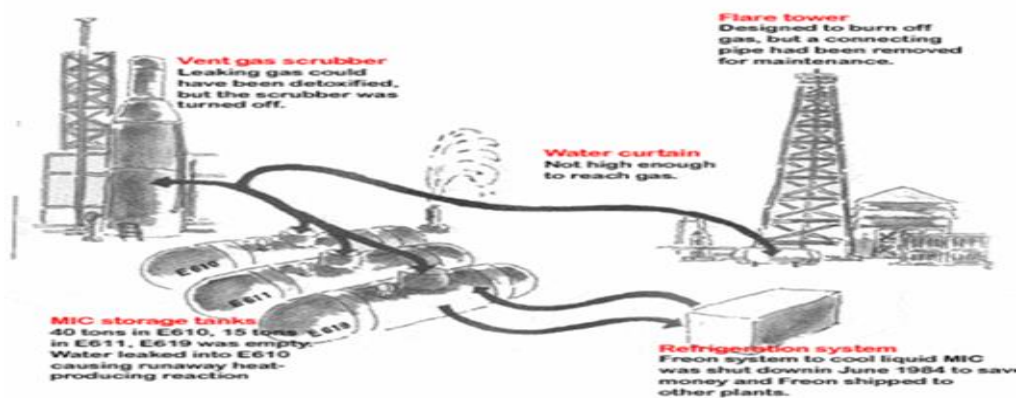


Figure 2. 5 The safety system in the UCC's MIC unit in the Bhopal plant. Source: <https://pdfs.semanticscholar.org/6986/65319295da48120d39872f62905e31a576f4.pdf>

Furthermore, the residents of nearby areas had no idea about what the plant was producing and had not been trained or educated about the alarm system (BBC: *One Night in Bhopal* 2014; Eckerman 2003; Gonsalves 2016; Jasanoff 2016; Mittal 2016). Additionally, the absence of any evacuation plans left the affected people unprepared in the event of a disaster (Banerjee 2013; Sarangi 2002; Varma and Varma 2005). Furthermore, although MIC is considered a highly toxic chemical, UCC consistently lied about the nature and effect of MIC following the disaster, even when *Gas Peddit* were in desperate need for medical help. For instance, UCC's medical officers told local residents that MIC was harmless and that putting a wet towel over patients' eyes would be sufficient. UCC's victim-blaming knew no bounds. In 1987, the company, holding out on their tale, argued in court (Chapter Seven) that if people had merely covered their faces, it would have saved them from inhaling released gases.⁵⁴ Such fabrications contradict UCC's own safety manual, which stated that MIC can inflict residual damage even if patients are given immediate treatment. UCC never disclosed details of the cloud's chemical composition.

⁵⁴This claim makes it seem as if it is the victims' fault for inhaling the gas. Similar stories of victim blaming unfolded over the ensuing decades. UCC's efforts to undermine the victims of the worst industrial disaster became clearer over the processing of compensation and categorization of the gas affected (see chapter five and seven)

Bhopal: the Incredible Stain

What makes Bhopal a profoundly interesting historical event to theorize is that it can be conceived “as sequences of occurrences” (Sewell 1996:843). While the Bhopal catastrophe did not cause structural change, as Sewell argues in his definition of events, it does have lingering effects on the *Gas Peddit* people in neoliberal India. Even though social processes can be uneven and unpredictable, historical events are not just random occurrences. Bhopal happened during a period of shrinking of the developmental state, when India vacillated between promoting programs to maximize food production and enacting state regulations that might limit it.

The Nehruvian development model started weakening in the 1970s and eventually led the neo-liberalization of Indian economy and society (Omvedt 1993; Ray and Katzenstein 2005; Levien 2018). MP government’s decision to lease the land to UCIL for 99 years exemplifies what scholarship on land grab and globalization calls “the foreignization of space” under global capitalism (see Majumdar 2012; Zoomers 2010). Marginalized groups under India’s shrinking developmental suffered many social and ecological consequences, witnessed in several protest movements, including struggles over natural resources and against displacement for large dam projects (Baviskar 1995; Chibber 2003; De 2014; Guha 2000, 1995; Omvedt 2003; Roy 2014; Sarkar 2008; and Sundar 2007, 1997). Development projects in India displaced approximately 4 million people (Fernandes 2008)—at least 40 percent are Indigenous people and 20 percent are Dalits. Similarly, Bhopal’s prevailing geography, divided across class and religious lines, embodies the pathological impact of development on the city’s marginalized populations living in old Bhopal.

Union Carbide targeted India's pesticide market and wanted to participate in and take benefit from India's dream to lead a chemical revolution in India.⁵⁵ However, the political and economic context in India, as stated above, was in a transitional stage, moving from the Nehruvian master frame to the decline of the developmental state. During this period, UCC exercised its political influence to retain a majority equity control over its businesses in India, and developmentalism was threatening UCC's interests. For example, UCC's application for MIC technology transfer from its West Virginia plant seemed unlikely to gain approval. Yet, an emergency political situation declared by Indira Gandhi in 1975 provided a windfall opportunity for UCC (Jeberaj 2010). Via backroom lobbying, UCC finally became successful in building a MIC unit in Bhopal by transferring corroded technology from its West Virginia unit (the application was approved when India was under emergency). The national crisis in India (1975-1977), including repression of civil liberties, was itself a sign of India's falling developmental state.

During the weakening of India's developmental state, farmers' socio-economic situation were aggravated by droughts, and the loss of income resulted in cutbacks on pesticide purchases. As a result, UCC's MIC project, faced financial challenges, which it met with massive cost-cutting measures. These measures, in turn, contributed to the event of the disaster, including the range of consequences of the initial explosion. In this way, the event can be seen as the outcome of a long chain of political economic events. The question is: did this disastrous event change the structural process of capitalism, particularly in India? Using the notion of temporal heterogeneity (Postone 1993; Sewell 2008), I argue that the consequences of the Bhopal catastrophe are not

⁵⁵ In an undated publication from UCIL prior to 1984, the chairman is quoted as stating, "There are in use today, in India, over 100 commercial pesticides, yet not one was ever developed or discovered in India... let us hope that Bhopal will, in the not too distant future, discover the first new pesticide molecule in India" (UCIL Undated:15. Quoted in Hanna (2014)).

inherent in the event. In the decade of the Bhopal catastrophe, India was already entering its market liberalization era, which had begun globally in the 1970s (Alfredo and Johnston 2005; Harvey 2006; Parr 2014). That is why, for example, the Bhopal plant officials were able to prevaricate when the Madhya Pradesh Pollution Control Board asked companies to share their emissions data. Thus, it would be a logical fallacy to state that the 1984 explosion led to structural transformation or gave birth to neoliberalism in India. However, what can be said is that the logic of capital in neoliberal India shaped the suffering that the affected Bhopalis would endure over the following decades—which also compelled the “valiant victims” (Baxi and Dhanda 1990) of Bhopal to lead the longest-running social movement in postcolonial India. A brief note on what followed immediately after the disaster sets the ground for how the state-corporation nexus further marginalized the affected Bhopalis in neoliberal India.

One particular incident orchestrated by UCC and the Indian government received public attention immediately following the disaster. The issue was what to do with the remaining, stored MIC in tank E619. With the Indian government genuinely baffled after the disaster, UCC was able to make the most of the situation. To avoid further investigation of MIC, UCC asked the Indian government to speed up the process of “neutralization” of the remaining MIC. UCC wanted to get rid of the MIC as soon as possible; the sooner MIC was gone, the lower the likelihood of their revealing its composition. At the same time, UCC refused to provide the government with any information about MIC. A scientist from the Council for Scientific and Industrial Research, S. Varadarajan, who was put in charge of leading the so-called neutralization effort of the remaining MIC, stated that no one in Bhopal had any idea of MIC’s composition.

The name given to this “neutralization” process was Operation Faith.⁵⁶ Fifty Indian scientists were involved in the operation. The amount of MIC converted to pesticides in Operation Faith was 22 tons, 50 percent more than what UCC experts had previously stated was remaining. Two factors of this operation are worthy of note. First, although the process was called “neutralization,” it was designed for production by converting the remaining MIC into pesticide products. The process was shaped by UCC’s economic motive since it was possible to chemically neutralize the remaining MIC by using caustic soda and simultaneously producing pesticides. While the Indian state gave a climax to this entire process, it was, like other major steps including the 1989 processing of compensation claims that shifted a complex range of exposures into simplified legal categories (Chapter Five and Seven), led by UCC. Not only did UCC continue to withhold any specifications of MIC, but it also feared that the MIC might be returned to its main headquarters, which, for economic reasons, it wanted to prevent from happening.⁵⁷

The story of an orchestrated mass exodus following the disaster has received scant critical academic or media attention. Instead, it was kept hidden behind the veil of Operation Faith. There was a growing and well-founded fear that the gas-affected victims and their sympathizers in Bhopal, already distrustful of the company and their own government, might organize politically. There were already some demonstrations. There was also a rumor that a group of aggrieved Bhopalis was planning to vandalize the plant. To diffuse the situation, UCC and the Indian state determined that a mass exodus of people was needed, and they premeditated

⁵⁶ Indian scientists who took charge of neutralizing the remaining MIC were shocked by the fact that UCC allowed so much of the dangerous chemical to be stored in the Bhopal plant, particularly as workers at the plant had minimal knowledge of the danger of MIC. Engineers who were to neutralize the gas were terrified of the possible dangerous outcomes. The operation therefore was named “Operation Faith.”

⁵⁷ After the disaster, UCC also ordered its subsidiaries across the world to use up all remaining MIC before local administrations closed their plants or started investigating.

it using Operation Faith. The Indian state, as well UCC, boasted of its success in Operation Faith, touting it as a symbol of hope and sincerity in a time of death and destruction. However, to the affected, to the disabled, to those who are born with deformities, to those who die in Bhopal due to their (in)direct exposure, to the water victims, boasting about Operation Faith is adding insult to the injury. Operation Faith sidelined other vital issues for days, such as the health care of the *Gas Peddit* and the troubles that this mass exodus caused to the affected. More importantly, the exodus of approximately 400,000 people, fearing another possible leak during Operation Faith, never received media or scholarly attention. Some of them returned to Bhopal, some of them settled back in their rural villages, and some of them never returned.

The events that followed the disaster were everything but pro-victim. Warren Anderson, the former chairman of UCC, came to Bhopal on December 7, 1984. The Bhopali arrested him on charges of culpable homicide upon his arrival; however, only six hours after his arrest, he negotiated his release on bail under the condition that he would return to India following the legal procedure. He remained a fugitive from Indian authorities until his death in 2014, even though there exists an extradition agreement between India and the US.

In 1989, UCC settled the issue with the Indian government with an *ex gratia* lump-sum. The 1989 civil settlement granted immunity to all accused, including UCC and Anderson. UCC sold its share to UCIL and left India without cleaning up its highly contaminated plant site. UCC never accepted responsibility for the disaster; it ridiculously maintains to date that the explosion was due to sabotage caused by a disgruntled employee. With the rise of India's neoliberal economic reform in the 1990s (Ray and Katzenstein 2005; Levien 2018), the issue of extradition was completely abandoned. UCC completely disappeared, at least legally, as an agent of the disaster after its merger with the Dow Chemical Company in 2001, which repeatedly said that it

would not take the liabilities of previous corporations.⁵⁸ All the while, the *Gas Peddit* people continue to be battered by ongoing health, social, and environmental consequences. If the Bhopal catastrophe that happened under India's shrinking development state was the outcome of a long chain of the larger political economic story, the ongoing suffering of the *Gas Peddit* is attributable to neoliberal India. The stories of suffering, betrayal, travesty, and resistance of the *Gas Peddit* in neoliberal India are addressed in the following chapters.

⁵⁸See UCC's explanation of the disaster here: <http://www.bhopal.com/>; See Dow's narrative here: <https://corporate.dow.com/en-us/about/issues-and-challenges/bhopal>.

Chapter Three: Theorizing Socioenvironmental Destruction and Resistance in Peripheral Countries

How, in other words, can we rethink the standard formulation of neoliberalism as internalizing profits and externalizing risks not just in spatial but in temporal terms as well, so that we recognize the full force with which the externalized risks are outsourced to the unborn?

- Nixon (2011), *Slow Violence and the Environmentalism of the Poor*. p.35.

What has been cast aside but not absorbed theoretically will often yield its truth content only later.

- Adorno (1966), *Negative Dialectics*. p.144.

This chapter aims to theorize socioenvironmental destruction and the resistance against it in neoliberal peripheral countries. Long-term socioenvironmental destruction has recently increased in peripheral countries, particularly in India. Bearing this in mind, the present chapter argues the following. First, existing political economic approaches to socioenvironmental destruction do not adequately capture the myriad ways in which such destruction affects poor, minority groups under neoliberalism in peripheral countries like India. Second, I argue that long-term socioenvironmental destruction of marginalized groups in the neoliberal period creates a form of politics, distinct from both labor and identity politics and that this form of “political society” remain largely under-theorized. Importantly, the process of further marginalizing the marginalized in Bhopal, India has contributed to a new form of politics. This new type of politics forms a forceful challenge to neoliberal globalization in India and potentially in other parts of the global South.

The Contours of Socioenvironmental Destruction and Resistance

Socioenvironmental destruction, including destruction by climate change, is now one of the greatest challenges faced by human civilization. A 2017 report in *Science Advances* (Carson et al. 2017) states that climate change is causing the extermination of parasites critical to ecological balance that would put thousands of species under threat and create a sixth major mass extinction (Allan et al. 2019). Similarly, a 2019 United Nations Reports describes how human exploitation of nature has pushed a million species to the brink of extinction.⁵⁹ Given modernity's many epoch-making socioenvironmental risks and crises (Bauman 2000; Beck 1992; Giddens 2009, 1990; Lash and Urry 1987), it is necessary that sociologists and other scholars critical of political economic forces become more interdisciplinary (Gellert 2005; Pellow and Brehm 2013; White et al. 2015), borrowing from and collaborating with a diversity of scholars, among them climate scientists, anthropologists, geographers, ecologists, psychologists, earth scientists, philosophers, criminologists, and biologists. It is important to note that while most socioenvironmental destruction disproportionately affects poor and vulnerable populations in peripheral countries (or areas), the pillaging is meted out by a few insatiable robber barons in a handful of developed countries (see, Allan et al. 2019; Ciplet et al. 2015; Connolly 2017; Parr 2014; Peet and Watts 2004).

Social and environmental destruction is often multifaceted and intertwined with global and regional inequality. The gap between rich and poor countries has been caught in an upward spiral: the top one percent owns approximately 50 percent of all wealth. However, the wealth owned by the bottom 90 percent continues to plummet (Milanovic 2016; Piketty 2013; Walby 2009), and multitudes in the global South remain starving and deprived of basic rights (Sen

⁵⁹ The report concludes that an ominous and catastrophic future for human civilization is awaiting. See the report here: <https://www.ipbes.net/news/Media-Release-Global-Assessment>

1999; Toussaint and Millet 2010; Davis 2005). It is, therefore, no wonder why socioenvironmental destruction should be treated in conjunction with the problems of growing inequality between and within nations across the world. Relatedly, a critical approach to socioenvironmental destruction must shed light on the ways in which this destruction is disproportionately affecting the poor and vulnerable populations in marginalized areas. While environmental justice scholars highlight the disproportionate effect of environmental problems on marginalized groups, their analysis has three weaknesses. It remains US-centric; focuses exclusively on questions of race and gender; and glosses over the ways in which slow, lingering, and invisible socioenvironmental destruction disproportionality affects poor and minority populations in peripheral countries, especially in the period of neoliberalism.

The ecologically unequal exchange (EUE) framework is an important perspective on global environmental justice (Givens et al. 2019). Frey's research on the transfer of hazardous materials and industry from the core to peripheral nations was an earlier contribution to this strain of critical environmental justice scholarship (Pellow 2019). Since Bunker's (1984, 1985) foundational contributions, most EUE research, however, has insufficiently addressed the internal dynamics of peripheral nations. A 'new' mode of scholarly analysis is, thus, integral to understanding the causes and myriad consequences of socioenvironmental destruction in peripheral countries. Offering a range of approaches and putting emphasis on underemphasized issues, this chapter uses a political economic and ecological lens in the context of neoliberalism peripheral countries to grasp how marginalized groups suffer as well as resist many prolonged social and environmental destruction.

Political economy (PE) scholars do well to complement and critique classic thinkers, such as Karl Marx and Max Weber, but in relying too heavily on their authority, they screen themselves off from new perspectives better suited to a new historical reality. Nixon's (2011) book *Slow Violence and the Environmentalism of the Poor* fills a gap in scholarship by showing how marginalized people in peripheral countries suffer slow and invisible environmental harm that he identifies as slow violence. Several acts of, and movements against, socioenvironmental destruction in neoliberal peripheral countries are long in the making, and thus remain primarily undertheorized. It is also vital to note that, despite the world being more globalized than ever (Bauman 2000; Crouch 2011; Harvey 2005; Klein 2007; Stiglitz 2017), socioenvironmental destruction in peripheral countries is shaped by the unique, spatiotemporal circumstances of each case (Levien 2012; Rajagopal 2003; Walker 201).

Two examples of the importance of local politics are worthy of note. First, drawing on India's politics of dispossession, Levien (2018) shows that dispossession in neoliberal India is happening without development, creating a new type of peasant politics.⁶⁰ Second, Walker (2012) analyzes "rural transformations" that created a subaltern actor in Thailand's political culture, the middle-income peasant, who is now leading Thailand's rural population and has become an unavoidable factor in national politics.⁶¹ Similar to Levien and Walker, I find that neoliberalism in India has generated and prolonged social and environmental destruction. As a result, affected populations have been prompted to generate a new form of politics in response. This form of politics is undertheorized in the sociology of movements.

⁶⁰ The book is based on his ethnographic research in a village in Rajasthan, India, showing the consequences of new regime (neoliberal) of dispossession in neoliberal India.

⁶¹ His ethnographic research of 6 years takes place in a rural village, called Ban Tiam (near Chiang Mai) in northern Thailand. To Walker, politics in rural Thailand is not "the old rebellious or resistant politics of the rural poor." Instead, "it is a new middle-income politics of peasants whose livelihoods are now relatively secure."

Social movements in independent (post-1947) India proliferated between the 1970s and mid-1980s when the Indian developmental state was on the wane (Ray and Katzenstein 2005). Despite weakening, the developmental state continued to legitimate its activities through the rhetoric of progress while producing social and economic inequality. The response of marginalized populations was to create protest movements, especially ones focused on dams and other development projects. In this period, especially during the rule of Indira Gandhi (1966-1984), India experienced a spurt of movements for ecological justice. Scholars, such as Baviskar (1995), Guha (1989), and Sundar (2007) theorized such struggles over natural resources vis-à-vis the outcomes of India's developmental state. They all highlighted many local resistances to state-driven dispossession in marginalized areas. However, their works were based on movements that emerged before neoliberalism was established in India. Neoliberalization, the era of "freedom of the market and trade" (Harvey 2007:7), only began in India in 1990. With the demise of the developmental state since the 1990s, neoliberal India has witnessed countless acts of prolonged social and environmental destruction. Moreover, most socioenvironmental destruction involving multinational corporations has prevailed without legal punishment. Parent companies in multilayered subsidiary firms, as Prechel (2004) argues, are protected by a "liability firewall." Resistance to state and corporate activities by marginalized groups, however, are also very common in neoliberal India (Ahmed 2012; Desai 2015; Hardtman 2009; Nilsen and Nielsen 2015; Roy 2015).

Underscoring areas both undertheorized and under-researched, I attempt to combine a range of theories to explain the distinct features of the causes and consequences of—as well as resistance to—socioenvironmental destruction in neoliberal peripheral countries. While there exists a number of perspectives in the PE tradition addressing the causes of social and

environmental problems, the ways in which vulnerable populations in peripheral countries suffer from long-term and seemingly invisible, socioenvironmental destruction under neoliberal conditions deserve wider theoretical scrutiny.⁶² Mainstream movement scholars, including Marxists, tend to over-generalize the causes, context, nature, targets, outcomes, and objectives of contemporary social movements across the world.⁶³ Even scholars who theorize resistance linked to accumulation by dispossession, such as David Harvey (2003), fail to account for the diverse conditions of resistance in peripheral countries. Unfortunately, some scholars, such as Slavoj Žižek (2009), criticize localized acts saying it's "better to do nothing than to engage in localized acts." Žižek clearly fails to decipher the importance of understanding the system that leads to the emergence of a new kind of politics in peripheral countries. For instance, unique and specific types of politics, such as politics of dispossession in India (Levien 2018, 2013, 2011), politics of peasant movements in Thailand (Walker 2012), and, as I argue, politics of long-term social and environmental suffering in peripheral countries, such as India, have grown evident under neoliberal regimes,⁶⁴ yet, by and large, they remain outside the purview of scholarly analysis. What is remarkable about this new type of politics is that it does not emanate from or languish in scrambles for economic or material resources, as labor politics often do. Though this new, neoliberalism-opposed political society targets the state in defiance of neoliberal capitalism, it more often signifies what Fanon (1963) would mark as a struggle over multiple resources, such as material, cultural, and environmental resources.

⁶² Invisibility of destruction is not new, though. More than a century ago, Simmel (1990, 1906) alluded that money economy made many activities in modern society invisible. It still holds true for much of the prolonged social and environmental destruction associated with the (neo)liberalization of economy in peripheral countries. Kuchinskaya (2016) illustrates how the massive consequences of Chernobyl accident remain largely imperceptible

⁶³ For instance, resource mobilization theory, political process theory, framing and social construction approach, as well as transnational and anti-systemic approach, strive to universalize/generalize resistance activities thus forsaken the context of distinct and specific kind of political and social mobilization in peripheral countries.

⁶⁴ Through his ethnographic research on resistance against land dispossession under neoliberal regime in India (I elaborate on this in the resistance section below), Levien (2013, 2018) demonstrates the specificity of the politics of dispossession and resistance in India.

Because social and environmental movements, no matter how localized they are, represent the importance of a firm social and historical reality in peripheral countries, scholars must incorporate a critical analysis of the resistance to socioenvironmental destruction in these areas. What is more important for sociologists than expanding their insights into different realities in order to enrich their imagination? Such imagination is the keystone of this chapter and, by extension, its effort to critique and combine a range of theories that both complement and critique existing PE approach of social and environmental problems, inequality, and resistance. Although I rely on PE scholars who focus on (1) the structural drivers of social and environmental destruction, (2) studying society and nature as bundled (see, for example, Gellert 2005; Moore 2015; Patel and Moore 2017); and (3) the disproportionate effects of social and environmental destruction on marginalized populations, I complicate them by exposing the ways in which their analyses bypass the range, intricacy, and invisibility of socioenvironmental destruction in the global South.

Per the subject at hand, the Bhopal Movement, the longest-running social movement in India, has endured and evolved through India's transition from the Nehruvian development model to the neoliberal model of development. The Bhopal activists, due to their local, national, and international connections, created a new type of bottom-up politics striving against the dominant narrative of justice, making visible the slow violence of social and environmental destruction besetting marginalized Bhopalis. This politics to render to slow violence visible has wider applicability to the experience of other marginalized groups suffering from lingering socioenvironmental destruction. The primary sources of inspiration for this chapter include Rob Nixon's (2011) notion of slow violence in marginalized areas; Fanon's (1963) analysis of resistance in post-colonial societies; Foucault's (1973, 1980, 1991) analysis of power and

resistance; and Chatterjee's (2004) analysis of political society. However, their studies do not capture the lingering features of socioenvironmental destruction and resistance specific to neoliberalism in peripheral countries, such as India. I attempt to contribute to their analyses by addressing the politics of social and environmental destruction under neoliberalism in peripheral countries.

The chapter highlights the following four aspects. First, it offers a critical introduction to a PE approach to social and environmental destruction. Second, it applies Rob Nixon's notion of slow violence to socioenvironmental destruction in peripheral countries. Third, the chapter offers critical purchase on Fanon and Chatterjee's perspectives in understanding the emergence and development of new political societies in neoliberal peripheral countries. Finally, it concludes with a discussion of implications for scholars theorizing about socioenvironmental destruction and resistance in peripheral countries in the age of neoliberalism.

Political-Economic Approaches to Socioenvironmental Destruction

Theoretical debates on socioenvironmental issues are as old as sociology itself.⁶⁵ Earlier environmental sociologists in the US asserted that the founding fathers of sociology, Karl Marx, Max Weber, and Emile Durkheim, distanced themselves from environmental issues and disregarded human impacts on the ecosystem.⁶⁶ However, this explanation has been qualified and refuted by several scholars because the writings of the founding fathers are in fact very interdisciplinary, although it is certain—and they may well have agreed if they were alive—that

⁶⁵ Though, it is only in the 1970s, when environmental sociology became a topical section of the American Sociological Association (ASA). In the 1970s, the study of environmental degradation reflected an increase in public and academic concern. During the four decades since its inception, environmental sociology has crossed many critical paths, making it one of the promising sub-disciplines in sociology.

⁶⁶For instance, in the 1970s, William Catton and Riley Dunlap—two main early environmental sociologists—contended that all classic sociologists are anthropocentric because they placed human society at the center of the planet. See Catton and Dunlop (1978, 1980) and Dunlap and Catton (1994).

they were not environmental sociologists. Not only do the socioecological foundations of their writings accentuate the historical legacy of socioenvironmental concerns in the discipline of sociology, classical thinkers influenced and continue to influence dominant PE approaches on social and environmental destruction (see Benton 1989, 1996; Burkett 1999, 1996; Castree 2000; Foster 1999; Foster and Holleman 2012; Hall 2013; Rosa and Richter 2008). Holding unbridled capitalism, or whatever name scholars prefer for the system, primarily responsible for social and ecological catastrophes, as a PE approach does, is nothing new. While Marx's contribution is already well recognized within environmental sociology, Weber and Durkheim's⁶⁷ recognition must be pushed further. Marx's approach, due to its dialectical nature, also deserves careful attention.⁶⁸ Classical thinkers' analyses of the constitutional logic of modernity and its destructive consequences, such as the deepening danger of anomie for Durkheim (1897, 1893), the increasing alienation for Marx (1876, 1857, 1844) and the dehumanizing mechanism of bureaucratic domination for Weber (1905), provide useful clues to why the planet now faces a mounting of extreme environmental threats. W.E.B. Du Bois, who has long been denied as a scholar by elite sociologists (Morris 2017), offers crucial insight into how social and environmental destruction are inextricably bound to racism and colonialism. For example, Clark

⁶⁷ See, Foster and Holleman (2012) and Murphy's (1994, 1997) discussion on Weber's contribution. Foster and Holleman's (2012) demonstrate that Weber's works are important to understand how historical capitalism, which is "energy intensive and resource dependent" (1667), poses a serious threat to human civilization. Although Timo (1996) writes an article on Durkheim's (and Marx) articulation of nature, Durkheim's contribution remains neglected thus far.

⁶⁸ Foster (1999) wrote a powerful article on Marx's "metabolic rift," and research on metabolism has also been growing since then. However, even two decades after this publication, the basic premise of this line seems to remain the same, i.e. following Marx's core argument, it continues to rely on how capitalism destroys nature and creates the possibility of an "ecological revolution" (Foster 2010; Foster et al. 2011), the foundation of the latter is environmental movements in global South. While this optimism is necessary and useful, it may not be consistent with the objective of dialectic thinking because social structure and the way capitalism functions are much different now than it was in Marx's time. Additionally, in my view, the notion of rift emphasizes bifurcation more than dialectical relationship between nature and society. Moore's analysis (2015; with Raj Patel 2018) presents a new development in this line, although ecosocialists tend to renounce Moore as anti-revolutionary and as adaptive to "capitalist ideologies." See Foster's interview with Ian Angus (2016) here: <https://climateandcapitalism.com/2016/06/06/in-defense-of-ecological-marxism-john-bellamy-foster-responds-to-a-critic/>

et al. (2017) show the usefulness of Du Bois' works in understanding the environmental injustice of the Peruvian guano trade in the nineteenth century.

Moreover, environmental scholars continue to misconstrue the contributions of critical theorists.⁶⁹ There is a tendency to identify critical school scholars as pessimists, who, critics assume, reduce the status of human agency in their espousal of absolute cultural hegemony (see Vogel 1996; York and Mancus 2009). There may not be anything 'wrong' with this interpretation. Yet, even from this point of view, critical theorists, such as Adorno, have much to offer in relation to how consumer culture is closely associated with increasing environmental destruction under capitalism.⁷⁰ Marx (1857-58:228) in the *Grundrisse* writes that "the act of production is therefore in all its moments also an act of consumption." In the *Grundrisse*, Marx (1857-58) wrote: "Production not only supplies a material for the need, but it also supplies a need for the material" (see *Marx-Engels Reader* p.230). Ever-expansive consumer culture will remain a major threat to impending social and environmental crises, even if we were able to magically change our production and accumulation system overnight, as most PE approaches advocated.

Furthermore, I argue that critical theory's contribution, offering a subversive critique of political economy (see, Bonefeld 2014; Dahms 2008), goes far beyond this predictable, culture-industry-driven assumption. Adorno's theory critiques the notion of progress, showing that the totality of capitalist relations has undermined enlightenment values including reason and human

⁶⁹Gunderson (2015)'s two-article series on environmental sociology and Frankfurt School has thankfully initiated this discussion, but these articles have provided a binary understanding, instead of unified, of the relationship between capitalism and nature. Further analysis of critical theory's contribution is therefore required. Cook (2014) offers analysis of natural history in Adorno's work, but her analysis similarly lacks a critical encounter with capitalism that Adorno significantly pursued. Alex Stoner's (2013) work also contributed to initiate the discussion on this.

⁷⁰ Consumption culture is not only associated with environmental destruction, but also is a justice issue, as EUE scholars demonstrated. It is a well-known fact, for example, that by itself the US, the most influential economic and military power on earth, consumes more than 25 percent of global resources though it comprises only five percent of the world's population.

emancipation (Adorno 2006; Adorno and Horkheimer 1941). To Adorno, the process of history, therefore, should become an object of critique. Attributing only consumerism or the culture industry to Adorno misrepresents his work. It is our task to parse out implications from Adorno's writings. In *Negative Dialectics*, Adorno (1966) argues that capitalism, which values egocentric interests, not only extends across the globe, but also destroys human nature and the environment.⁷¹

To elaborate, the concept of "negative dialectics," though developed in his later writings, is the philosophical crux of Adorno's wide-ranging thought (Buck-Morss 1979; O'Connor 2004).⁷² Dialectics, from Plato to Hegel to Marx, refer to positive achievements using negation. Adorno, examining modernity's ever-deepening darker sides, seeks to liberate dialectics from its affirmative features. As with other structuring dualisms in philosophy and social science, such as subject and object and agency and structure, history and nature are dialectically interrelated.⁷³ To Adorno (1964), nature, whether external or internal, is skillfully and problematically controlled by history's progressive march of instrumental reason. This progressive stream often sets up the expression of nature in its most untamed and wild forms. The looming ecological upheaval, including climate change and other socioenvironmental disasters, such as the Bhopal industrial disaster, testifies to how capitalism subjugates external nature.⁷⁴ For instance, Union Carbide Corporation, the once-Fortune-500 company not only attempted to generate profit from building a highly hazardous plant adjacent to the shanty towns of Bhopal, India, but also ravaged (and

⁷¹ However, some critics, that includes some critical theorists too, argue that "critical theory should frame its research program and its conceptual framework with an eye toward decolonial and anti-imperialist struggles and concerns." See Amy Allen (2017).

⁷² Foucault offers a similar insight through his scathing attacks on Western knowledge structure. Although I bring Foucault in my analysis of resistance in later section of the paper, Foucault's contribution to environmental sociology is not yet realized.

⁷³ This dialectical understanding seems very consistent with Moore's (2015, 2014, 2011) analysis of historical capitalism as world ecology.

⁷⁴ While the attempt to subjugate internal nature is evidenced by increasing barbarism, which, for Adorno, was manifested in its ultimate form by the Holocaust. See Adorno (1966).

continues to do so) human and non-human wellbeing in the region. In other words, the case demonstrates how “capitalism is not just a part of an ecology, but it is an ecology” (Patel and Moore 2017:38) because global capitalism made it possible for a powerful American corporation, Union Carbide, to build a risky factory in the shanty towns of Bhopal and to destroy the human and non-human nature for generations to come. In the following section, I focus on how the PE approach to socioenvironmental destruction, despite its notable contribution, has yet to adequately address the catastrophic, yet slow, social and environmental destruction affecting poor, minority populations living in neoliberal peripheral countries.

PE Approaches to Socioenvironmental Destruction

Scholars dealing with PE aspects of socioenvironmental destruction form arguments consistent with sociology’s most classic thinkers, Karl Marx above all. From the outset, Marx (1848) theorized the time-space configuration of expansive capitalism that attempts to “create a world after its own image.” The necessity of an ever-expanding market for its products, as Marx writes, “chases the bourgeoisie over the whole surface of the globe.”⁷⁵

PE scholars, broadly speaking, argue that the constant drive for accumulation, production, and profit under capitalism results in ever-greater environmental degradation (see Bunker 1985; Bunker and Ciccantell 2005; Clark and Foster 2009; Davis 2002; Faber and O’Connor 1998, 1993; Foster et al. 2011; Gellert 2010; Gould et al. 2015; Peluso and Watts 2001; Salleh 2010; Smith 1984; Swyngedouw 1999; York and Rosa 2003). Moreover, scholars, such as Lefebvre (1974), Smith (1984), and Harvey (1996), argue that capitalism, unlike other previous systems, produces nature and space at a world scale. There exists, however, another line of thought, called *ecological modernization* (EM), which proposes that a continued

⁷⁵ Marx (1857-61) makes a similar point in his *Grundrisse*, stating that every limit in capitalism constitutes a barrier to overcome.

modernization is actually necessary for dealing with social and environmental issues. The ecological modernists' proposition is an elaboration on that of economic developmentalists, who advocate for poor/traditional countries to embrace the technological development model of modern (developed) Western societies. Social and environmental destruction, to these modernists, are the necessary outcome of development and this destruction is possible to overcome. To EM, further modernization of the existing institutions of industrial society, premised on continuous innovation in technology, will ultimately bring about a more sustainable society (see, Buttel 2000; Mol 2001; Spaargaren 2000; York and Rosa 2010).

Most PE scholars vigorously contend this position. For instance, scholars of the *treadmill of production* (ToP), a term first coined by Schnaiberg (1980), propose that capitalist firms produce like a treadmill since the degree to which an economic system intensifies has a directly proportionate effect on its ecological destruction. To ToP scholars, the state, which facilitates economic growth, is part of the treadmill, yet it does little to oppose the destructive forces of capitalism (see Pellow and Brehm 2013; Rudel et al. 2011). Thus, the underlying logic of this system is that increasing investment in economic growth breeds and escalates social and ecological ruin (Gould et al. 2004). ToP is a useful metaphor for comprehending the environmental destruction we currently face. However, scholars suggest that its basic premises must be reexamined (Buttel 2004; Foster 2005; Wright 2005). The authors of ToP must recognize considerable changes taking place over the last three decades, especially since Schnaiberg first used this metaphor in 1975. Since then, there has been a sea change in capitalist production, especially with the beginning of neoliberalism in the 1970s that associates the logic of market with human and social liberation.

The concept of “metabolism” is receiving growing attention in PE perspectives of environmental problems. Foster (1999), drawing on Marx’s analysis, argues that capitalism is responsible for a *metabolic rift* in the thermodynamic reciprocity of humans and earth, placing innumerable burdens on the environment (see, for empirical relevance, Austin and Clark 2012; Hooks and Smith 2005; Sanderson and Frey 2014). Foster rejected the traditional interpretation of Marx from scholars like Giddens (1981), who stated that Marx adopted a “Promethean attitude” toward nature. In Foster’s words: “Marx employed the concept of metabolic rift to capture the material estrangement of human beings in capitalist society from the natural conditions of their existence” (1999: 383). Rift scholars, like other PE scholars, discussed below, also argue that since “the driving force [of metabolic rift] is a society based on class, inequality,” solutions to environmental destruction require the removal of inequality from capitalism (Foster et al. 2010; Foster and Holleman 2014; Longo et al. 2015). Although rift scholars’ contributions to the critique of mainstream environmental sociology are significant, they “tend to overlook careful analysis of the material potentialities of the present in [their] insistence of what ought to be done” (White et al. 2017:13). Moreover, rift scholars tend to overlook the dialectical and inseparable nature of the nexus between society and humans in neoliberal capitalism. Some scholars, therefore, are critical of the nature-society dichotomy (see, Freudenberg and Gramling 1995; Gellert 2005) that rift scholars tend to underscore.

Moore (2015) is the most strident anti-dualist. In his formulation of a “world-ecology”⁷⁶ framework, he challenges rift scholars by arguing that they erroneously separate society from nature. To Moore (2015:77), while *metabolic rift* refers to “disruption and separation” between nature and society, *world-ecology* refers to “reconfiguration and unity” of nature and society.

⁷⁶ For instance, world ecology scholars “sees how humans and other species have co-produced the forest and how that 'bundled' forest simultaneously conditions and constrains capital today” (2015:51)

Moore suggests that nature as a “terrain of power” should be studied dialectally with the logic and accumulation of capital (see Moore 2015, 2014, 2011). What is distinct in Moore’s argument is that he analyzes how capitalism acts on human and non-human nature, always “search[ing] for, and find[ing] ways to produce, Cheap Natures: a rising steam of low-cost food, labor-power, energy, and raw materials” (2015:51).⁷⁷

While both rift scholars and Moore hold capitalism responsible for environmental degradation, Moore uses the term “Web of Life” to analyze how capitalism organizes nature. To Moore, capitalism as a web of life co-produces nature and accumulates capital. Thus, the world-economies, to Moore, are ecological projects; so capitalism as an ecological regime should be studied as a *world-ecology* since the accumulation of capital and the organization of nature happen in “dialectical unity” (Moore 2015). Gellert (2019), who in an earlier article also recommended that scholars take “socio-nature” as their object of inquiry (Gellert 2005), critically reflects on the debate between Foster’s metabolic rift and Moore’s world-ecology via the addition of Bunker’s ecological unequal exchange. He shows that though Moore’s analysis is an expansion of rift scholarship, rift scholars and Moore’s analyses can benefit each other and, as a result, our understanding of socioenvironmental problems. Like other scholars coming from the world-systems tradition, in addition, he recognizes the unequal power relations between developed and periphery nations.

World-ecology is rooted in world-systems analysis (WSA) which takes a world-historical position that prosperity in core (or developed) nations comes at the hand of the social, economic, and ecological degradation of peripheral (or underdeveloped) countries (Chase-Dunn and Grimes 1995; Wallerstein 1974, 1996). To W-S scholars, the capitalist world economy began in Europe

⁷⁷ In a 2017 book (with Raj Patel), *A History of the World in Seven Cheap Things: A Guide to Capitalism, Nature, and the Future of the Planet*, Moore identifies seven cheaps. The additional three are money, care, and lives.

in the sixteenth century, and Europe had colonized all corners of the world by the nineteenth century, which created a global division of labor with Western Europe at the center and the colonies at its periphery (Arrighi 1994; Wallerstein 1974, 2005). The relation between core and periphery has always been the exploitation of peripheral countries by core countries. In other words, the peripheral countries are structurally constrained to remain dependent on and exploited by developed countries, just as the economic success of core countries is dependent upon the exploitation of the less advanced countries.⁷⁸ Critics of W-S argue that such sociological analysis pays inadequate attention to non-human ecological processes (Clark and York 2005), and as most of the W-S research operates by highlighting core-periphery conflict on a national scale, it risks “reifying systemic processes by ignoring significant cultural differences and thoroughly sex-gendered character of capitalist productivism” (Salleh 2010: 207).

Grounding his ideas in the unequal power relations within W-S, Stephen Bunker (1985) introduced the term “Ecologically Unequal Exchange” (EUE) through his pathbreaking research on the underdevelopment of the Amazon, an extractive periphery in the W-S. Bunker criticizes development scholars for not underscoring how extractive economies damage environment, society, and reproductive prospects in resource-rich areas within peripheral regions of the world economy. Bunker (1985:22) writes:

The internal dynamics of the extractive economies that have provided most of the exports from the least developed regions differ significantly from those of productive economies in their effects on the natural environment...and therefore on the subsequent

⁷⁸Despite a critical attention to the link between social inequality and environmental harm, W-S approach, in general, does not offer any satisfactory parameter to measure ecological destruction outside the framework of the nation-state. The categorization of all countries into three groups (core, periphery, and semi-periphery) seems very limiting as well. This ‘shortcoming’ is equally applicable to most other PE approaches dealing with environmental damage in various parts of the world. More localized studies that are informed by W-S, or structural, approach, such as this one, would help understand the environmental problems in peripheral countries.

developmental potential of the affected regions [...] the resource-exporting region loses values that occur in its physical environment. These losses eventually decelerate the extractive region's economy, while the resource-consuming communities gain value and their economies accelerate.

Research on EUE has grown abundant. Many works show that as the entire world becomes globalized, developed countries extract resources from peripheral nations (Acosta 2013; Bunker 1985; Gellert 2012, 2010; 2003; Kaup 2010; Kelly and Peluso 2015; Watts 2001). Other show how they export their hazardous waste to poor countries, which, in turn, leads many of these impoverished nations to ecological crises (Castleman 1983; Frey et al. 2017; Frey 2013, 2003; Jorgenson 2016; Jorgeson and Clark 2009).

Consistent with the line of thought articulated by EUE, environmental justice (EJ) scholars show more specifically the flagrant degree to which environmental damage is unjustly distributed, especially in the US. Research on EJ shows that as social, economic, and material inequality is reflected in environmental problems, environmental harm disproportionately affects poor people, people of color, and other marginalized populations (see, Bullard 1996; Brulle and Pellow 2000; Cable et al. 1999; Downey 2010; Guha 1989; Mohai and Bryant 1992). Although most EJ studies focus on race (environmental racism), there are other studies revealing the disproportionate effect of environmental destruction on women (Brown and Ferguson 1995; McKinney 2014; Pellow and Park 2002), immigrants (Bullard et al. 2007; Mohai and Saha 2007; Taylor 2009), and indigenous people (Kirsch 2014; Pelluso et al. 2011; Smith 2005).

While EJ scholars are successful in linking environmental destruction and inequality, their studies are inordinately US-centered and give inadequate attention to stratification systems in peripheral countries. Also, EJ scholarship does not highlight how socioenvironmental harms

under neoliberalism in peripheral countries, which is different from damage under the developmental state, disproportionately affect marginalized groups. In sum, their analysis does not account for how marginalized groups in terms of class, religion, and caste stagger beneath varying forms of social and environmental harm through several periods of development—above all, the shift from state-led to neoliberal.

Gaps in PE Approaches

The PE approaches discussed above have contributed to our understanding of structural drivers of social and environmental problems and how these problems disproportionately affect peripheral nations and marginalized groups across the world. To me, scholars studying society and nature as bundled and as justice issues are relevant to the analysis of socioenvironmental destruction peripheral countries are facing under neoliberalism. Neoliberal capitalism marvelously disguises socioenvironmental harms under the pretext of freedom and progress. I would like to identify three specific areas in which PE approaches require further examination. First, we need an adequate framework for grasping the myriad ways in which poor and minority people in peripheral countries suffer socioenvironmental violence, particularly those destructions incremental and long in the making. Second, it is imperative to capture the specific characteristic of socioenvironmental violence linked to different regimes of “development” in peripheral countries. Third, PE approaches, especially EJ scholarship, must enrich their analysis by comprehending domestic politics associated with the process of marginalization in neoliberal peripheral countries.

To elaborate, existing PE scholarship requires an examination of the ways in which political economic forces shroud the “slow violence” of social and environmental destruction

affecting marginalized people in peripheral countries. The idea of violence most often calls to mind images of overt, sudden atrocities; it is unmistakably visible.⁷⁹ Such an ordinary view of injustice, however, overlooks the many oppressed people who are subject to slow violence globally. Rob Nixon (2011) defines slow violence as having a direct relationship with the neoliberal, globalized society we exist in today.

Slow violence, as Nixon defines it, is an incremental violence that happens gradually and out of sight, continuing over time and space and generally “not viewed as violence at all” (2011:2). It is not typically recognized as violence due to the slow, sometimes invisible, pace of the effects. Using examples such as the Chernobyl meltdown, oil spills in the Niger Delta, and the Bhopal disaster, Nixon highlights the environmental and social consequences that occur slowly, when vulnerable populations are exploited and ravaged for profits and resources. By way of illustration, Nixon’s study of the detrimental effects of the oil fields of the Niger Delta depicts the slow violence of oil extraction. Nigeria is an oil-dependent nation as it relies on oil for 96 percent of its export revenue and 80 percent of government income. However, of the people that live there, 85% of the wealth goes to a mere 1% of the population, “almost none of whom belong to the micro-minorities who inhabit, ingest, and inhale the ecological devastation” caused by oil leaks (Nixon 2011:106).

Climate change is the one form of slow violence destined to grow worse over time because it relates to soil erosion and food insecurity in marginalized locales. Such destruction

⁷⁹ Bunker’s *Underdeveloping the Amazon* does deal with long-term, cyclical social and environmental change; thus, it offers a crucial analysis of prolonged destruction., Bunker (1985) focused on how state development programs enabled global actors to garner profit from and damage the ecosystem in the Amazon basin. In developmental states, such as India, the state was not necessarily unable to extract resources, but it is the same development dynamic that led to environmental degradation under the developmental state in peripheral countries. What I argue, therefore, is that socioenvironmental destruction in neoliberal peripheral countries has a specific characteristic—it’s made invisible; thus, the destruction continues to fester due to the visibility. By contrast, Bunker (1984, 1985) highlights physical violence and labor exploitation in peripheral regions that are enabled in part by the remoteness of the Amazon.

perpetuates the environmental harm that places vulnerable populations at greater risk. Indeed, the nature of slow violence is that harm persists and sometimes becomes worse over time because it is ignored. As the ignoring continues, the causes of slow violence only ramp up in intensity in response to resource, production, and consumption demands from a globalized capitalist society.

Moreover, at the core of slow violence is that poor, marginalized people from peripheral countries are made victims of neoliberalism, which threatens not only those that unwittingly mingle with these perpetrators, but also the generations to come (see epigraph quote from Nixon). However, Nixon, like other PE scholars, does not address the different facets of social and environmental destruction in peripheral countries subject to developmental and neoliberal regimes. The neoliberal period, as scholars (Harvey 2005; Crouch 2013) argue, valorizes privatization, tax cuts, and deregulation on the one hand, and diminishes social expenditure, labor markets, and the labor movement, on the other. In peripheral countries, social and environmental destruction takes on distinct properties for each case.

Let me explain. India's political-economic history, for instance, can be broadly divided into two chronological periods: developmental state (1947-1989) and neoliberalization period (since 1990). Levien (2018), however, makes a valuable qualification. To Levien, the divide involves (1) developmental state and (2) neoliberal state without development.⁸⁰ Ray and Katzenstein's (2005) chronology in *Social Movements in India* divides the history into three periods: Nehruvian master frame (1947-1966), the gradual decline of the developmental state (1967-1988), and economic liberalization (1989-present). There was an upsurge of social movements in the middle period—when India's Nehruvian state was in decline and yet continued to invoke national economic development and poverty alleviation (Ombedt 1993; Ray

⁸⁰ Through an ethnography of a Special Economic Zone in Rajasthan, India, Levien (2018, 2011) shows that capitalist state uses rural land for mainly IT companies and luxury real estate, thus generating non-productive economic activity exacerbating class inequality in India.

and Katzenstein 2005).⁸¹ The acts of ecological violence in rural India due to the developmental state received scholarly attention (see, Bhaviskar 1995; Guha 1989; Shiva 1993). Nixon in his analysis of slow violence in developing countries does not explain how ecological violence and its impact on marginalized groups in developmental regime is different from that of the neoliberal regime.

I argue that social and environmental destruction under the neoliberal regime has assumed a more furtive yet more threatening form. It is prolonged, incremental, and fundamentally invisible. In this way, it continues the slow violence that Nixon described. Going beyond what Levien (2018) argues, however, it is more than a regime of dispossession without development. It is a regime of degradation without apology or end. The slow, adverse consequences of the Bhopal disaster—a saga of multiple catastrophes: biosocial, environmental, and legal, and yet highly under-theorized by scholars (which one is the last book on Bhopal you remember?)—are incessantly propped up—and the resistance incessantly suppressed—by the neoliberal development regime at work in India. Thus, while the Bhopal disaster itself is an outcome of the developmental state, the adverse, long-term consequences that are made invisible are linked to the neoliberal period in India. Due to the relative invisibility of the affected, marginalized people and the withholding of information by government and bureaucratic agencies (e.g., nobody yet wholly knows about the nature of the released gas in Bhopal), this violence is allowed to fester unnoticed and at an agonizingly slow pace.

What's more, it is this slow pace that makes it easier for powerful actors, such as multilayered subsidiary corporations, to legitimize their activities and distend their slow violence to other peripheral areas (see Chapter Seven for a relevant discussion). In multi-layered

⁸¹ In a similar vein, Kaup and Gellert (2017) in their analysis of resource nationalism in Bolivia and Indonesia observed two distinct temporal junctures: "in mid-20th century and in the early 21st century.

subsidiary firms, each subsidiary is considered legally separate, even if the parent company owns the majority (Prechel 2000; Prechel and Touche 2014). This separation prevails even if the parent company imposes the most foundational decisions on its subsidiaries. The parent remains nonetheless protected by what Prechel (2000:215) calls “liability firewalls.” Thus, by default, it is the subsidiaries who shoulder most or all legal risk and responsibility while parent companies are protected. This organizational structure allowed Union Carbide, an American multinational corporation responsible for decisions affecting the wholesale destruction of humans and the environment in Bhopal, to circumvent India’s jurisdiction.⁸² Thus, the theme of slow violence and the countless examples of it stain a vivid representation of inequality unseen.⁸³

Nixon’s analysis frames slow violence in nexus with neoliberalism. As he writes, “a neoliberal ideology that erodes national sovereignty and turns answerability into a bewildering transnational maze makes it easier for global corporations like Union Carbide to sustain an evasive geopolitics of deferral in matters of environmental injury, remediation, and redress” (Nixon 2011:46) and thus is highly useful for the task of analyzing slow violence caused by the Bhopal catastrophes, I emphasize that the analysis of slow violence could do better by highlighting the dynamics of domestic politics in peripheral countries in different periods. This political economic dynamic, in other words, has both temporal and spatial dimensions. Space is shaped by the processes under/for which they are operating, and it is, as Harvey (2006:123) states, “impossible to disentangle space from time.” Spatiotemporal dimensions of violence are, in consequence, inextricably linked to the notion of justice. Understanding the transition of

⁸²In addition to the firewall, there are also conflicts over national boundaries of legal liability. Robert Berzok, Carbide's Director of Communications, said: Union Carbide will not appear [responding to a summon by a Bhopal court] because, as a United States corporation, it is not subject to India's jurisdiction. see *New York Times* 1996.

⁸³ For a similar analysis, see Frickel and Elliot (2018). The authors analyzed the widespread toxicity in US urban areas, which were once sites of industrial manufacturers. Lener’s (2010) sacrifice zones offer a similar analysis on toxic exposure across America.

developmental state to neoliberalism in peripheral countries enables us to grasp how the nature and extent of socioenvironmental destruction are different in those countries under neoliberalism than in the developmental state. Although Nixon's analysis is informed by geopolitical dynamics, he seems to disregard such distinct dynamics. As a result, he does not differentiate ecological violence in neoliberalism from violence under developmental states.

It is important to recognize that the disaster in Bhopal happened at a time when the developmental state was still active even if it was shrinking. Nixon analyzes slow violence within a general framework of neoliberalism, disregarding the domestic political economic dynamics that render much long-term environmental violence invisible and thus marginalizes already marginalized groups in India., India only entered its neoliberal period during the aftermath of the disaster. Thus, what Nixon generalizes as neoliberalism applies to the steps undertaken to deal with the aftermath but not the residue of a developmental state decision to accept the UCC factory in the first place in the wake of the disaster have a neoliberal character. These internal, specific dynamics are essential to grasp why powerful actors, such as states and corporations, strive to overshadow the prolonged biosocial and environmental destruction in peripheral countries.

In the schema (Table 3.1), I identify instances of environmental violence by their temporality and scale. Temporality refers to fast/immediate consequences that usually capture media and public attention, and slow/lingering consequences that either remains invisible or whose visibility is difficult to determine based on available information. Scale refers to whether the effects of events manifest as local or global or both. According to the schema, an event can have Slow and Local, Immediate and Local, Slow and Global, and Immediate and Global consequences.

Table 3. 1 Characteristics of Different Types of Socioenvironmental Violence⁸⁴

	Local / small-scale	Global / large-scale
Fast (immediate)	<p>Visible Explosive Immediate deaths and injuries</p> <p>1984 Bhopal disaster caused 25,000 deaths and 600,000 injuries <i>Other Examples:</i> London smog disaster (1952); Three Mile Island accident (1979); several gas/pipeline leaks in Alberta, Canada; BP oil spill (2010); tailings dam breaches in OK Tedi, Papua New Guinea (1984-) and Buffalo Creek, WV (1972).</p>	<p>Visible Explosive Immediate deaths and injuries</p> <p><i>Examples:</i> Krakatau volcanic eruption (1883); Indian Ocean earthquake and tsunami (2004); nuclear war (future?)</p>
Slow	<p>Invisible Unknown Secret/hidden</p> <p>1984-present, Bhopal disaster's ongoing health and environmental effects <i>Other examples include effects of:</i> Chernobyl nuclear meltdown (1986); multiple oil spills in Niger Delta; use of Agent Orange in Vietnam (the 1960s); Love canal, NY landfill (1978); BP oil spill (2010); OK Tedi disaster (1984-)</p>	<p>Invisible Unknown Secret/hidden</p> <p><i>Examples:</i> Effects of climate change, such as species extinction; effects of Fukushima meltdown (2011); and the effects of Green Revolutions⁸⁵</p>

⁸⁴ This schema, however, for analytical purpose is not specific to socioenvironmental violence in peripheral regions, although my theorization primarily focuses on peripheral locations. While this schema can be extended to other contemporary issues, in this research it is limited to socioenvironmental violence cause by disasters that are primarily linked to industrial activities.

⁸⁵ Green Revolutions (GR) certainly have increased the food productivity in different nations, but it is not without adverse effects. There is a profusion of evidence showing that many of pesticide chemicals cause serious damage to the ecosystem (Jeyaratnam 1990; Devi 2010). It is estimated that since the beginning of Green Revolution, approximately 800,000 people died in poor countries due to pesticides. Pesticide consumption via food cause more than 20,000 deaths in peripheral countries each year (Bhardwaj and Sharma 2013). And, marginalized farmers and farm workers are the worst sufferer of pesticide-related illness and death (see, Nyakundi et al.2010; Devi 2012). Besides India's Bhopal disaster, GR diminished local culture and created a ground for the Westernization of production and culture. Moreover, as Vandana Shiva (1993) in her *Monocultures of the Mind: Perspectives on Biodiversity and Biotechnology* shows, GR not only promoted plant and crop monocultures but also helped in disseminating the "monocultures of mind." It is also important to note that the Bhopal disaster occurred under shrinking developmental state in India—the effect of which is therefore played out different than the effects of Geen Revolution. Green Revolutions, although arguably, boosted up domestic production in poor countries, the consequences of the Bhopal disaster, on the contrary, are totally undermined, delegitimized, an unaccounted by state and corporate managers.

For instance, climate change undeniably is an example of slow violence that has global negative implications.⁸⁶ Although events with Immediate and Global consequences are not very common, there are many instances of events with Slow and Local consequences. For instance, the 1986 Chernobyl disaster, the OK Tedi disaster, Agent Orange, and multiple oil spills in Niger Delta are examples of slow violence with local consequences. Similarly, the Bhopal disaster that has caused endless social and environmental devastation falls into the category of Slow and Local. In many instances, however, an event can have both immediate and long-term, incremental consequences. For instance, the Bhopal catastrophes (also Chernobyl, OK Tedi) had thousands of initial casualties and received media attention, but the disaster's social and environmental consequences are also enduring and remain unheeded.⁸⁷ Moreover, one of the core aspects of slow violence is that is inflicted on those who do not have the power to publicize it; hence, as in the critical perspectives on the PE of socioenvironmental destruction mentioned above that illuminate relatively invisible structures of inequality, long-term effects remain invisible.⁸⁸

As the Bhopal disaster occurred under a shrinking developmental state in India, the effect of which is different than the effects of the Green Revolution (as the arrow in the schema indicates). Green Revolutions, although arguably, boosted up domestic production in poor countries, the consequences of the Bhopal disaster, on the contrary, are totally undermined,

⁸⁶ In addition, although the long-term environmental consequences of the Fukushima meltdown are undetermined; researchers argue that the radioactive materials released into ocean will have enduring consequences for generations (see Deb 2018).

⁸⁷ It is with this distinction in mind that I use the Bhopal disaster as a key exemplar of slow violence. Although the above schema, designed for analytical purpose, includes a list of the cases of socioenvironmental violence in both developed and peripheral regions, such violence disproportionately affect peripheral countries and peripheral regions in the neoliberal world-systems, as I explain in the introduction (see also Appendix).

⁸⁸ Bhopal continues to be a site of suffering and devastation. Those who were exposed to the gas release have given birth to physically and mentally disabled children. Contamination remains a public health issue to this day. UCC left India immediately after the disaster without cleaning up more than 2,000 tons of dangerous chemicals they left in the factory, and Dow has taken no responsibility for the problem. Bhopal's ongoing consequences mostly affected and continue to affect vulnerable populations in Bhopal, such as the poor, Muslims, children, Dalits ("untouchables"), and women. Those who are affected are the poorest, and 80 percent of which are Muslims, 75 percent are slum dwellers, 40 percent are children below one year of age, and 20 percent women are in the reproductive age group. See CSE (1988).

delegitimized, and unaccounted by state and corporate managers. Most examples of slow violence, as the schema shows, are linked to current global economic order: neoliberalism.⁸⁹

While EJ scholars emphasize the uneven effect of socioenvironmental destruction on vulnerable populations, what lies outside of their focus is the distinct, internal stratification system of peripheral countries. Shell, for example, a multinational petrochemical chemical industry, took approximately one thousand million barrels of oil worth more than \$5 billion from Nigeria's micro-minority Ogoni, and meanwhile, the Ogoni still lack access to clean drinking water (see, Pegg 1999). The Bhopal catastrophes continue to affect minority Muslims, Dalits, poor, and women, yet Union Carbide Corporation, as well as its new owner, Dow, remain free with impunity. The process of marginalization under neoliberalism has been aggravated because neoliberalism reflects on the interests of "private property owners, businesses, multinational corporations, and financial capital" (Harvey 2005:7). The lingering catastrophes in Bhopal or in Nigeria are inextricably linked to the demographics of the affected, which also significantly vary in terms of both times (e.g., regimes of development) and geography (Castree et al. 2009; Castree 2004; Harvey 2006).

Moreover, there are also various cases of resistance by marginalized populations in peripheral countries. In the following section, accordingly, I aim to theorize resistance against socioenvironmental destruction in peripheral countries and illustrate how slow violence in neoliberal, peripheral countries create a form of politics, quite distinct from both labor and identity politics, yet to be captured effectively by the sociology of social movements.

⁸⁹ Following Nixon, I argue that EJ scholars highlight structural violence, a violence that is static and physical. Slow violence is gradual and depends on time and movement. Slow violence takes place over time and space and thus is decoupled from its direct causes by the working of time.

Theorizing Resistance against Socioenvironmental Destruction

After the 1950s, as scholars argue, the colonial violence of European expansion (see, Davis 2002; Dwyer and Nettelbeck 2017; Fanon 1961; Galeano 1997; Sen 1981) was reestablished by economic violence through Structural Adjustment Programs carried out by the IMF and WB (Davis 2004; Harvey 2003; Rajagopal 2003; Toussaint and Millet 2010). The socioenvironmental violence of corporations, encouraged by the Western models of development, has increased in peripheral countries, with the help of local actors of global capital. Marginalized people are the greatest victims of socioenvironmental violence, both under developmental state and the neoliberal regime in peripheral countries. However, this violence is not without resistance. Developing countries have recently become a seedbed for multidimensional resistance, *inter alia*, resistance against biosocial and environmental injustice.

There are several noteworthy efforts from movement scholars to analyze resistance against adverse socioenvironmental consequences in marginalized nations (see, Auyero and Moran 2007; Auyero and Swiston 2009; Harvey 2003; Martinez-Alier et al. 2016). Yet an outpouring of newly-emerged resistance in neoliberal peripheral countries, as well as their distinct political economic context, remains largely outside the dominant scholarly and political discourse on movements. Since most of these movements in peripheral countries are shaped by the nature and context of political and development institutions existing there, they require an adequate understanding of these institutions' trajectories. However, the sociology of social movements over-generalizes, and thus simplifies, the causes, context, nature, targets, outcomes, ideology, and objectives of movement resistance. In other words, they seem less interested in underscoring how distinct forms of politics at local levels unfold in peripheral countries.⁹⁰ This

⁹⁰ Moreover, what is unfortunate is that, in many cases, resistance in peripheral countries is understood by the parameters resisted, prompting a tendency to theorize and examine such resistance as a coopted activity. See

section acknowledges the imperative of developing a theory of resistance that would push scholars to grasp the context, content, characteristics, objective, and specificity of these acts of resistance. It begins with the premise that different structural forces at different periods compel marginalized groups to erect a new form of politics qualitatively different from labor and identity politics. Scholarship on labor politics is predicated on wage laborers, and thus, the focus of labor is primarily economic. Most of these scholars take inspiration from either Marx (labor) or Polanyi (commodification). Although this new form of politics engages with power structures, such as states and corporations, like labor politics, the emergence, development, sustenance, and objectives of the former differ from the generic features of the latter. In the following, I focus primarily on the context of the emergence of movements against socioenvironmental destruction and injustice in neoliberal peripheral countries. And along these lines, it highlights how the marginalized masses experience, contest, and penetrate power within the frame of neoliberal globalization.

The Weakened Developmental State: Struggles over Blend of Resources

Over the last couple of decades, especially since the advent of neoliberal globalization, state sovereignty in peripheral countries has increasingly become subservient to international and domestic capital; therefore, the capacity of marginalized nations to act as a legal representative of their people's democratic aspirations has substantially diminished over time. The state is still a dominant actor in peripheral countries, colonizing virtually all spheres of public life, serving the interests of the global and local elite and destroying the life, livelihood, and environment of the unprosperous public. A brief historical look at postcolonial states illustrates that resistance to

Rajagopal (2012). This chapter although recognizes that there are a variety of social and environmental movements in marginalized society, and this section neither aims to demonstrate certain forms of resistance as more authentic than others nor posits to challenge any environmental justice theories.

antidemocratic and unjust development regimes is evident in numerous instances (Harvey 2003; Scott 1985, 1990; Smith 1997; Levien 2018, 2013).

Frantz Fanon, an anticolonial thinker renowned for his analysis of the psychological impact of colonialism,⁹¹ has a theory of resistance dealing with social movements in postcolonial societies. Fanon's (1963) "The Pitfalls of National Consciousness" describes how decolonization leads merely to a recurrence of the previous colony. After initially fending off the inequality and oppression of the given colonial power, and after a new nation is born from the ashes of a now-liberated colony, a new elite class—the national bourgeoisie—emerges in its train; it attempts to emulate the bourgeois ideology of the previous colony and instill into their newfound nations vestiges of the colonial customs from which they had escaped. They act through façade leadership, bearing the selfsame attitude of previous colonizers. With this, corrupt authority merely changes hands, transfixing its status without liberating its people or national consciousness. New rulers of independent nations, by and large, refuse negotiation with their subjects for an authentic continuation of the desired change. Instead, they stand as an obstacle to both freedom and unity, a failing ally that won't work to accommodate the true interests of the majority.⁹² Beyond preventing real change, they even sell out their entrenched authority to international structures, passing the torch to yet another oppressor and leaving their country strangled in hunger alongside social and environmental devastation.

⁹¹ Fanon's (1967) *Black Skin White Mask* is classic text on this. Fanon shows what colonialism does to the psychology of the colonized people. To Fanon, people living in a colonized society internalize the norms of their colonial masters, thereby become reduced to adapt the psychology of colonizers. The profound impact on the psychology of colonized people is another type of slow violence, but it lies outside the scope of this chapter.

⁹² Fanon, however, argues that if this native ruling class stopped being lazy intellectually, and acted with authentic dialectic with the masses, that true nationalization and liberation will be achieved. This is contestable because the middle class, in my view, doesn't possess intellectual laziness, but an intellectual desire to continue prospering, and uplift their interest among their preference of oppressed people. They want to retain, and increase, their current power and wealth.

Human liberation in peripheral countries, therefore, as Fanon shows, cannot be confined to a nationalist agenda. For instance, the vast upsurge of movements against the developmental state in India by marginalized groups, viz., urban poor, peasants, indigenous peoples, women, and the environmentally concerned is proof of how formerly colonized nations have been forced to bear the brunt of development activities.⁹³ While Fanon's analysis neatly captures the characteristics of the postcolonial, developmental state, it scarcely addresses the specificity of the politics of social and environmental destruction in peripheral countries, such as India, under neoliberalism.

To elaborate, Ghanshyam Shah (2004) and Gail Omvedt (1993) document how the failure of the Nehruvian state to deliver economic and social development to its impoverished people incited a range of movements in India. It is important to mention that at least 60 million people were displaced in India between 1947 and 2004, and 40 percent of the displaced were *Adivasis* (indigenous people), although *Adivasis* constitute about only 8 percent of the total population (Fernandes 2008). In collaboration with the capitalist class, India's Congress Party, which headed the Indian government for almost 50 years since Independence, repressed the militant working-class struggle in the post-independent period (Chibber 2003, 2005). Though in some instances, scholars like Shah and Omvedt depart slightly from the traditional Marxist analysis by moving beyond working-class struggles in Indian society, their analysis is characteristically Marxist as well. Raka Ray and Mary Katzenstein (2005) offer a more comprehensive analysis of social movements in postcolonial India. Their periodization—1947-1966 (Nehruvian development), 1967-1988 (declining trend developmental state under Mrs.

⁹³ For instances of movements in other peripheral countries, see Almeida 2006, Almeida and Stearns 2014, Apostolopoulou and Cortes-Vazquez 2018, Auyero 2001, Shefner 2001, Walton and Seddon 2008.

Gandhi), and 1989- to date (post-liberalization)—usefully categorizes the cases of resistance in relation to the shifting character of the Indian state.⁹⁴

The developmental state witnessed movements primarily linked to class-derived tensions and poverty alleviation. Carrol and Jarvis' (2017) edited book, *Asia After the Developmental State*, broadly outlines the developmental state as an arena for class antagonism. And following a process of marketization of development (Carrol 2017), developmental states began tapering off in South and Southeast Asia (see, Ben et al. 2013; Carrol and Jarvis 2017; Iain 2017), thus acts of resistance challenge the state due to its failure to ensure development for marginalized groups. Given that political rhetoric continued to invoke development and poverty alleviation during the ebbing of the developmental state, a profusion of resistance activities by different marginalized groups, such as women and Dalits, surfaced in India. This period of transition, in the 1970s and 1980s, also witnessed struggles of rural populations with the state over natural resources. Ecological movements during these decades arose from what scholars (Bhaviskar 1995; Gadgil and Guha 1992; Guha 1989; and Sundar 2007) call development-induced displacements. All major movements till this period have, for this reason, challenged and rejected outright, what Fanon calls the “nationalist” framing of justice.

However, the politics of marginalization in neoliberal is different from that of the development regime. For instance, while dispossession in the previous period, i.e., the regime of the developmental state, was merely a product of the development process, dispossession is now taking place under neoliberal regimes without development (Levien 2018). Although India continues to tout its economic growth, multitudes are caged in the zones of underdevelopment (Gupta 2009). The affected are, in this sense, victims of a non-labor-intensive, speculative

⁹⁴It also highlights the Hindu nationalist movement in India, which is now under the Modi regime has certainly been proliferated.

system, beginning in the 1990s, which created a form of politics distinct “from politics that have been theorized in the social sciences” (Levien 2013:351).

Similarly, I argue that socioenvironmental destruction under neoliberalism in India has specific characteristics. By marginalizing the already marginalized groups, destruction stimulates a new form of political society that exposes, challenges, and discredits the dominant narratives and practices of social and environmental justice that is based on local sacrifice. I now turn to discuss how prolonged social and environmental destruction creates a new form of politics in peripheral countries.

New Political Society

Marx-influenced movement scholarship usually emphasizes economic and material factors behind the emergence of movements. Resistance is, as many social movement scholars argue (Burawoy 1978; Piven and Cloward 1977; Shefner et al. 2015; Shefner and Stewart 2011; Thompson 1971), fighting for economic and material resources. Such views offer a partial explanation of resistance in peripheral societies but fall short of explaining the role of other resources behind the movement. Drawing on Fanon (1963), who implies a form of resistance that goes beyond traditional, Marx-influenced analysis, it can be said that movement resistances in peripheral societies are combinations of struggles over multiple resources, such as material (e.g., economic), symbolic (i.e., cultural), and environmental (i.e., water, air, soil).

After the arrival of neoliberal globalization, which associates the logic of free-market with the notion of freedom, marginalized people in peripheral countries not only always find themselves the victimized by the market economy, but also they are further marginalized.⁹⁵ The

⁹⁵ Moreover, caste, religion, gender, geography, race, and ethnic factors are a large part of struggles in poor countries. Although Fanon wrote long before what we now call the age of neoliberal globalization, he (1963) asserts that as colonial domination is replaced with domination by colonial business elites, primarily through exploiting the markets for goods, it also creates opportunities for resistance.

nature of the exercise of power and resistance in peripheral countries in the age of neoliberal globalization, which is shaped by different structural and social forces, becomes relevant to this discussion. It is in this context important to reiterate that mainstream movement approaches, such as resource mobilization, political process, antisystemic, and framing and social construction, tend to focus on the rigid, universal assumptions of social movements⁹⁶; they have largely “abandoned the idea of grounding qualitatively distinct kinds of politics in the analysis of social structures” (Levien 2013:356). However, like Levien’s analysis of urban movement, the nature and objective of mobilization in peripheral countries, such as the Bhopal Movement, depends on disparate structural and social forces, leading to a distinct kind of politics in peripheral countries. Before engaging in this discussion, a brief account of the nature and exercise of power in contemporary capitalism is required.

Michel Foucault, known primarily for his notion of biopower and his analysis of disciplinary society (1979, 1991), offers valuable clues for movement scholars interested in understanding the complexity of the exercise of power in contemporary society. Foucault’s analysis of power is intrinsically linked to his understanding of resistance (Pickett 1996), yet he is not well recognized in this area. Foucault suggests that to understand power, particularly in peripheral countries as I demonstrate, one must extend his attention beyond the handiwork of state institutions. State, to Foucault (1991, 1980), is neither the sole nor primary source of power,

⁹⁶ In the 1960s, resource mobilization, basing its argument on political, sociological, and economic theories, challenges the classical model of collective behavior and social movements. Political process theory, emerged in the 1970s, criticizes RMT (see McCarthy and Zald 2001) for downplaying politics and political interests (Tilly 1978).. McAdam (1982), for instance, identified two necessary conditions for social movements to challenge the established political system: (1) the structure of political opportunities such as political and economic crises; and (2) the strength of indigenous political organizations that are equipped by cognitive liberation. Framing and social construction (see, Benford and Snow 2000; Ferree and Merrill 2000; McAdam 1996; Snow 1986) criticizes political process approach for giving a secondary role of collective grievances, focusing on micro-level social dynamics, emphasizing both symbolic interaction and cultural theories that help in the construction of meaning and understanding of grievances, motivations, recruitment process, and identity formation. Anti-systemic movements, as argued by world-system scholars, focus on the structures and patterns of the [capitalist] world (Arrighi et al. 1986; Wallerstein 1974, 2002, 2005).

which has rather been changed to apparatuses of government and private agencies.⁹⁷

Conventional theories of the state, including PE and Marxist theories, regard state as the principal source from which activities of government are derived. By contrast, Foucault shifts the attention from the institutions of state to practices/apparatuses of government; in other words, changes in governmental practice bring about changes in the nature of state institutions.

Foucault's analysis likewise highlights how masses of people experience power in mundane activities—or what he calls the micropolitics of power relations—and how they turn governmental practices into a 'center of resistance.'⁹⁸ The poor and marginalized, who are the victims of environmental degradation, have been challenging the power structure for decades, exhibiting a dialectic between resistance and changes in the practices of government. For instance, the Bhopal Movement, the longest-running movement in India, continues to demonstrate its endurance in challenging the top-down narrative of social and environmental justice (Chapter Six). This, moreover, brings us to the question of the role of the postcolonial state in resistance.

Some Subaltern Studies scholars, offering a radical critique of conventional historiography and movement scholarship (see, Chatterjee 2010; Guha 1999, 1982; Guha and Spivak 1998; Chaturvedi 2000), have offered keen insight about this.⁹⁹ The state is, to Subaltern Studies scholars, not a monolith. On the contrary, it is a fragmented terrain of conflicts and antagonism. To elaborate, Partha Chatterjee (2004) sheds light on what he calls “political society” to understand the contemporary dynamic of state and society in peripheral nations, such as India. Chatterjee developed this notion by mapping the trajectory of democracy and modernity

⁹⁷ Foucault's analysis, in consequence, is essential for developing a theory of resistance that does not fetishize state

⁹⁸ Whether such resistance is successful in terms of changing widespread power relations is a different question, but this resistance has been manifested in social and environmental justice movements throughout peripheral countries .

⁹⁹Vivek Chibber (2013) writes a powerful critique of subaltern scholarship. He, however, did not include Chatterjee's “political society” (2004) in his criticism, which is the primary focus in this research.

in postcolonial societies and inspecting the role of politics at the local level. Chatterjee developed the concept of political society by setting it in opposition to civil society, which is connected to “the nation-state founded on popular sovereignty and granting equal rights to citizens” (2004:37). Chatterjee’s analysis of civil society, as he recognizes, is nothing ingenious.

Civil society to Antonio Gramsci (1971) was a non-state space in which the hegemonic ideology of ruling classes is organized. Civil society, in other words, consolidates the hegemony of the state. Gramsci’s concern was to analyze how the class structure is reproduced in capitalism.¹⁰⁰ It is well-recognized that the purpose of civil society in the modern state is to check authoritarianism and make progress from pre-modern forces. Civil society in peripheral countries is conceived as a force dedicated to the advancement of modernity and the protection of freedom. Chatterjee (2004), in this regard, distinguishes between citizen and populations; the former represents a theoretical category of right-bearing individuals who participate in the activities of the state, while the latter embodies a vast, governed group of classifiable individuals who are not only provided welfare by government apparatuses but are also part of a large-scale surveillance network. Populations, as Foucault brilliantly underscores through his notion of biopower, are both looked after and controlled by various governmental agencies (Chatterjee 2001). This shift marks what Foucault identifies in his theory of governmentality as a transition from participatory citizenship to technologies of governing. This is also where Chatterjee’s distinction between civil society and political society becomes pertinent. Civil society, to Chatterjee, is a bourgeoisie society, as Marxist scholars argue, while populations of political society, which are connected to “governmental agencies pursuing multiple policies of security

¹⁰⁰ Louis Althusser, similarly, uses the role of ideology to analyze how the structure that enables capitalist production is reproduced. Ideological apparatuses

and welfare” (2004:37) and are deemed outside mainstream civil society, engage in a different political relationship with the state.

To explicate, in line with the formal structure of the state (as defined by its laws and constitution) all of society is civil society, and everyone is a citizen possessing equal rights (Chatterjee 2004, 2001). This is, however, an ideal and theoretical definition of civil society. There are still many areas in which citizens are all but divorced from the state as members of civil society and yet are not deemed outside the domain of politics (Chatterjee 2004).. Shefner (2012), in his analysis of mobilization in an impoverished community, Guadalajara, in Mexico, makes a similar argument on how neoliberal economic activities harm marginalized communities. Shefner relies on Gramsci’s notion of organic intellectuals, who create “popular politics and culture” (2012:117) by challenging hegemonic capitalism, to describe the process of bottom-up democratization and community mobilization process in Mexico. Chatterjee also highlights the distinction made by Subaltern Studies in the anti-colonial movement between the elite domain (organized) and the subaltern domain, the latter of which is primarily regarded by scholars, including Marxist scholars, as pre-political.¹⁰¹

Moreover, to understand the dynamics between elite and subaltern domains in contemporary India, Chatterjee introduces his concept of political society. Political society exists in a zone between the state and civil/bourgeois society (Chatterjee 2004, 2001). Members of political society, as Chatterjee (2004) argues, engage in ad-hoc, unstable, and extralegal arrangements with state agencies.¹⁰² The mobilization of political society often goes against and

¹⁰¹ Marxist historians, such as Hobsbawm, attributes this quality to movements led by peasants and farmers. See Hobsbawm (1959).

¹⁰² Chatterjee offers numerous examples; slum dwellers in Calcutta is one of them. In *The Politics of the Governed*, Chatterjee (2004) defines political society as a domain in which subaltern groups engage the state (as governed populations) as subjects negotiating ad-hoc and extralegal arrangements. This view of extra-legal negotiation has been negated by scholars, such as Amita Bhaviskar and Nandini Sundar (2008) and Sarker (2012).

beyond the scope of modern practices and ideologies. And this definition goes above and beyond what neoliberal institutions prefer: all social institutions and practices that lie outside the state's domain to be included in the notion of civil society. The obscure role of political parties in the struggles of political society and the resilience of the people in rebuilding their lives and negotiating with authorities are clearly different from the bourgeois nature of civil society. But these struggles represent a strong political contestation with the state. In Chatterjee's words: "Civil Society is where corporate capital is hegemonic, whereas political society is the space of the management of non-corporate capital" (2008:58). A theory of resistance, as Chatterjee shows, requires the state to be understood as a plural terrain of contestation in which state and society have a complex, interpretable relationship.

Although many movement resistances by poor and minority populations attest to Chatterjee's understanding of the political society in peripheral countries, his analysis of political society misses a mass of elements critical to understanding the features of new political society in neoliberal peripheral countries. Several researches are seen concerning anti-dispossession movements in neoliberal India, theorized by Michael Levien's (2018, 2013), and new political peasants in Thailand, analyzed by Andrew Walker (2012), both of which capture the particularities of new political society in accordance with the distinctiveness of each case.

I argue that the process of marginalization under neoliberalism in peripheral countries, such as India, creates a new form of political society. For instance, much prolonged biosocial and environmental destruction in peripheral nations that largely marginalizes the already marginalized groups shapes the nature, goals, and targets of new forms of politics, particularly evident in India. For instance, the gas-afflicted Bhopalis refuse to give up their fight through any ad-hoc, extra-legal negotiations (Chapter Six), complicating what Chatterjee (2004) mentions

about the nature of political society. Take Tata Motors, one of the biggest corporations in India, for example. The multinational Indian manufacturing company tried to settle the issue of decontamination in Bhopal on Dow Chemicals' behalf, but the Bhopal activists refused to negotiate unless Dow (Union Carbide's new owner since 2001) accepts legal liability for the disaster. Through their more than three-decades-long activism, the Bhopal activists, by rejecting the state-corporate narrative of justice under a weakening developmental state and a surging neoliberal regime, fashioned a new political society, one that, despite its national and transnational involvements, generates diverse, *sui generis* political responses unabsorbed by the stagnant political mainstream. As a social and environmental justice movement, therefore, the Bhopal Movement, displays a novel and vigorous type of resistance, not only against conditions that nourished the disaster, but also against the forces shadowing forth the long-lasting social and environmental destruction of marginalized Bhopalis (to Žižek and other scholars' surprise, as they refuse to examine politics at the local level).

In sum, society is not static, nor is it monolithic. The ways in which socioenvironmental destruction manifests itself and affects different demographics depends on the historical moment and distinct context of the society in question. New forms of socioenvironmental destruction in marginalized areas are produced and perpetuated by the ways in which the structure of the economy operates. Similarly, the process of marginalization in peripheral nations depends solely on the internal stratification and existing political economic structure of a given country. Resistance to such problems, and marginalization itself, therefore, takes multiple and complex forms. It is a central task for sociologists to take account of distinct contexts, discerning the complex ways in which socioenvironmental destruction is created, affected, and resisted.

This chapter contributes to the understanding of the political-economic drivers of socioenvironmental destruction and the resistance against this destruction in peripheral countries under neoliberal. In this vein, it has demonstrated that although dominant PE approaches offer essential explanations for understanding the causes of socioenvironmental destruction, such approaches seem to overlook how poverty-stricken minorities endure the blight of slow, catastrophic environmental damage under neoliberalism. The chapter has integrated Nixon's notion of "slow violence" for capturing the socioenvironmental devastation that is long in the making and how it affects poor and minority populations in peripheral countries. However, Nixon's analysis would do better by emphasizing the domestic politics associated with lingering devastation and the process of marginalization. Similarly, EJ scholars must extend their analysis beyond US society to grasp the multiple ways in which the process of marginalization operates under neoliberalism.

This chapter, moreover, has shed light on an undertheorized domain in peripheral countries: social and environmental justice movement as a new political society. Social and environmental justice movements in peripheral countries symbolize a new reality requiring further scholarly attention. A new form of political society seizes the control of democratic spaces by challenging the prevailing discourse of justice. To underpin a nexus between society, state, power, and socioenvironmental resistance in peripheral countries, this chapter has mainly brought several theoretical perspectives together: Fanon's analysis of marginalization and resistance in postcolonial societies; Foucault's analysis of how masses of people experience and penetrate power; and Chatterjee's analysis of political society. This effort to entangle a range of approaches has also highlighted the need to remove the veil of Western, universalist, and elitist bias from a theory of resistance.

Finally, a range of theories highlighted in this paper to complement and critique PE approaches to socioenvironmental destruction under neoliberalism is by no means exhaustive. Importantly, the call for a new approach to socioenvironmental destruction and resistance is not a call for refuting existing theories. Instead, it is to expand our imagination to a new, historical, and complex reality for both theorizing these issues and conceiving a space for transformative justice. Adorno in his *Negative Dialectics* states that “what has been cast aside but not absorbed theoretically will often yield its truth content only later” (1966:144). The task of theorizing is a constant and dialectical effort, and scholars should not cease to evaluate their assumptions in examining this complex contemporary system, a system that is almost continually unleashing new forms of socioenvironmental violence against marginalized people worldwide. To wit, this is a call for theorizing the truth content waiting to be seen; the ways in which marginalized people suffer long-term socioenvironmental destruction in neoliberal peripheral nations; and how, in their efforts to resist such destruction, they contest and penetrate power in our age of neoliberal globalization, leading to a new form of political society. Finally, the effort to theorize socioenvironmental destruction and resistance is first and foremost a call for social and socioenvironmental justice; for, as the world experiences a formidable rise in socioenvironmental violence, how they are understood has significant implications for marginalized populations the world over.

Chapter Four: Data and Methods

Research is not an innocent or distant academic exercise but an activity that has something at stake and that occurs in a set of political and social conditions.

- Linda Smith (1999), *Decolonizing Methodologies: Research and Indigenous Peoples*, p.5.

Every confrontation between agents in fact brings together, in an *interaction* defined by the *objective structure* of the relation between the groups they belong to (e.g. a boss giving orders to a subordinate...academics taking part in a symposium), systems of dispositions...and, through these habitus, all the objective structures of which they are the product, structures which are active only when *embodied* in a competence acquired in the course of a particular history...

- Pierre Bourdieu (1977), *The Logic of Practice*, p.81

Structural fieldwork is a qualitative field methodology in which the researcher is self-consciously guided by considerations emerging out of macro-sociological theories.

- Paul Gellert and Jon Shefner (2009), "People, Place, and Time: How Structural Fieldwork Helps World-Systems Analysis," p.194.

I used a multi-method approach, drawing data from interviews with Bhopal *Gas Peddit* and activists, observations, and secondary sources including reports and archival records on Bhopal. These data (Table 4.1) provide information pertinent to political, economic, and ecological aspects of the Bhopal catastrophes (Chapter Two); ongoing, adverse social and environmental consequences and how such consequences are perceived by affected peoples (Chapter Five); movement resistance against these consequences (Chapter Six); and legal responses to the catastrophes in Bhopal (Chapter Seven). Additionally, to examine the vulnerability of peripheral countries to slow violence, I created and used a cross-national dataset of industrial disasters with long-term social and environmental consequences. Table 4.1 summarizes the data sources used for the research questions I investigated in this dissertation.

Table 4. 1 Data Sources by Research Question

Research Question	Data Sources
History and political economy of the disaster	Archival data (from companies, newspapers, and Names of Indian NGO Libraries) Governmental and non-governmental reports
Cross-national patterns of slow violence	Cross-national data that I created
Long-term biosocial and environmental consequences	Fieldwork and interviews; Official and Independent Reports on the consequences
Resistance movements	Fieldwork and interviews
Litigation	Archival data and reports; Interviews

While fieldwork data substantiate the theoretical assumptions based on the particular contexts of the Bhopal catastrophes, cross-national data enables me to corroborate theoretical assumptions (Agredsti and Finlay 2009; Blaikie and Priest 2017; Bohon 2014; Creswell 2013) employed in the study. In this dissertation, I use what Gellert and Shefner (2009) call “structural fieldwork” in the world-system analysis. The purpose of structural fieldwork, as Gellert and Shefner (2009:194) argue, “is to explain power among people in specific places and times in order to help us modify and elaborate general theoretical understandings of the social world.”

Structural fieldwork is quite valuable for case study research, such as this one, not only because case study research strengthens social science research (Abbot 1992; Ragin 1992), but because case studies are “indispensable building blocks” for plausibility in research, because it is through particularities that we can gain an understanding of general mechanisms of the system (Steinmetz 2004:384). Borrowing from Lund (2014), the selection of a case depends on the level of generalizing, abstracting, and theorizing one does in approaching a research. Large-scale

events—such as the Bhopal disaster, that can epitomize the central subject, can become, with their own delimitations, useful for a historical case study (Abbott 1992) and can help us grasp what Sewell (2008) calls the temporalities of capitalism.

Fieldwork

This dissertation relies primarily on structural fieldwork methods, which continued for a total of 4 years. The data was collected from multiple sources, including interviews with gas and water sufferers, observation of sites and events in Bhopal, as well as secondary sources from peer-reviewed publications to government and non-government reports and archival records on Bhopal. The most intensive period of observations, interviews, and archival research were conducted in Bhopal during two periods, summer 2018 and December 2018.

Interviews

I conducted 60 interviews with Bhopal gas and water sufferers and activists. These interviews provide data about: (1) victims' perceptions of the long-term social, health, environmental, and legal consequences of the Bhopal disaster; and (2) the organization and activities of the Bhopal Movement, which is a sustained three-decade-long response to these adverse consequences.

Over the last five years, I have been following updates on the disaster very closely and developed a personal network with Bhopal experts, activists, and survivors. My networks include several activists who became key informants for this research: Satinath Sarangi, the director of the Bhopal Group for Information and Action (BGIA); Rachna Dhingra, the Indian coordinator of the International Campaign for Justice in Bhopal (ICJB) and also a member of BGIA; and Tim Edwards, Managing Trustee of the Bhopal Medical Appeal. These informants helped me to gain access to *Gas Peddit* and grassroots activists. In most cases, I use pseudonyms to ensure

participants' confidentiality, but some activists requested that I use their names. I have respected the expressed desires of each participant.

The interviews were semi-structured and in-depth in order to grant the flexibility required for participants to describe their experiences thoroughly and unhindered (Becker 2008; Galletta 2013). Interview questions were framed to accentuate respondents' views on the long-term consequences of the disaster and Bhopal litigation, as well as to document survivors' mobilization against the ongoing social and environmental injustice in Bhopal. Specifically, the main questions I asked pertained to health complications and care; compensation and rehabilitation; soil and underground water contamination; social consequences; and the nature, targets, and goals of the Bhopal Movement. I tape-recorded all interviews on a digital voice recorder; thus, all quotes are directly taken from these recordings. Because I relied on quotations as evidence from respondents, my methods follow what Creswell (2013) calls the "epistemological assumption" in qualitative research.¹⁰³ Since the state-corporation nexus produced its knowledge to deny ongoing crises in Bhopal, victims' perceptions are used to examine these denials. Each interview data file was transcribed and cataloged within a file for the specific individual. I hired a transcriber to facilitate a timely transcription of audiotapes from interviews. After collecting and transcribing interview data, I provided a detailed description of central issues underlined in the interviews pertaining to the research questions of this dissertation. I used NVivo qualitative data analysis software to analyze all interviews, as well as my observational data. Data coding, which permits our theoretical questions and concepts to open our gaze to new prospects, meanings, and practice, helped to uncover the data's common and notable traits (Emerson and Shaw 2011; Fetterman 2010).

¹⁰³ Creswell (2013:21) defines epistemological assumption as "what counts as knowledge, and how are knowledge claims justified, and what is the relationship between researcher and that being researched."

Observation Data

I made observations at sites in Bhopal, including observing the victim activists' regular meetings, attending the 34th annual commemorative events of the Bhopal disaster on December 2 and 3, 2018, visiting the Chingari Rehabilitation Centre (a clinic designed to help children born with psychological and physical disabilities) and the Sambhavna Trust Clinic (a community clinic established for the Bhopal gas and water victims), and touring the Remember Bhopal Museum, a community-owned project that collects and exhibits memories and history of the survivors' suffering and mobilization. More importantly, to understand the strength, targets, and objectives of the Bhopal Movement, I observed several annual demonstrations in Bhopal organized by four survivors' organizations on December 2-3, 2018, the 34th anniversary of the disaster.¹⁰⁴ Observation of the clinic and rehabilitation centers helped me to grasp the victims' interaction with doctors and staff and to see how many patients come every day and receive treatment. Observing the Chingari rehabilitation center included attention to how physicians and therapists interact with disabled children and their mothers and the kinds of rehabilitation efforts made to assist them while through observations of the museum, I grasped how it documents the history and memory of the disaster and the resistance. These observational data were used to corroborate information from interview data.

Archival and Secondary Data

Scholars have illustrated that because time is heterogeneous, and changed historical epochs have different social dynamics (Postone 1993; Sewell 2008), penetrating the temporal dimension of any case or event is crucial for accurate analysis (Abbot 19990; Pierson 2000). I use the notion "event" to indicate a remarkable occurrence, the disaster, that has profound consequences. I

¹⁰⁴ The four survivor organizations are Bhopal Gas Peedit Mahila Stationery Karmchari Sangh, Bhopal Gas Peedit Mahila Purush Sangharsh Morcha, Bhopal Group for Information and Action, and Children Against Dow Carbide.

analyzed India's political-economic trajectory to address the historical circumstances that (1) led to the event: the Bhopal disaster; and (2) render invisible its long-term consequences. I used archival data to corroborate the factors above. Among these were two major sources: the Sambhavna Clinic Library archive and the Remember Bhopal Museum archive in Bhopal.

I consulted multiple independent and government reports on the Bhopal disaster, including ones focused on the causes and consequences of the disaster, in order to address (1) political-economic factors causally related to the Bhopal disaster; and (2) the short and long-term social and environmental consequences of the disaster. Reports on the persistent problems caused by the gas leak were particularly useful in highlighting the adverse effects of the disaster. My sources included both official and independent reports. Official reports include reports of the Indian Council of Medical Research (ICMR), the Indian Council for Scientific and Industrial Research, the Defense Research and Development Establishment (DRDE), the National Environmental Engineering Research Institute (NEERI), the Group of Ministers on Bhopal (GOM), Centre for Rehabilitation Studies (CRS), and the Bhopal Gas Tragedy Relief and Rehabilitation Department (BGTRRD). Reports from Union Carbide Corporation itself was also used in the study. Independent reports include reports published by the Bhopal Group for Information and Action (BGIA); the International Medical Commission on Bhopal (IMCB); the Sambhava Trust Clinic; Greenpeace International; the Centre for Science and Environment (CSE); Amnesty International, and the Highlander Research and Education Centre.

Two Phases of Fieldwork in Bhopal

I conducted interviews and collected observational and archival data in Bhopal in two phases. In the first phase, in the summer of 2018 (July-August), I conducted 40 interviews. In the first few days of my fieldwork in Bhopal, I worked as a volunteer in the Sambhavna Trust Clinic's library

and established a working relationship with two grassroots activists who work there, Satinath Sarangi and Rachna Dhingra. They subsequently provided a list of 30 other women grassroots activists. I then identified the location of each activist, went to his or her house, and asked for a suitable time for interviews. I was able to interview 28 of the 30 names provided; one was unavailable (out of town) and one declined to be interviewed. Through a snowball process, some of these interviewees referred me to other gas and water victims and activists. I interviewed 12 more in the first phase of my fieldwork. In all, I interviewed people from 14 different communities in Bhopal in all directions from the Union Carbide plant (Figure 4.1). I conducted an additional 15 interviews in December 2018. I conducted five more interviews with international activists working for Bhopal via Skype and email. Thus, in total, I conducted 60 interviews.

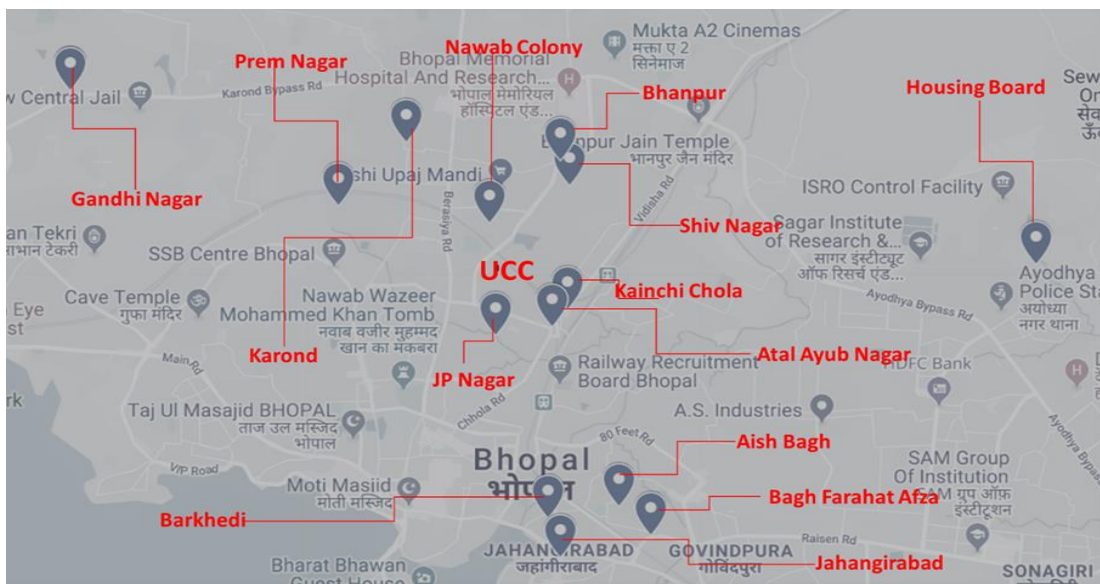


Figure 4. 1 Map of Communities of survivor-activists in the Bhopal metropolitan area covered in my fieldwork

Language and Culture

The culture and language of Bhopal never seemed foreign to me, given my background. I was born and brought up in Bangladesh. Bangladesh was part of undivided India until 1947, and despite internal diversity, the two countries share many broad cultural attributes. During the fieldwork, I found that my background allowed me to gain access to and develop a rapport with a range of sufferers and grassroots activists. This cultural, social, and personal history has made me sensitive to what scholars (Bourgois and Schonberg 2009) call “local meanings” in Bhopali culture. Although “representing Others” has always been “a complicated and contentious undertaking” (Madison 2012: 4), it is crucial to understand, recognize, and acknowledge what Bourdieu (1980) calls the *habitus* or, more simply, belonging that we carry into the field. Due to the shared cultural, linguistic, and religious background, it was not too difficult a task for me to build trust with my interviewees within a short period. Perhaps it has much to do with my non-white, Bangladeshi origin. Referring to trust and reciprocity, one of my respondents, Hamida Bai, observed, “You do not appear like another white American conducting research and never follow up with them.” Nonetheless, a number of survivors initially declined to be interviewed as they are profoundly disappointed and frustrated over the lingering injustice in Bhopal. To them, as one put it, “nothing really changes on the ground.”¹⁰⁵

It was in a similar spirit that I received a warm welcome from Kanchan Verma,¹⁰⁶ a Bhopal survivor and community activist who told me at one point that though he had helped many American and European researchers in Bhopal, it had been a great pleasure for him to

¹⁰⁵After convincing Josna Bi that my purpose in research and her purpose in raising her voice to be heard by others are the same, she agreed to be interviewed. I view my research as a small step towards helping their voices be heard. I truly hope that this research contributes to emancipatory knowledge and social and environmental justice for marginalized groups.

¹⁰⁶ Kanchan lost seven members of his family in the disaster, and his elder brother, Sunil Verma, another survivor of his family, committed suicide in 2006. See Sanjay’s story in his own words, published in Aljazeera. <https://www.aljazeera.com/indepth/opinion/2014/12/i-survived-bhopal-gas-tragedy-2014121194116413879.html>

assist a researcher from his neighboring country, Bangladesh. Kanchan Verma told me that nobody from South Asia ever came to Bhopal to conduct research. I conducted the interviews in both Hindi and English; however, the majority of conversations with *Gas Peddit* and grassroots activists were conducted in Hindi. Although I can speak Hindi with reasonable proficiency (due to Bollywood movies and music), Kanchan Varma helped me verify my interpretations of the first ten interviews I conducted and provided insights into the cultural context on the ground. My stay at Kanchan's apartment during the first phase of my fieldwork enabled me to grasp the nature and culture of Bhopal, most notably in relation to the affected communities. In the first phase, Hazira Bee, a longtime Bhopal activist and resident of JP Nagar (adjacent to the UCIL factory), offered me invaluable aid in navigating the locations of interviewees.¹⁰⁷ In the later phase of my interviews, I was assisted by another interpreter, Chandrakant.

Additional Sources on Bhopal

As the Bhopal disaster is now more than three decades old and is deemed the worst industrial disaster in modern human history, a plethora of primary and secondary sources exists on the causes and consequences of the Bhopal catastrophe. This literature offers much relevant yet conflicting information about the disaster and the complex, politicized issues from counting casualties and injuries to adjudicating litigation procedures, compensation demands, and long-term consequences. In order to address this complexity, I attempted to crosscheck data and materials using multiple sources. In addition to peer-reviewed papers, official documents, and

¹⁰⁷ It was a double benefit for me to be assisted by Hazira Bee, a longtime, committed Bhopal activist. Although I later conducted a formal interview with her, by that time she had already shared her story of the night of the explosion and of her long commitment to activism for justice in Bhopal. Hazira Bee has a leadership quality in her voice, but it was not difficult for me to sense her frustration and despair because it has been more than three decades since the disaster, and justice remains elusive.

documentary films [e.g., *One Night in Bhopal* (2014), *The Bhopal Disaster* (2014), and *Bhopali* (2011)], I found it useful to view movies ([e.g., *Bhopal: A Prayer for Rain* (2014) and *Bhopal Express* (1999)] and novels [e.g., *Animal's People* (2007) and *The Red Book* (2008)] based on the events. These sources provided insights into the social and environmental harms that destroyed the livelihood of marginalized populations living in Bhopal and the emotions surrounding these events. Moreover, as this dissertation critically engages with the history of development trajectory (developmental and neoliberal) in India and analyzes the event of the disaster as outcome of a long chain of global economic story, I examined and make use of existing materials on India's social and economic developments leading up to and following the disaster.

Cross-national Data on Slow Violence

I combined information from several data sources to create my own cross-national dataset containing all major industrial disasters that have long-term social and environmental consequences (Appendix A). The dataset was created by starting with information from Mihaidoul et al.'s (2012) study of major industrial accidents occurring since 1907 and Beck's (2016) study of the risk implications of globalization with particular attention to high-casualty disasters.¹⁰⁸ I used both studies as a beginning point in the creation of my database. I further updated descriptive information on major industrial accidents by conducting extensive newspaper searches and collecting data from relevant disaster-related websites, such as the International Disaster Database (EM-DAT) and the Chemical and Industrial Accidents Database. Due to a shortage of information on vital aspects, such as casualties and injuries, I omitted some disasters from my database. The most glaring gap in existing datasets is that they do not provide

¹⁰⁸ I extend my thanks to Mihaidoul for sharing her data on major industrial accidents.

adequate data about major disasters in marginalized countries. For example, two large-scale gas explosions in Bangladesh in 1997 and in 2005, which left enormous social and ecological damage, were not included in the recent datasets. Knowledge of these events, due to my Bangladeshi origin, led me to dig deeper into the multiple sources to attempt to create a more comprehensive dataset.

The definition of what is a major industrial accident is also fraught. The United Nations Environment Program (UNEP) defines major industrial accidents as those in which 100 or more people are injured and 10,000 or more people are evacuated. I supplemented this definition discerning which disasters had long-term social and environmental consequences and at least one casualty caused by the disaster for this research. The inclusion of information about long-term social and ecological effects, i.e., slow violence, caused by industrial disasters is the most challenging part in creating the dataset. Although Rob Nixon (2011:2) defines slow violence as, “a violence of delayed destruction that is dispersed across time and space,” he does not provide clear direction on how to operationalize social and environmental destruction as slow violence. Consequences in this research include health, social, and environmental. I used four separate time durations for calculating prolonged destruction: (1) effects that lasted for less than five and more than one years; (2) consequences that lasted for more than 5 and less than 10 years; (3) consequences that lasted for more than 10 and less than 15 years; and (4) consequences that lasted for more than 20 years. The extent of social and environmental destruction caused by industrial disasters that took place after 1997 (for more than 20 years) and after 2005 (for more than ten years) is estimated based on news media and journal articles.

Since there are no readily available data sources for industrial disasters with slow violence, I conducted a manual search for each individual disaster. I did an extensive search for

each of the disasters used in the analysis to collect information on the long-term social, health, and environmental consequences. Although existing disaster research and websites do not have specific details, I used these sources to develop a primary understanding of disasters (including the type and consequences). I used LexisNexis to obtain information on industrial disasters in developed countries such as in the US, Germany, and England; however, this search tool is not very useful for disasters data in peripheral countries. For this reason, I used local English-language newspapers for the slow consequences of the disasters in peripheral countries that are not found by LexisNexis search. The classification of countries as peripheral and developed is based on a combined measure of GDP size (the World Bank and IMF measurement criteria) and share of workers employed in industry (Beck 2016).

I recorded data on the cross-national variation of industrial disasters with far-reaching and enduring consequences on Excel spreadsheets. I analyzed the data using descriptive statistics, including graphics, to examine the degree to which peripheral countries are vulnerable to industrial disasters. I used SPSS 23 software to complete quantitative data analysis. This dataset allowed me to examine the ways in which developed countries/sites offshore social and ecological risks to peripheral countries/sites; and renders invisible the slow violence of social and environmental harms. Industrial disasters that occurred before 1980 are not included in the dataset for two reasons. First, the 1980s are the critical period for what we now call neoliberal globalization (see, Brown 2015; Davis 2006; Fraser 2013; Harvey 2007; Parr 2012; Urry 2014), creating a new dimension in the integration of the world economy. Additionally, slow violence has a direct relationship with the neoliberal globalization that exists today (Nixon 2011). Second, accidents occurring before 1980 are more likely to be underreported and subject to reporting bias (Beck 2016). In other words, industrial accidents that

took place in developed countries are more likely to have received better media coverage than that of developing countries, particularly in an era when mass media was not that dominant.

Chapter Five: Bhopal: The Epitome of the Slow Violence of Biosocial and Environmental Destruction

An old woman hobbles forward out of the crowd, it's Gargi, whose back is almost as bent as mine. "Mr. Lawyer, we lived in the shadow of your factory, you told us you were making medicine for the fields. You were making poisons to kill insects, but you killed us instead. I would like to ask, was there ever much difference, to you?"¹⁰⁹

- Indra Sinha (2007), *Animal's People*, p. 306

Victims were responsible for the fact that their disease was not understood by modern medicine...[it] was like saying that because human beings were not like laboratory animals, the toxic insult to their bodies by the inhalation of methyl isocyanate – about which science did not possess definite knowledge – could not be decisively linked to the diseases encountered

- Veena Das (1995), *Critical Events: An Anthropological Perspective on Contemporary India*. P. 155.

The Bhopal disaster is what Sewell (1996, 2005) calls a moment in a larger global political economic history, but what happened on December 3, 1984, in Bhopal was but the beginning of a long chain of tragic events that would unfold over the following decades. The lethal cloud of chemicals that floated over the crumbling neighborhoods surrounding the Bhopal chemical factory, on the one hand, instantly killed four to eight thousand people and injured hundreds of thousands, and on the other, left devastating biosocial and environmental consequences for generations to come.

¹⁰⁹ Booker-shortlisted *Animal's People*, a novel on the *Gas Peddit*, centered around the story of a 19-year-old boy whose life has been crippled by the poisonous chemicals released from the factory. The chemicals made him look like an "animal" who is bent at the bottom of his spine, making him to walk on four feet. The novel begins with the account of this boy: "I used to be human once...I don't remember it myself, but people who knew me when I was small say I walked on two feet just like a human being." Sinha, who was part of the International Medical Commission on Bhopal team, also crafted an advertisement, published in *The Guardian*, to raise money for health care of the victims gassed by Union Carbide.

The catastrophes in Bhopal have laid the foundation for intergenerational suffering. As of yet, there is no sign that the calamitous and inter-generational chain is ending. Hamida Bee, a Bhopal survivor and activist, showed me her paralyzed son lying on the bed, and told me about her struggle:

Look what Union Carbide did. I was supposed to be the one to be taken care of by him. Instead, in my sixties, I am taking care of him. I, like many others in this colony, don't know for sure if my grandchildren are carrying poison in their blood. It seems we have no chance of escape.

Hamida Bee and hundreds of others live in JP Nagar, the area adjacent to Union Carbide's factory that was hit hardest by the leak. Since there was no evacuation on the night of the disaster, those who lived around the factory died instantly (Figure 5.1) or suffered until their deaths, weeks or months later. Those who survived, like Hamida Bee's son, face long-term, chronic health consequences. Such stories are all too common among the neighbors of the now-abandoned factory. Moreover, Bhopalis who live in the shadow of the factory suffer many health problems due to ongoing soil and water contamination caused by the abandoned chemicals.

Despite the profusion of devastating biosocial and environmental consequences, official research in neoliberal India has failed to offer any systematic conclusion about the adverse effects of the disaster. Additionally, doctors working in hospitals designed to provide treatment for victims stigmatized patients because of their lower socioeconomic status. Anando, a gas sufferer, told me, "doctors think that because we [the gas affected] can walk into hospitals, we must be rather well. One has to die in Bhopal to prove his gas-related illness is legitimate." The disaster has not only done biological harms to the *Gas Peddit*, but it also wounded them socially as well.



Figure 5. 1 Widows' Colony, Homes for the Wives of Men Who Died in the Lethal Cloud.
Source: Raghuraj Rai.

In addition to the wanton degeneration of their injuries, the gas-affected were misled and exploited by medical professionals. These doctors, who ought to have treated the victims with compassion, were instead driven by profit to use the *Gas Peddit* as “guinea pigs” for unethical drug trials (Gulhati 2010). For instance, the Bhopal Memorial Hospital and Research Centre (BMHRC),¹¹⁰ built to provide treatments to gas sufferers, conducted several for-profit drug trials for Western drug companies AstraZeneca and Glaxo Smith Kline on gas affected people between 2003 and 2009, leading to deaths of approximately 14 *Gas Peddit* people (Hanna 2014; Lakhani 2011).¹¹¹ Bhopal, as I discuss in this chapter, continues to be a site of social, health, and

¹¹⁰ The Indian government created this hospital through UCC’s liquidated asset to treat gas victims. It began working in 2001, and UCC made the decision about who would be its managers (Hanna 2014). The hospital is both private and public, and although it has good facilities, victims prefer not receive treatments from there. The gas affected I interviewed accused BHMRC of corruption and profiteering by exploiting *Gas Peddit* victims. Many, thus, prefer to go to Hamida hospital or the Sambhavna Trust Clinic.

¹¹¹ The issue of drug trials has become so intense that family members of drug-trial victims refused to sit for an interview with me out of fear of retaliation. However, with the help of Rachna Dhingra from Bhopal Group for Information and Action (BGIA), I managed to interview Mohsin Uddin, the brother of a deceased in drug trials.

environmental destruction, with continuous exploitation in tow. Moreover, similar to what scholars have found in research on socioenvironmental damage in other marginalized sites (Auyero and Swiston 2009; Norgaard 2011; Monbiot 2007; Petryna 2004), powerful actors, such as state managers and corporate officials, from the beginning engaged in the production of uncertainty and invisibility to suppress the unending consequences of the disaster.

This chapter goes beyond the spectacle of the event, i.e., instant deaths and injuries, highlighting the way that the slow violence of social and environmental destruction affected and continues to affect vulnerable populations in the Bhopal region. In its endeavor to highlight the process of marginalization of the gas-afflicted Bhopalis in neoliberal India, this chapter also illustrates why existing political economic scholarship on social and environmental destruction needs to emphasize how neoliberal actors, to maximize accumulation and profit, overshadow many prolonged biosocial and environmental harms affecting marginalized groups living in peripheral countries such as India. This chapter, in other words, examines the Bhopal disaster as the epitome of slow violence, a violence of prolonged social and environmental destruction that continues to spread over time and space (Nixon 2011) in Bhopal.

Offering a stimulating discussion on unequal power relations and global environmental racism, Nixon (2011) brings evasion of corporate responsibility to the debate on Union Carbide. Union Carbide, the corporation responsible for the disaster, evaded the legal liability for cleaning up the toxic site after the accident. Nixon equally questions a general framework on violence that relies mostly on media spectacle and thus fails the public by preventing us from grasping the slow-moving, attritional consequences of the Bhopal disaster. At the same time, Nixon, however, analyzes slow violence in Bhopal within a general framework of neoliberalism, highlighting the

Mohsin told me that they [BMHRC] never mentioned that “it [the paper, in English, that he signed] was for a trial on my brother who had severe breathing problem and heart disease [common among gas affected].”

literary representation of the Bhopal disaster in Indra Sinha's (2007) novel *Animal's people*. In this framing, he misses the internal political economic dynamics (discussed in Chapter Two and Three) that further marginalize affected people in peripheral countries. Specifically, since the neoliberalization of the Indian economy in the 1990s, in which the US eventually became the largest source of foreign investment, the Indian government not only abandoned the issue of Anderson's extradition but also attempted to suppress the legitimacy of anyone identifying biosocial and environmental crises in Bhopal. Based on data from archives and official and independent reports, as well as interviews with Bhopal gas and water sufferers, I examine the disaster's ongoing adverse consequences stemming from a dynamic that overshadows the slow violence of social and environmental harms affecting vulnerable populations in peripheral countries.

The Production of Uncertainty and Invisibility

The rush of uncertainty in Bhopal began immediately after the event when the prevailing question was whether there was cyanide poisoning among those exposed to the gas. Research shows that MIC, a water-soluble lethal gas, can be converted to cyanide when reacting with water in high temperatures (Dhara and Dhara 2002; Eckerman 2005). Some doctors, such as Sriramachari (2006), as well as other doctors who were part of official research organizations, were convinced that activated cyanide was already present in the initial gas leak. Yet, even if the exothermic reaction in tank 610 of the Bhopal plant, for example, had not converted MIC into cyanide, it is possible that after inhalation the MIC would have transformed into cyanide anyway through a chemical reaction with bodily fluid.

Similarly, relying on autopsy results, doctors who were treating the gas affected during the early hours of the disaster suspected well in advance that cyanide poisoning was the cause of death and serious injuries.¹¹² Thus, physicians began administering sodium thiosulphate (NaTS), a known antidote for cyanide poisoning. However, the then-director of health services in Bhopal strictly advised against it, saying, “under no circumstances shall NaTS be administered” (Rajagopal 1985:137). In 1985, Morcha, the pioneer of Bhopal activism in the early days (Chapter Six), secured permission from the court to administer the antidote, and it built Jana Swasthya Kendra (Public Health Centre; hereafter, JSK) to offer the antidote to patients with the help of volunteer doctors. Not long after the Bhopali police vandalized their office, raiding and confiscating all health-related materials. The central and local administration of India immediately terminated the antidote application thereafter. JSK’s documented data could have provided essential baseline data for future epidemiological research. In its 1985 report, the Indian Council of Medical Research (ICMR), the highest biomedical body in India, detailed the evidence of improvement after the antidote was administered to some of the exposed. According to ICMR’s report, the response to NaTS was quite positive since “patients who were in a helpless situation were suddenly relieved of the major symptoms....” (Sriramachari 2010:80).

The cyanide controversy, as Rajagopal (1985:140) wrote, “remains the most scandalous story of Bhopal.” He continues: “the only drug (NaTS) that seemed to promise antidotal treatment was denied thousands of poor and suffering victims; that instead, precisely symptomatic treatment was given, with dangerous drugs, is tantamount to slow mass murder”

¹¹² Dr. Heeresh Chandra, who was the head of the Department of Forensic Medicine at Gadhi Medical College, confirmed the presence of cyanide within 24 hours. Dr. Sriramachari, with other doctors working on finding a causality between symptoms and cyanide poison, highly recommended antidote to cyanide. Dr. Sriramachari was sure that MIC may have reacted into cyanide. The same was asserted on December 10 by a German doctor, Dr. Dauderer, who came to Bhopal as part of a relief effort from German foreign office. The Indian government asked him to leave India three days later on December 13. It was also reported that Dr. Dauderer sent NaTS—but they were given to only affluent victims (see Rajagopal 1985).

(Rajagopal 1987:140). No official investigation followed this controversy. UCC clearly had the most specific knowledge about how MIC reacts as well as what could be done to treat victims of the resulting cyanide, but never said anything significant for the benefit of the exposed. Instead, it fomented uncertainty to minimize its legal risk.¹¹³ The central and local administration in India still maintains a narrative of uncertainty about the possible cyanide poisoning among *Gas Peddit*. The production of uncertainty has still not ended over cyanide poisoning; it remains at the center of Bhopal's ongoing, adverse consequences.

The health outcomes of the Bhopal tragedy, particularly the long-term ones, are obfuscated due to a scarcity of relevant information, reflecting a lack of organized effort by the responsible actors following the disaster (Dhara and Dhara 2002; Eckerman 2005; Hanna 2014; IMCB 2002).¹¹⁴ The citizen uncertainty and confusion in the aftermath of the disaster can be attributed to multiple causes. Importantly, Union Carbide refused to divulge information on the composition of the leaked gases—claiming the need to maintain trade secrets. Their refusal then multiplied the adverse effects and the capacity of agents to address them. Although it is widely accepted that MIC was the primary gas released from the Bhopal factory, various studies also reported that more than 28 chemical entities were released in the atmosphere that night (Chandra et al. 1994; Sriramachari 1997; Vijayan 2010). Medical and environmental experts argue that the lethal cloud may have contained other dangerous substances, including not only hydrogen cyanide but also nitrogen oxides, carbon monoxide, phosgene, and monomethylamine (Dhara et al. 2002/2013; Hanna 2014; Sinha 2009).¹¹⁵ Moreover, researchers have found that when MIC

¹¹³ UCC's 1974 report on safety considerations for the Bhopal plant rated MIC at the most dangerous level, five (5).

¹¹⁴ Bhandari N R. (2010), who was part of ICMR medical body, after the lifting of unwritten ban on sharing medical results, later talked about the mismanagement in handling the case.

¹¹⁵ ICMR conducted a clinical trial on 30 gas-exposed patient two months after the disaster, recommending the use of sodium thiosulfate as antidote to cyanide poisoning. However, the recommendations were not followed by the local health authorities in Bhopal. UCC rejected the notion of cyanide poisoning (see, Dhara et al. 2002/2013; ICMR 1985)

reacts with water at a high temperature, as likely happened in Bhopal, as many as 300 toxic byproducts are generated (Narain and Bhushan 2015). However, most official and independent research assumes that the purest form of MIC was released on that fateful night. But because such postulations are based on the test results of animals, these studies are indeterminate for the impact on society, humans, and the environment.

The Indian government's lack of a serious concern for the suffering of Bhopal *Gas Peddit* victims contributed to uncertainty and confusion as well. Sarangi, a longtime Bhopal activist, once asked me, "How do you expect them to offer justice to the victims if you don't know who they are or the exact consequences of the disaster? Ask anyone in the local or central administration, they probably do not have any desire to know what is going on in Bhopal."

Echoing that, Guddo Bi, a gas and water victim, asserted:

If our people [politicians and people in power] had been serious about us, about our health, the Bhopal disaster would not have happened. The same goes for what is going on today: the official uncertainty about the ongoing negative health and environmental consequences reveal the attitude of the powerful towards the affected.

Guddo Bi's account is reflected in how the agents of the catastrophe systematically undermined the biosocial and environmental harms caused by the disaster. What played a significant role in the production of uncertainty and invisibility after the cyanide controversy is the 1989 out-of-court settlement, which reduced a complex range of exposed persons into discrete categories.

The categorization occurred based on the suggestion of UCC and before the exposed people were even identified. Moreover, 93 percent were placed in the "minor injuries" category.¹¹⁶ Many gas

¹¹⁶ There are a total of four categories, minor injuries, temporary disability, permanent disability, and utmost severe cases. The categorization was created with litigation in mind; but it still defines Bhopal victims. The Group of Ministers on Bhopal (GOM), created to evaluate the Bhopal issue, was targeted by the activists for changing the categorization process. The group says, it's too late to do anything with regard to this.

sufferers were brushed aside by the government simply because they came short of the requisite paperwork. During an interview with another Bhopal activist, I met a woman, Lovely Verma, who did not want to talk because, in her words, “I tried so many times, and I had to bribe, but they still did not believe I’m a *Gas Peddit*.”

The 1989 settlement also influenced the official biomedical discourse of the Bhopal catastrophe. ICMR conducted 26 long-term studies between 1985 and 1994, but the results were not published until 2004.¹¹⁷ Thus, official research confused the public about the health consequences of the disaster. The Indian government placed an unofficial restriction on government researchers, preventing them from speaking about the medical consequences of the Bhopal disaster. When the embargo was finally lifted in 2004, medical doctors had the opportunity to speak up, and several of them made allegations of corruption and gross mismanagement in the epidemiological studies (see, Bhandari 2010; Lall 2010; Singh 2008). The many shortcomings of ICMR’s study notwithstanding, the Indian government never scrutinized its own official data on the biological harms caused by the disaster. In a similar vein, official research on environmental contamination in Bhopal reflected the interests of local and global powerful actors of neoliberalism in India.

In the following sections of the chapter, I describe the best available data first on short-term and long-term health and social effects and second on environmental effects such as on the soils and groundwater. This section also integrates interview data to provide the perspectives of

¹¹⁷ One methodological flaw of the ICMR study is that it created a cohort based on mortality/death rates in the immediate aftermath of the disaster in 1985. They tiered the cohort by using documented mortality rates in the first few days of the disaster (such as, in “severe” areas, the mortality rate was 22 -23 per 1,000). Residence and the number of people killed in each location were used to measure the exposure. As discussed in earlier chapters, several activist organizations protested this and advised for location, among many other things, rather than injury-based cohorts (see, BGIA 1991; Hanna 2014).

Gas Peddit and activists on the long-term biosocial and environmental consequences of the disaster.

Biosocial Destruction

Many health-related issues remain completely unresolved (Dhara et al. 2002/2013; Eckerman 2005; Samarth et al. 2013; Visvanathan 2001), and even 34 years after the disaster, the overall assessment of long-term consequences of the MIC exposure in Bhopal is replete with confusing facts and figures. At least three notable factors have prevented researchers from developing the systemic understanding required to mitigate the adverse consequences of the Bhopal disaster: (1) company and state refusal to release critical information concerning the nature of the released gas; (2) failure to report the acute-stage clinical and autopsy findings; and (3) claims of medical confidentiality that obscured the extent of the disaster. It is important to note that the disaster and these acts of producing uncertainty happened when India's developmental state was in decline and market liberalization for neoliberal actors was in the making (Chapter Two).

During the initial days of the disaster, health care providers were constrained. Because those offering care were unsure of the underlying causes, they were forced to treat only observed symptoms. The presence of thick and blood-streaked foam flowing from the nose and mouth was a common symptom of the gas-affected people (ICMR 2010; Sriramachari 2010).¹¹⁸ The available autopsy reports suggest that the lungs wholly collapsed due to congestion, hemorrhage, and consolidation in the lungs. Organs and blood were discolored, and blood cyanide levels were significantly higher in gas-exposed patients (Vijayan 2010). Since the lungs were the main organs affected instantly by the gas, major symptoms included breathlessness, coughing,

¹¹⁸ Eckerman (2005) writes, the gas-exposed people "gasped for breath, their nostrils were quivering, the lips were cyanotic. They had foetid breath and blood-streaked froth."

choking, chest pain, and hemoptysis. As MIC is soluble in water, effects were seen in both the upper and lower respiratory tract (Dhara and Dhara 2002/2010). Reacting with water, MIC is capable of being ingested and distributed throughout the body;¹¹⁹ essentially, released gases entered the lungs and victims drowned in their own bodily fluids. Although most medical studies confined their analysis of the effects on lungs and eyes, health consequences among the exposed were due to a wide spectrum of respiratory, reproductive, ocular, neurological, genetic, and psychiatric factors (BGIA 2018; Cullian et al. 1996; Dhara and Dhara 2002/2010; Samarth et al. 2013; Vijayan 2010).¹²⁰ Government-initiated studies highlighted short-term health effects, such as lung disease, eye infections, and morbidity (ICMR 2013), and independent studies refer to long-term health problems, including cancer and birth defects (BGIA 2018; Eckerman 2005; *NY Times* 2014).

Most deaths occurred in the first few days of the disaster (Anderson et al. 1985), and a range of factors determined the exposure levels, including geographical location at the time of the disaster, housing quality, age, and preexisting health conditions (BGIA 2018; Dhara and Kribel 1993; Rastogi et al. 1998;). Despite the inadequacy of official research and the widely variable methodologies and sampling criteria of independent research efforts, all of the available research shows higher mortality rates in severely exposed areas both immediately following the disaster and over the long-term (BGIA 2018, 2016; Dhara and Dhara 2002; Vijayan 2010; Narayan 1990). Additionally, general health problems are much higher in exposed areas than

¹¹⁹ Studies of MIC on experimental animals both before and after the disaster revealed this finding (see Blake 1982, Dhara and Dhara 2002, and Gassert 1986).

¹²⁰Several organizations conducted studies on the adverse health effects of the disaster. Ten years after the disaster, the International Medical Commission on Bhopal (IMCB) conducted longitudinal studies to examine the health outcomes among the exposed populations. Months following the disaster, the Council for Scientific and Industrial Research also conducted community and toxicological studies. Additionally, studies conducted by many independent researchers and organizations (see, for instance, Anderson et al. 1990; Kamat et al. 1987; Medico Friend Circle 1985; Vijayan 1989, 1996) provided useful insights into the health-effects of the disaster. The Tata Institute of Social Sciences (TISS) registered the exposed households; however, the findings of analysis of the TISS remain unpublished. BGIA has been conducting research over the last decades.

control areas (Acquilla et al. 1996; Banerji 1985; BGIA 2018; Dhara and Kriebel 1993; Mehta 1990; Singh 2006). Pulmonary and respiratory functions among survivors were found to be highly abnormal, persistent, and, in many cases, permanently impaired (Vijayan and Kupparao 1993; Vijayan 2010).¹²¹

Since MIC is heavier than air, it hovered at ground level, killing children below the age of 5 disproportionately (Vijayan 2010).¹²² Children and women continue to bear the brunt of the disaster (Figure 5.2). Three decades later, many children are born with birth and congenital deformities (ICMR 2010). Relatedly, the long-term consequences have devastating effects on women's reproductive health, evident in both recent and previous studies. Early studies suggested evidence of reproductive complications such as menstrual cycle disruption, leukorrhea, dysmenorrhea, pelvic inflammatory disorder, cervical erosion, excess menstrual bleeding, and suppression of lactation (Bang et al. 1990; Eckerman 2005; Narayan 1990). More than 25 percent faced changes in the duration of their menstrual cycles (Medico Friend Circle 1986).

Young women who were exposed in their childhood continue to have abnormal and painful menstrual cycles (BGIA 2000). Pregnancy loss and infant mortality rates were found to be higher in gas-exposed women who lived in the vicinity of the factory (BGIA 2018, 2010; Dhara 1993; Varma 1987). Studies go on to show that 43 percent of the pregnancies in neighborhoods near UCC did not result in a live birth, and 14 percent of the babies died within one month. A 25 percent incidence of miscarriage was reported in the pregnant women exposed to the leak; the abortion rate is found to be four-fold among the exposed women.

¹²² In a survey of 164 children conducted approximately two months after the disaster in residential areas less than 2 km away listed chronic health effects for children and many of them are found to be traumatized and depressed (see Irani et al. 1986).



Figure 5. 2 Bhopali children born with disabilities after the leak. Source: Greenpeace, IEP.

The perinatal and neonatal mortality rate of 7 percent in the affected area was significantly higher than in the nonaffected areas, where 4 percent of babies are lost (Bajal et al. 1993; Bhandari 1990). Because studies show that exposure to MIC is directly fetotoxic (Dhara and Dhara 2002; Vijayan 2010), it follows that what I term *reproductive violence* in Bhopal is part of the ongoing consequences of the Bhopal disaster.¹²³ Bhopali women experience, one could say, are the embodiment of pernicious development in India. The suffering of their bodies represents the adverse consequences of not only the Bhopal disaster but India's economic growth more broadly.¹²⁴ Rachna Dhingra, from the Bhopal Group for Information and Action, said:

Women's suffering caused by the disaster is so discernable that you don't even need research to understand it. Women who survived the night of the disaster experienced the worst trauma, and their suffering is never-ending. And, you know, in a conservative

¹²³ Women's ongoing suffering in Bhopal is one of the reasons why the Bhopal Movement is led predominantly by women. Women play a very active role in the Bhopal Movement. In fact, women outnumbered men over several times. Women's continuous suffering from the gas leak and soil and water contamination appears to motivate them to continue the struggle until justice is served. On women's role in the Bhopal Movement, see Zavestoski (2009) and Mukherjee (2010).

¹²⁴ In more recent years, violence against women in India has reportedly increased by 46 percent (Sanjay 2016)

society like Bhopal, despite all the evidence, it is not easy to convey women's reproductive sufferings caused by the disaster.

Aberrations in the immune status and genotoxicity in severely exposed subjects are not uncommon. For instance, an increased number of chromosomal aberrations in lymphocytes and a significant depression of phagocyte activity of lymphocytes (Correspondent 1991; Saxena et al. 1998) were found in exposed subjects.¹²⁵ However, no follow-up study was done to examine the persistence of this problem, though animal and *in vitro* studies demonstrate MIC's potential for genotoxicity (Dhara and Dhara 2002; Eckerman 2005).¹²⁶ As MIC can elicit an immunogenic response, studies on this area, experts suggest, require further attention (Dhara and Gassert 2002; Eckerman 2005; Samarth et al. 2012; Vijayan 2010).

Furthermore, psychological problems among the exposed are prevalent, though research is highly inadequate.¹²⁷ ICMR, despite its many failures, was compassionate about psychological disorders among the exposed and conducted a brief study in 1984 which concluded that more than 50 percent of the gas-affected population faced psychological issues (Murthy 1987). A survey conducted in 1985 demonstrated that mental disorders were five times higher in exposed areas than control areas (Sriramachari 2006). In a collaborative research project, Sethi (1987), an expert maintaining outpatient service programs established specifically for gas victims, detected that 45 percent of those survived suffered from neuroses, 35 percent from anxiety states, 19.7

¹²⁵ BGTRRD, an official organization created by the local state government in 2010 to alleviate the suffering of Gas Peddit, found that there are 100,000 who have chronic respiratory disorder, and 30 percent of the survivors have neurological and psychological problems. In addition, overall morbidity is five times higher than in unexposed areas.

¹²⁶ Although cancer risks among the affected populations were not conclusively reported, and in some cases have moderate to weak evidence of risk (Ennever and Rosenkrantz 1987) longitudinal study is needed as risks may be manifested two or three decades after exposure (Dikshit et al. 1999).

¹²⁷ It is understandable that a system which is suspicious of the affected peoples' physical health problems would not care their mental health status. Mental health problems garner some attention when gas-affected people commit suicide. Other than that, it is not even a health issue in Bhopal. My fieldwork observation of the affected people in Bhopal suggests that even patients themselves do not want to talk about it much.

percent adjustment reaction with prolonged depressive type, and 15.5 percent adjustment reaction with predominant disturbance of emotions (Dhara and Dhara 2002; Vijayan 2010). Neurobehavioral tests on exposed populations suggested that “auditory and visual memory, attention response speed, and vigilance were significantly impaired” (Dhara and Dhara 2002:11). The persistence of cognitive impairment in the exposed populations, as found in the research, suggested significant MIC neurotoxicity. Neurological research revealed evidence of central nervous system involvement in the form of stroke, encephalopathy and cerebellar ataxia (Vijayan 2010). The incidence of suicide among the gas-exposed was reported, but no serious study has ever been undertaken.¹²⁸

As victims are often stigmatized because of their poor socioeconomic status, doctors who offered treatment to the victims attributed much of their ailments to their class background.¹²⁹ As noted above, lung disease is the most prevalent ailment among the gas exposed, and research indicates that even those with no previous record of disease contracted chronic illness after the disaster (BGIA 1986; Eckerman 2005). However, the prevailing discourse of prior tuberculosis often undermines treatment. Arjun Singh, the chief minister of MP province Madhya Pradesh, stated, “you cannot call these sick people ‘gas cases’: most of them have had such pre-existing

¹²⁸ The issue of suicide garnered attention after a famous Bhopal survivor activist, Sunil Varma, killed himself in 2006. He was wearing his favorite shirt with the slogan, “No more Bhopals,” when he was found hanging. Sunil Verma survived the disaster with his two other siblings and lost six family members. He was found spared in a cremation ground waiting to set up in a funeral pyre, when he woke up among the corpses. Although he survived, he, like many other Bhopali kids who witnessed the disaster, has been suffering serious mental trauma since the night of the disaster in 1984.

¹²⁹ Although my research did not include the nearest hospital, Bhopal Memorial Hospital and Research Center (BMHR), designed initially to provide free treatments to victims, BMHR, a technologically developed hospital, is reportedly rife with corruption. BMHR was established in 2001. When UCCL liquidated all its asset, they were transferred into this hospital (the trust is called the Bhopal Memorial Trust), [MAYBE CUT this last phrase or rephrase because it’s unclear why it “thus escaped” prosecution] thus escaped the possibility of criminal prosecution in India. The hospital was set up to provide care for gas victims free of charge for eight years, but it is also peculiar because it takes private patients. Lalita Bee, a gas survivor, told me: “BMHRC can make money and give better treatments to private patients. Why would they care about us? Being a gas survivor is a stigma, and doctors working there stigmatize us as well.” Ethnographic research on the science and medicine after Bhopal shows that doctors who are supposed to offer treatments to victims are distrustful of patients’ complaints (Hanna 2014).

lung diseases” (BGIA 1986:4). Poverty has certainly contributed to their suffering and exacerbated the status of their health; it has also been used to cover up the failures of modern medicine and the subterfuge of powerful actors trying to overshadow the consequences of their faults. Rumita Bai, who lost a daughter and a sibling in the disaster, recently lost her husband to cancer, and she suspects each was caused by the gas. Interestingly, however, cancer was not deemed a compensable category until 2010. But even after it was recategorized, she received no compensation. Many doctors, such as Dr. Agarwal, who is the director of cancer registry in Gandhi Medical College, Bhopal, completely reject associating cancer cases with the gas leak and deny a separate cancer registry for the gas survivors (Hanna 2014). The cancer registry published a report in 2010, more than 20 years after the previous one in 1988. Although the new report revealed a higher rate of cancer among MIC-affected areas, it simultaneously detracted from the issue at hand and compounded our understanding by linking cancer among men to tobacco use and cancer among women to poverty.¹³⁰ The health statuses of those who were fortunate enough to survive the catastrophe are, to this day, being ignored, underestimated, and stigmatized by the people in power.

The many devastated families experience the Bhopal disaster's long-term effects. In many cases, only children survived as orphans; in other cases, women survived with their children, leaving no male salary-earning members to support the family. Many wage-earning family members who have become chronically sick due to their exposure to gas are still unable to work and provide food for their households. One of the activists, Savitri Bai, makes another relatable point. She states: “Even if you don’t have any chronically sick person in your family now, it’s still difficult to get a job because your family members are gas survivors. Employers look at

¹³⁰ The report did not focus on cancer incidences in the MIC-exposed areas. Instead, it makes a causal connection among cancer, poverty, and tobacco use, violating the research design required for this study. See Hanna (2014)

Bhopal victims differently. Victims are not considered healthy; thus, employers do not want to hire them.” In a similar vein, the stigma and health concerns around being a *Gas Peddit* makes it difficult for victims to find someone willing to marry them. It is a trouble women survivor face the most, since both they and their suitors legitimately fear the prospect of disabled children.

It is understandable why the situations of those who are chronically ill are worse. The consequences of the 1984 Bhopal disaster are not only epidemiological, but they are also linked to social as well environmental suffering. Premlata Chowdhury, a water victim and activist, says: “For many? years, we have been drinking the water and growing food in the soil polluted by toxic chemicals from the plant. Contamination is environmental, and consequences are social and epidemiological.”¹³¹ This statement aptly exemplifies what environmental historian Ramachandra Guha (2013) once wrote: the environmental movement in the West primarily emerged “out of a desire to protect endangered animal species and natural habitats” while in India it emerged “out of the imperative of human survival.” To Bhopal victims, the long-term health consequences are not disconnected from the social and environmental consequences.

Environmental Destruction

The magnitude of environmental contamination remains highly underemphasized. The devastating environmental effects immediately following the Bhopal disaster were largely undetermined because, as stated before, the exact composition of the chemicals in the cloud was unknown. Some measures of the initial impact on nonhumans were taken. Initial research shows that the Bhopal gas tragedy instantly killed 2,000 livestock and caused severe harm to the fauna and flora in the factory’s vicinity. Toxic substances that decomposed diminished soil fertility and

¹³¹ This statement aptly exemplifies what environmental historian Ramachandra Guha (2013) once wrote: The environmental movement in the West primarily emerged “out of a desire to protect endangered animal species and natural habitats” while in India it emerged “out of the imperative of human survival.”

the leaves of trees withered and branches fell off. Most aerial parts of plants dried instantly upon gas dispersal. The polluted rivers and lakes decimated the local fish populations.¹³² Bhopal gas survivor, also a water victim, Kasturi Bai recollects: “There were many dog and goat carcasses in the roads and fields. It seems something had defaced the areas around the factory. It was a city of death and destruction of humans and animals.”

More than three decades later, toxic pollutants from the abandoned plant continue to contaminate the soil and groundwater in nearby areas (Figure 5.3) and affect new generations, exacerbating the health effects just described. Since the inception of the plant in 1968, the factory dumped processed waste, by-products, and waste from machinery, polluting water inside and outside the facility. Tons of waste was left in a leaking container at the site. Many of these chemicals have a long half-life and will remain poisonous for hundreds of years.

Most studies, including studies conducted by the Centre for Science and Environment (2009), found that the site remains contaminated with chlorinated benzenes, HCH isomers, Carbaryl, Aldicarb, carbon tetrachloride, and chloroform (Narain and Bhushan 2015). In 1999 Greenpeace International declared the site a “global toxic hotspot.”¹³³ In 2009, to mark the 25th anniversary of the disaster, Greenpeace (2009) analyzed a sample of water and found that carbon tetrachloride levels were 4,880 times higher than the US Environmental Protection Agency limit. A 2018 study conducted by the Sambhavna Trust Clinic found that UCC’s waste had contaminated groundwater in 42 localities in Bhopal (BGIA 2018). Laila Bai told me: “It’s a slow poisoning,” and when I asked her, “Do you think that your government does not want to deal with this because these consequences are not clearly manifested?” Bai replied: “I don’t think

¹³² For the immediate environmental consequences of the Bhopal disaster, see Broughton (2005), Samarth et al. (2012), Vijayan (2010), and Muscato (2018. Link: <https://study.com/academy/lesson/the-bhopal-gas-tragedy-facts-effects.html>)

¹³³ Chemicals found in groundwater have multiple health effects, including chromosomal aberrations, liver and kidney damage, narcotic, impaired fetal development, and cancer (Greenpeace 1999).



Figure 5. 3 The abandoned factory, which contaminates soil and groundwater in and around

so. They, in fact, don't want to manifest them because it will harm their reputation. And they don't want to fight [the] powerful multinational corporation, Dow.”

Referring to an open pit (Figure 5.4), once a repository for chemical waste from the pesticide plant, Zarina Bi, another water victim and activist, asked, “Why does this pond full of chemicals still exist just outside the factory wall?” Slum children take baths in this open pond. “These kids barely have any idea that they will fall sick when they grow up,” says Safreen, a second-generation victim and activist. During my fieldwork in Bhopal, I witnessed the same. The abandoned factory site became a frequent playground for children. Monsoon floods transport these chemicals to nearby areas, and groundwater contamination is still spreading. Water in districts two miles from the factory is 40 times more toxic than the Indian safety standard (*CSE* 2009). When I asked Shanti Bai, a gas and water victim and activist, about the water contamination, she responded in a manner similar to many others:

Our struggle is also [an] environmental struggle because our life depends on the water we drink. People are also growing food on this contaminated soil. Nobody is telling us clearly what is going to our body with this water and soil. And, what kind of government and corporations make people drink polluted water? Is this hell?

An Indian Supreme Court lawyer, Claude Alvares, once visited and tasted the water from the well. He had to spit it out because of its strong chemical taste. At the behest of the Indian Supreme Court in 2004, the local administration has supplied the victims with clean drinking water since 2012; nevertheless, victims have complaints about the water quality of this provided water. Sarita Malviya, a gas and water victim and activist, showing me a sample of water collected in a bottle, asked, “Is it drinkable, you think? If the administration really cares about our good health, why do they not just clean up the contaminated site?”



Figure 5. 4 Children playing near the contaminated Solar Evaporation Pond. Source: Amnesty International.

Bhopalis have been drinking the contaminated water for decades. The 2002 study by the People's Science Institute confirms the presence of mercury in Bhopal's wells. The 2009 CSE study shows that soil and water in and outside the factory are packed with dangerous chemicals (Figure 5.5). The CSE study was conducted on seven soil samples (six from inside the factory and one from the solar evaporation pond) and 12 water samples (one from inside and 11 others from wells at different locations). Soil samples were discovered to have high concentrations of contaminants, such as carbaryl, Aldicarb, HCH isomers, chlorinated benzenes, alpha-naphthol, mercury, lead, and chromium. Similarly, groundwater in several locations is contaminated with chlorinated benzenes, HCH isomers, Carbaryl, Aldicarb, carbon tetrachloride, chloroform, mercury, lead, chromium, manganese, zinc, nickel and copper. The average concentration of pesticides found in all water samples was 1.1 to 38.6 times higher than the Indian standard. Even in areas three kilometers away from the factory, such as in Shiv Nagar, water was found to have concentrations of carbaryl 110 times the Indian standard, mercury 24 times the Indian standard, and lindane 40 times the Indian standard.

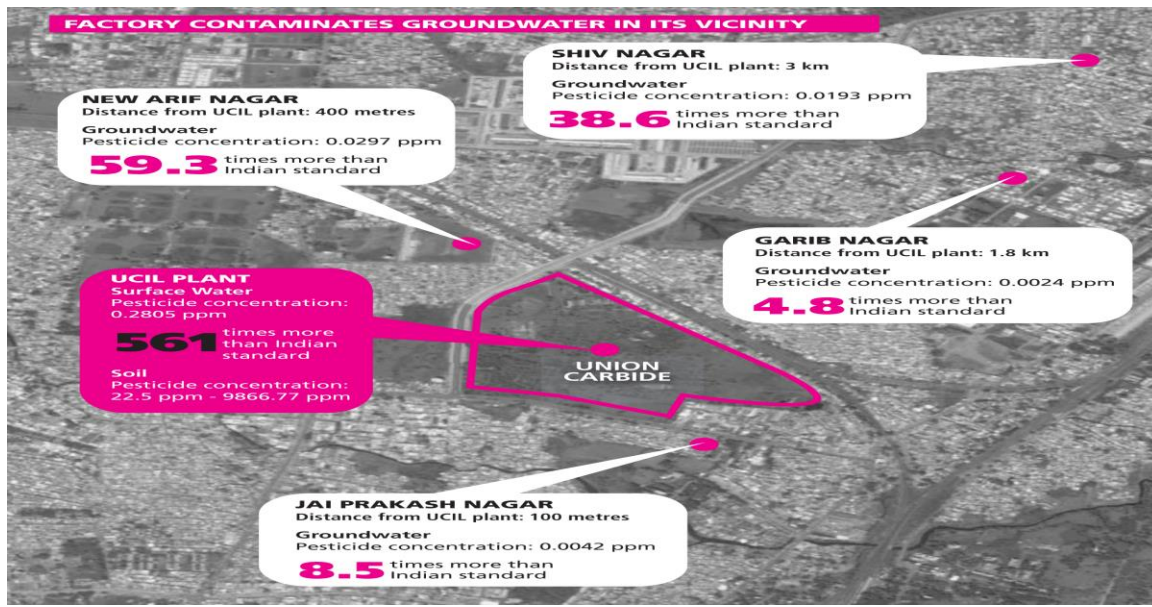


Figure 5.5 Toxic pollutants contaminate groundwater in the vicinity of the factory. Source: IEP.

Yet the denial of such findings by the local and central administration is not uncommon. In 2010, the National Environmental Engineering Research Institute (NEERI) and National Geophysical Research Institute (NGRI) found isolated contamination, arguing that there was a limited movement of contaminants towards the groundwater due to extremely low permeability. Rachna Dhingra from BGIA contests:

It's simply a lie. Pesticides once produced by the factory were found in both soils and groundwater. It is not difficult to understand why the Indian administration does not want to show ongoing contamination in Bhopal. If they do, they will have to hold the corporation [currently, Dow] responsible. They are not going to do this without resistance. They are not honest and courageous enough to bring the culprit to justice. But people already know, so we are not going to stop our fight until we ensure justice in Bhopal.

While some bodies of the Indian government, such as the Chemicals and Petrochemicals Ministry, have pushed for Dow to remedy the site, other bodies fear that forcing Dow would

jeopardize foreign investments in the country. Second-generation victims and activists like Safreen continue to insist that the “Dow Chemical Company, which owns Union Carbide since 2001, must acknowledge its legal liabilities and should pay for the cleanup. Causing damage to people’s lives and their environment, and not accepting responsibility, is shameful.”

Over the last decade, toxic pollutants that contaminated soils and groundwater in and around the Bhopal factory have garnered national and international attention. However, decontamination in Bhopal is absent in the state and corporate justice narrative. Bhopal survivor and activist Kaniza Bee raises a pertinent question:

How many of our people have to die to show the pain and suffering to the world? Does it really matter? We are not scientists or politicians. We know that the water we have been drinking has had a pungent smell, and these chemicals now might reside in our body. When we get sick, or even die, [because of] toxic pollutants, we understand. But our country, this world, doesn’t seem to care.

The ongoing adverse social and environmental consequences of the Bhopal disaster display the unending catastrophe in Bhopal. Groundwater and soil contamination caused adverse health conditions to the people living nearby abandoned factory. Although biosocial and environmental consequences are ongoing, there are no government-initiated efforts to conduct epidemiological studies and clean up the contaminated site. ICMR terminated all studies in 1994 without explanation; though experts continue to advocate for more rigorous epidemiological studies (Dhara and Kriebel 1993; Eckerman 2005). ICMR, moreover, lost track of its cohort used in epidemiological studies. Dhingra from BGIA said: “we talked to many *Gas Peddit*, there is no evidence that the victims have been contacted by any official researchers for years.” There is mounting evidence that serious health problems, including cancer, have increased over time. A

recent study conducted by the Sambhavna Trust Clinic (2018) found that kidney failure rates among the affected are three times higher, while cancer mortality and respiratory illness rates are twice than those of the average population. The same study shows 28 percent more deaths among the exposed compared to the unaffected. Diseases, including renal, respiratory, ocular, gastrointestinal, reproductive, and psychological, are not only caused by exposure to toxic gas but by ongoing environmental contamination in Bhopal as well.

No Silver Lining?

The catastrophe in Bhopal is unending, and it continues to take a large toll on vulnerable populations, including the poor, minorities (Dalits and Muslims), and women and children. The affected, however, have yet to see any systemic assessment of and steps against biosocial and environmental destruction in Bhopal. While these harms in Bhopal continue to unfold, neoliberal actors in power strive to render these consequences invisible. Such acts by powerful actors to produce invisibility begun, as I discussed at the beginning of the chapter, immediately following the disaster. Union Carbide's refusal to share the information on the effects of MIC contributed to this invisibility immediately following the disaster. This refusal was also a sign of coming biosocial and environmental catastrophes in Bhopal. The Indian administration's denial of possible cyanide poisoning reflected UCC's desire to downplay the devastation caused by the disaster. What followed afterward is no exception. The Indian government granted immunity to the corporation and all foreign accused in 1989 when it settled with Union Carbide for a lump-sum.

The 1989 out-of-court settlement, more importantly, reduced a devastating range of exposures to simplified categories and thus set the firm ground for the invisibility of long-term

biosocial and environmental consequences. With the rise of neoliberalism in India since the 1990s, the official biomedical research, which echoed the harm mentioned in the 1989 settlement, hoodwinked the public about the biological damages attributable to the Bhopal catastrophe. Similarly, the neoliberal undermining of the lingering devastation in Bhopal has also been reflected in official research on environmental contamination linked to the thousands of chemicals left in the defunct factory in Bhopal. Visvanathan (2001, 1986), an anthropologist, also criticized relevant social science disciplines for failing the victims of the lasting catastrophes in Bhopal. While fearless *Gas Peddit* time and again attempted to make their suffering visible and pressured their government to ensure social and environmental justice in Bhopal, the neoliberal Indian administration, under the influence of global actors of capital, never made any fruitful efforts to remedy the ongoing, intergenerational crises. And as the US eventually became India's largest foreign investor, taking any meaningful steps against responsible corporations became unimportant to the Indian government. Thus, the constant misery of the *Gas Peddit* remains an abandoned issue largely.

Bhopal's ongoing consequences may not be an aberration. On the contrary, they are part of the larger political economic dynamic. The long-term adverse social, health, and environmental consequences in Bhopal are consistent with research findings: destruction caused by industrial activities, including disasters, are exploited by powerful actors as opportunities to increase profit (see, Davis 2002; Dyson 2010; Gunewardena and Schuller 2008; Johnson 2011; Klein 2007; Swamy 2011; Tierney 2007). To Bhopali *Gas Peddit*, however, their ongoing suffering is specific to the developing world. To them, such complete travesties of justice do not happen in the developed world or developed areas. Their position is supported by a comparative fact. In the US, the Dow chemical company did assume responsibility for the health damages

caused by Union Carbide before the company was acquired. Dow accepted UCC's liabilities and settled an asbestos lawsuit in Texas that was originally filed against UCC. However, by contrast, Dow insists that it does not take liability for the Bhopal disaster because it never owned the Bhopal plant.¹³⁴ And much the same, the US government did not hesitate to punish BP for its Deepwater Horizon oil spill; the corporation was held responsible and made to pay "fair" compensation. But when it came to holding a US corporation accountable for an atrocity overseas at Bhopal, the US government did nothing. Instead, it meddled with efforts to ensure justice inside India.¹³⁵

The Bhopal catastrophe remains to be the most tragic event in peripheral countries' growth story. India long touted its economic growth and claims to be the most powerful country in Asia. India's so-called success story inflicts the burden of social and environmental destruction on marginalized people, including Dalits and Indigenous people. Since India's independence, more than 4 million people were dispossessed due to economic activities. More than 40 percent of the dispossessed are indigenous people. Neoliberal India with the resurgence of right-wing, Hindutva politics continues to marginalize its already vulnerable groups of populations. Levien (2018) shows that neoliberal India is without development for the people who need it most. For the *Gas Peddit* people, as I have demonstrated in this chapter, neoliberal India is not only without development; its ultimate feature is the prolonged biosocial and environmental destruction. In other words, if the initial catastrophe is attributable to India's shrinking developmental state, lingering devastation in Bhopal is the characteristic of India's

¹³⁴ See <http://www.indiaenvironmentportal.org.in/media/iep/infographics/Bhopal%20Gas%20Disaster/index.htm>

¹³⁵ On December 7, 1984, Warren Anderson was arrested (on the ground of culpable homicide, a non-bailable crime in India) by the Bhopali police upon his arrival in Bhopal after the disaster. However, he was released on bail six hours after his arrest. Due to the interference of President Ronald Reagan, the former Indian prime minister, Rajiv Gandhi, ordered his release, and the US government never adequately responded to the Indian court's extradition request of Warren Anderson (Edwards 2015).

neoliberal regime. *Gas Peddit* Bhopalis, in this sense, bear the brunt of India's developmental state as well as of India's neoliberal system.

Bhopal stands as a symbol of biosocial and environmental injustice in the modern, globalized world. In fact, justice in Bhopal is one of the main casualties of slow violence. This chapter has sought to demonstrate that the catastrophe in Bhopal did not end with the gas explosion that killed 25,000 and maimed hundreds of thousands in Bhopal, for its effects have passed on to new generations. Survivors and activists have been fighting for social and environmental justice for more than three decades, but the powerful actors and agents of the catastrophe, states and corporations, continue to display no concern for the suffering of Bhopal *Gas Peddit*.

This chapter argues that the Bhopal disaster is the epitome of slow violence, a violence that occurs gradually and out of sight (Nixon 2011) because adverse consequences are not only enduring but also spreading over time and space. Also, this chapter has shown why it is a sociological imperative to discern the internal dynamics of a country. For instance, the time period in which the Bhopal disaster took place was the era during which India was opening its market to global capital, and state and corporate agents in this process of market liberalization in India (a) built the hazardous factory in a highly disadvantaged zone in Bhopal; (b) disregarded basic safety standards; (c) set the ground for ongoing catastrophes in Bhopal. Since 1990, when India embraced a neoliberal ideology, the issue of the suffering of *Gas Peddit* has become a forgotten issue. Apart from India's political economic dynamics, what is notable is India's own, unique stratification system, to which caste, religion, gender, and indigeneity are of paramount importance. The ongoing catastrophes in Bhopal affect the most marginalized groups living in old Bhopal.

In sum, the biosocial and environmental destruction in Bhopal is a slow violence because the adverse consequences are ongoing and incremental, spreading across time and space. It is a slow violence because the consequences continue to affect the most vulnerable populations living there. Moreover, it is a slow violence not only because the enduring consequences elude political and judicial discourse, elude restitution from governments and corporations, but also for the reason that powerful actors have tried to cover their own tracks and suppress the legitimacy of the crisis. While other forms of violence are inflicted on marginalized people as well, the slow violence of social and environmental destruction stands apart, as it furthers the marginalization of the marginalized in Bhopal. Beyond the flash and dust of spectacle, Bhopal is, more crucially, the embodiment of slow violence, a violence begun on the night of December 3, 1984, when a lethal cloud without a silver lining took hold of the sleeping city.

Chapter Six: The Bhopal Movement, A New Political Society for Social and Environmental Justice

We are dealing with an [human] animal whose resistance, unlike that of a horse, lies not in his fragile body but in his stubborn determination to remain what he is—that is to say, precisely something other than a victim, other than a being-for-death, and thus: something other than a mortal being.

- Alan Badiou (1993), *Ethics: An Essay on the Understanding of Evil*, P.11-12.

...the 'valiant victims' of Bhopal remain 'faithful' to the event of the catastrophe, treating it "*right to the limit of the possible.*" Put another way, they 'draw from this situation, to the greatest possible extent, the affirmative humanity it contains ... to try to be the immortal of the situation.

- Upendra Baxi (2010), "Writing About Impunity and Environment." p.30

Bhopal continues to evoke our strong memories of instant deaths and destruction. Yet all but invisible are the ensuing catastrophes that harry the people, society, and environment of Bhopal. Although the slow violence in Bhopal is bereft of spectacle, it is not without resistance. I argue that the further marginalization of the gas sufferer in neoliberal India compelled the affected Bhopalis to create a specific form of politics distinct from mainstream political discourse as well as from what have been theorized in the sociology of social movements. While the responsible states and corporations continue to evade their liabilities for an avoidable catastrophe and attempt to trivialize and annul the continuing adverse consequences, Bhopal survivor-activists have been challenging the top-down narrative of social and environmental justice for more than three decades. The Bhopal Movement is, in fact, the longest-running social movement in postcolonial India. Besides its longevity, the Bhopal Movement, which challenges what Frantz

Fanon (1961) calls the nationalist narrative of justice, symbolizes the struggle for social and environmental justice in postcolonial societies. Moreover, I show in this chapter that the Bhopal Movement created a new political society in India, serving as a decisive refusal to forget or accept the biosocial and environmental assaults on the city's marginalized communities. I argue that the further marginalization of the *Gas Peddit* in neoliberal India compelled the affected Bhopalis to create a specific form of politics distinct from mainstream political discourse as well as from what has been theorized in the sociology of social movements.

To Bhopal victims, the catastrophe in Bhopal did not end with the gas leak in 1984; rather, it lives on through its reverberations and thus demands resistance be carried on until corruption is driven out. However, fighting for justice in a country like India, where the poor and marginalized suffer tirelessly, has often met with fierce state repression and sometimes desperate actions in the face of suffering (Baxi 1985; Chatterjee 2004; Kumar 1989; Patnaik 2010; Roy 2014; Rajagopal 1987; Ray 2014; Ray and Katzenstein 2005; Sarangi 1996; Levien 2018).¹³⁶ The local and central Indian administration from the night of the disaster attempted to invalidate the fight, and over time launched violent attacks on *Gas Peddit* activists. Despite such repressions, Bhopal activists have never quit standing up for their rights because they are determined to continue the struggle until justice is served. Of course, the Bhopal Movement went through its ups and downs. On the whole, however, it accomplished numerous goals, generated national and international attention to social and environmental justice issues, created a strong transnational network, and most importantly, kept the issue of Bhopal alive to demonstrate the

¹³⁶ Recently, in 2018,, Indian farmers marched to New Delhi with the skulls of farmers who committed suicide due to a devastating loan burden. In 2007, in Nandigram, West Bengal, 14 people were killed, and many women were raped for protecting their land from corporation. Repression to Narmada activists is well known. Antinuclear activism by fisherman in India was also met with state repression. The 2011 Rail Blockade Movement by Bhopal survivors met with massive attacks on women and elderly people. See Nielson (2010), Srikant(2009), Banerjee (1998), Sarkar(2008), De (2014).

futility of a state-corporate notion of justice. The strength of the movement lies in its refusal to accept the dominant narrative from power structures such as states and corporations, envisioning instead a version of justice premised on the people below — the affected, the marginalized, and the poor.

In this chapter, I broadly examine how the Bhopal Movement has emerged and endured in the face of the disaster’s long-lasting, adverse social, economic, health, and environmental consequences. I demonstrate how the process of marginalization of affected Bhopalis, both under the shrinking Nehruvian development developmental state (1967-1989) and the neoliberal regime that followed (since 1990), shaped the targets, tenacity, means, and objectives of the Bhopal Movement.¹³⁷ I argue that the Bhopal Movement created a form of politics that existing movement theories have failed to capture. Predicated on four years of “structural fieldwork”—consisting of interviews with activists, archival research, and observation of sites and events, including the 34th anniversary events in 2018 – I detail the ways in which the Bhopal Movement created a new kind of politics, one that rejects conciliatory posturing and ad-hoc solutions, constraining states and corporations alike to meaningfully address the ongoing social and environmental mutilation of Bhopal. The Bhopal Movement, therefore, complicates Chatterjee’s (2004) theorization of “political society,” which maintains that subaltern groups that remain excluded from bourgeois civil society engage the state through unstable, temporary, and extra-legal negotiations. For instance, the decontamination of the toxic site that continues to spread soil and water contamination is one of the major demands of the movement, and Bhopal activists refused to accept any makeshift solutions to this ongoing problem. The Bhopal movement is

¹³⁷ The Bhopal Movement is a three-decade-long resistance movement for justice in Bhopal, India. Although initially the movement was led by some activists from outside the city of Bhopal, now, besides the gas affected Bhopal activists, the movement is strengthened by local and international students, activists, organizations, doctors, lawyers, and environmentalists.

remarkably stable, long-lasting, and continues at least for tactical reasons, to rely on the law (as expanded further in Chapter Seven). Taken together, the following is an analysis of the Bhopal Movement as a social and environmental justice campaign, underlining the agency, determination, and aspirations of the subaltern people (Chatterjee 1993, 2004; Guha 1982) to create an alternative to the dominant narrative of justice. The specificity of the politics of long-term, intergenerational suffering in Bhopal is different not only from labor and identity politics but also from various types of environmental justice movements that have been theorized highlighting only material, visible, and spectacular short-term consequences (Bullard 1993; Brulle and Pellow 2006; Cole and Foster 2001; Mohai et al. 2009; Pellow 2007).

This chapter proceeds in three steps. First, it discusses how the catastrophe in Bhopal has flipped its political character since 1984. It highlights the history of the Bhopal Movement to explain this reversal. Second, it briefly elaborates on the women's role in political mobilization for justice in Bhopal. Finally, it analyzes how the Bhopal movement, through its firm commitment to counteract the perpetrators of slow violence, creates a new political society, underscoring its mobilization against state negligence and corporate exploitation.

From Political Apathy to the Politics of Suffering

Bhopal before 1984 was what scholars¹³⁸ call politically very apathetic (Eliasoph 1998; Gans 1974; Gaventa 1980; Riesman et al. 1950). Bhopal after the disaster of 1984 became a new Bhopal: a political Bhopal. In a conversation with me on July 30, 2018, a longtime Bhopal activist Satinath Sarangi said what he had stated many times about the history of activism in

¹³⁸ Culture of political avoidance has been analyzed by various social scientists. For instance, Eliasoph (1998) in her analysis on the production of apathy shows that how apathy and apolitical ideas among ordinary people are created and disseminated. For a similar analysis on quiescence (and rebellion) in Appalachian valley, see Gaventa (1980). Similarly, written in 1950, Riesman et al. study the inner-directed social character in American middle class. For a similar type of discussion, see Gans (1974).

Bhopal: “As for questioning the power, Bhopal was highly apolitical. People living here never really considered fighting for their rights. Even the Indian independence movement against British rule before 1947 hardly influenced the people of Bhopal.” But the city’s political nature flipped after the disaster, especially among residents of old Bhopal where the factory was located. When I asked what motivated you to become an activist, Kanchan Verma, a gas survivor orphaned by the disaster, states,

In 1994, after leaving the orphanage with my elder sister, Mamta, we started to live with our elder brother, Sunil [Sunil committed suicide in 2006], I would seldom see actions, rallies, etc. in the streets of Bhopal, sometimes I would accompany my brother to these protests, as he was still active. He did not come to live with us at the orphanage in Bhopal where my sister and I lived. He rather chose to be a part of the campaign and continued to stay at our house in Jaiprakash Nagar, the worst affected community, it is situated right opposite the abandoned Union Carbide factory and the company employed hundreds of contract workers from nearby. So, much of the motivation came from my brother, and also from how I saw people in the streets of Bhopal over the years – both young and old along with their children. In a nutshell, I grew up with having the campaign around.

[Interview via email. May 29, 2019.]

Many of the Bhopal disaster survivors became fervent justice activists and take pride in their long-lasting mobilization, among other accomplishments, such as making the local administration provide them with clean drinking water, refusing to give up under state repression, and forcing the Indian government to file a Curative Petition to seek further compensation for *Gas Peddit* people (Chapter Seven). The movement evolved, gained traction over time, and contested the states and corporations responsible for their immense biosocial and

environmental suffering. More importantly, it created a new political society at odds with the prevailing political discourse, granting responsible parties no exceptions. Although the current scope of the Bhopal Movement, national and international, is remarkable, the *Gas Peddit* and activists initially vacillated between different goals, targets, and strategies.

Furious Crowd to Political Mobilization

The historical time-period of the Bhopal disaster is critical. It happened at a time when global capitalism was taking a neoliberal turn (Harvey 2005; Parr 2014; Wacquant 2009) and environmental regulations, especially in peripheral countries, were little to none (Kumar 2014; Roberts 1996; Zavestoski 2009). It was a critical historical period in India as well; the country was transitioning from its Nehruvian development model (1947-1966) toward social decline under Indira Gandhi (1967-1989) and, eventually, to the neoliberalization of the economy in the 1990s.¹³⁹ The Bhopal Movement began when India started experiencing a transformation in resistance activities associated with its transition to neoliberalization of the economy. With no frame of reference for mobilizing in the wake of such an unprecedented catastrophe, much less in a remote, apolitical place like Bhopal, the affected Bhopalis faced enormous challenges at the start of their activism. From a historical perspective, survivors' mobilization in Bhopal is split between two phases, loosely categorized: a spontaneous resistance by a furious crowd immediately following the disaster in 1984; and a persistent surge of increasingly organized responses since 1985, which began emboldening when disaster survivors organized in 1989,

¹³⁹ My periodization follows Raka Ray and Mary Katzenstein's (2005) *Social movements in India: Poverty, power, and politics*. They identify three related but different chronological phases: 1947-1966 (Nehruvian master frame); 1967-1988 (decline of Nehruvian state under Mrs. Gandhi); 1989- to the present (neoliberalization). While movement activities were directed towards the discourse of poverty alleviation in previous periods, market liberalization gave birth to a transformation in resistance, such as women's movements and environmental movements. (add phrase to explain the aims of these movements)

when Union Carbide made the disputable out-of-court settlement with the Indian government for an *ex gratia* lumpsum.¹⁴⁰

The first phase was a spontaneous response to the disaster, beginning with what scholars (Hobsbawm 1959; McPhail 2017; Rudé 1981; Thompson 1963) would call an agitated “crowd” who surrounded the gate of the Bhopal factory. Once news of the disaster disseminated throughout the adjacent communities, several small and sporadic groups organized demonstrations in front of government offices. They demanded health and monetary assistance and the arrest and hanging of the chairman of Union Carbide, Warren Anderson.¹⁴¹ This spontaneous response, as activists Sarangi and Balakrishna state, was leaderless or led by many leaders; however, it lasted for only a few days (Sarangi 1996; Mac Sheion 2015).¹⁴²

The first phase of the movement was met by an orchestrated effort of the local and central administration to thwart any and all mobilization, to create an impression that the state was handling the crisis adequately. The first retaliation attempt against mobilization was made under Operation Faith (discussed in Chapter Two), the process of neutralizing the remaining MIC, which started on December 16, 1984.¹⁴³ This operation which caused a premeditated mass exodus of approximately 4 million people was part of a plan to diffuse the anger and de-mobilize the desperate people looking for justice in Bhopal (Jones 1988; Sarangi 1996).

¹⁴⁰Splitting the earlier phases of the Bhopal Movement with a distinct time period is a difficult task. The ingenious beginning of the movement following such an unprecedented catastrophe was itself a remarkable thing; however, the movement did not necessarily find its essence in terms of goals, ideologies, and targets for couple of years. Successful organized protests began happening after the 1989 out-of-court settlement.

¹⁴¹ The demand to hang Warren Anderson still lives on (even after his natural death in 2014). “UCC and Anderson ko fasi deo” (Hang Anderson and UCC) is one of the common slogans survivors use in their major demonstration such as anniversary events.

¹⁴² There are several useful sources for very earlier mobilizations of this three-decade long social movement. See especially Sarangi (1996) and Mac Sheion (2015). Sarangi is an old warrior of Bhopal activism. His other writings are very useful to understand the history of survivors’ mobilization in Bhopal.

¹⁴³ Although the Indian administration named the process of converting remaining gas to pesticide as Operation Faith due to the uncertainty and confusion involved with this undertaking, the administration created a spectacle (water tankers and fire brigades drenched the streets, while a helicopter hovered around the plant and sprayed water) to restore confidence among locals.

The second phase of the movement was mostly led by activists who came from outside Bhopal. These activists formed two groups, Nagarik Rahat Aur Purnvas Committee and Zahreeli Gas Kand Sangarsh Morcha (known as Morcha). The former placed greater focus on the victim's immediate needs, including health care, whereas the latter placed greater emphasis on the social and health consequences, involving broader political goals and tactics. Morcha sustained its activities longer than its counterpart and marked a decisive influence in the early struggle for justice in Bhopal. Morcha was the most powerful activist organizations at the beginning of the Bhopal movement. It was the first major organized activism that questioned the faulty categorization process of the gas affected and suggested location-based, instead of injury-based, lists of the *Gas Peddit*. The Indian government responded to Morcha's mobilization with harsh reprisals, such as confiscating the medical records of Bhopal victims that Morcha had sought to preserve.¹⁴⁴ State repression, combined with inter-group conflicts and problems with the internal decision-making process, made this earlier organized protest only briefly successful (Mac Sheoin 2015; Mukherjee 2010; Sarangi 1996; Zavestoski 2010).

Most of the outside activists left Bhopal after relatively rapid success. The achievements of these first two phases are notable. They pressured the complicit Indian government to provide health and economic relief for the *Gas Peddit*; spread the news of the magnitude of the disaster (including high casualties and health impairments) and drew the media's attention; and above all, showed the sign of forming a culture of peoples' mobilization outside the mainstream political

¹⁴⁴ Bhopali police attacked Morcha's office, Jana Sasthya Kendra (JSK), in 1985 following a controversy over whether victims suffered cyanide poisoning or not. Morcha, following the recommendations of doctors working for the victims and with the help of volunteer doctors, started administering NaTS, an antidote to cyanide poisoning, in a health service center it organized. With the central administration and UCC's suggestion, the local administration stopped all efforts of administering NaTs to victims. This antidote, as many doctors (Sriramachari 2006) recommended, could have been helpful to improve victims' health condition.

discourse.¹⁴⁵ Rachna Dhingra, the Indian coordinator of the International Campaign for Justice in Bhopal (ICJB) and a member of Bhopal Group for Information and Action (BGIA), said: “This culture of resistance is also what makes the struggles continue, and it takes tremendous time to create such a culture in a conservative place like Bhopal” (Interview. July 30, 2018).

Initially, however, most activists tried to bring attention to the immediate consequences of the disaster, spending their energy on pressuring the government and Union Carbide to provide necessary health care and monetary compensation (Banerjee 2013; Mac Sheoin 2015; Zavestoski 2009). BGIA was the first group that tried to connect Bhopal to other national and transnational networks (Sarangi 1996; Mac Sheon Zavestoski 2009). This organization, many of whose members were studying at American and British universities, later played a decisive role in taking the Bhopal issue beyond the Indian state. Due to their efforts, the International Coalition for Justice in Bhopal (ICJB) was formed.¹⁴⁶ This campaign network, later revamped under a different name, the International Campaign for Justice in Bhopal (ICJB), which to date is still very active, comprising at least five Bhopal-based groups, organizing multiple demonstrations across the world, and continuing to mobilize people for justice in Bhopal. Additionally, ICJB continues to be very active in using internet to mobilize internationally and challenge “the oppressive structure of state-corporate nexus” (Pal and Dutta 2012:230).¹⁴⁷

¹⁴⁵ Movement scholars call it the cultural outcomes of the movement. See, Taylor and Van Dyke 2004. This also can be noted as what Whittier (2004) calls the consequences for each other.

¹⁴⁶ Ward Morehouse, an American activist for justice in Bhopal, through his writing and activism played a critical role in Bhopal activism in the United States. Morehouse established the Council on International and Public Affairs, which fought for justice in Bhopal. He inspired the formation of the International Campaign for Justice in Bhopal (ICJB), a transnational activist group fighting for social and environmental justice to this day. The Highlander Research and Education Centre, Tennessee-based grassroots organizing, played a very crucial role in Bhopal’s initial transnational mobilization process. People who worked with Highlander Center became connected with an Indian NGO, Society for Participatory Research, known as PRIA. Back then PRIA was a very young organization, and organizers of PRIA were very committed to bring international attention to what happened in Bhopal. The author’s conversation with John Gaventa, who mobilized people initially for Bhopal in America, was helpful in this regard.

¹⁴⁷ See ICJB’s internet-based campaign here <https://www.bhopal.net/>. Its activists currently use Twitter and Facebook for campaign purpose. Currently ICJB activists are doing a twitter storm to revise the death figure in the

Moreover, the Bhopal disaster, as Zvestoski (2009: 391) states, would eventually become “the de facto cause for the global anti-toxic movements.”¹⁴⁸ Although it takes a longer period of time to develop and establish a kind of politics that would constantly fight the dominant actors of the catastrophes in Bhopal, the Bhopal Movement realized the importance of mobilizing supporters both nationally and internationally. Hazira Bee, a survivor activist, stated:

The movement is not only about Bhopal anymore, it is also about how to make the world know that such immoral practices of corporations must be fought collectively and globally. Going global with activism, therefore, was a necessary step for our success because corporations responsible for this massacre are not Indian, and thus the fight must look beyond our own country of India. (Interview. August 1, 2018)

It is important to note that the second phase of the movement ended after outside activists left Bhopal. The Bhopal disaster survivors led the next phase. They formed many organizations, all of them devoted to the immediate needs of Bhopal victims. Two of the organizations, namely Bhopal Gas Peedit Mahila Udyog Sangathan and Nirashirt Pension Bhogi Sangarsh Morcha, garnered wide-ranging attention: membership of these two organizations reached approximately 10,000.¹⁴⁹ But of the many survivor-led mobilizations in Bhopal, none could have made such strides without the participation of women, who continue to lead the movement even 34 years after the initial explosion.

Curative Petition (CP) filed in 2011. The hearing of CP will happen very soon. In 2016, it petitioned the White House for not shielding Dow against its liability for Bhopal, although the Obama administration did not make any useful steps in its response to the petition.

¹⁴⁸ As early as 1985, the Pesticide Action Network (PAN) organized a small protest in front of the conference center of the Food and Agricultural Organization in Bangkok. The Bhopal Medical Appeal (BMA)—a UK-based NGO that started a fund-raising campaign in 1996 for the health care needs of Bhopal victims—was widely supported by the UK branch of PAN. BMA currently raises money for the Sambhavna Clinic, a community health clinic designed to provide treatment and support to gas and water victims.

¹⁴⁹ It’s unfortunate, however, that these organizations had much in common with their predecessors regarding their errant focus, internal democratic crisis, and conflicts over trivial issues. These mobilizations were partly successful in getting whatever monetary assistance they received from the Indian government; in pressuring the government to improve certain rehabilitative measures directed toward the Bhopal victims, such as building hospitals for survivors; and in influencing the questionable settlement with the Union Carbide corporation.

“*We are the women of Bhopal... We are Flames*”¹⁵⁰

Women activists, despite their seemingly drawn-out, tiring efforts,¹⁵¹ are nonetheless proud of their activism for justice in Bhopal. Women activism in Bhopal began as early as 1989, when a legal catastrophe—which brought countless catastrophes in its train—shocked the affected Bhopalis. The Indian government in 1989 settled with UCC for an *ex gratia* lump-sum, massively undercounting the number of deaths and injuries from the gas explosion. The affected people were initially and continued to be excluded from the litigation process (Baxi 2010; Cassels 1993; Fortun 2001; Paul and Baxi 2015). Importantly, the litigation process to date has used the image of the ‘average’ victims, placing them in a range of categories from “minor injuries” (more than 90 percent are placed in this category) to “utmost severe cases.” This facile classification of a perilous, complicated, and individualized exposure, which was actually drafted for the 1989 legal settlement, has dominated the official epidemiological discourse on the Bhopal disaster. To protest this government decision, at least 1,000 women walked to the capital of India, New Delhi, immediately following the disputable settlement in 1989. This was, in fact, the first major move by the Bhopal survivors and activists to challenge the narrative of justice provided by the states, Indian and American, and the Union Carbide Corporation. The affected Bhopalis and activists soon realized that their government “sold them out,” colluded with the American corporation, and did not nor “[would] not protect them from corporate onslaught” (Interviews with Ram Piyari Bai, on July 26, 2018; and Lalita Bee, on July 13, 2018). Once again, it was women who spearheaded and carried out the subsequent protest.

Women’s participation was vital, both for representing the marginalized in their demographic totality and for lending *pathos* to the victims’ appeals. Importantly, women’s short-

¹⁵⁰ “We are the women of Bhopal, we are flames, not flowers” is a slogan Bhopali activist women use to illustrate their determination and strength for justice in Bhopal.

¹⁵¹ Some activists expressed such frustrations to me during my fieldwork in Bhopal.

term and long-term reproductive suffering (see Dhara 1993; Narayan 1990), such as birth defects in offspring and early menopause, compelled them to continue the fight for justice in Bhopal. Premlata Choudhary, a community leader and Bhopal survivor activist, said, “women activists have been central to the Bhopal Movement, and they have motivated their family members to participate in demonstrations and organized protests.” Another woman activist, Guddo Bee, stated,

It was difficult as a woman to be an activist [referring to conservative culture], but we tried and now people understand why we are fighting. If we do not fight, no governments or corporations would be willing to safeguard people like us who have been suffering since the night of the disaster. The struggle was and is still hard, but that’s the only thing we can actually do. (Interview. July 17, 2018)

Such determination among the women activists has only grown over time (Figure 6.1). In June 2002, two women survivor activists started a hunger strike for an indefinite period at New Delhi’s radical public sphere, Jantar Mantar.¹⁵² They were Tara Bai, who was three-months pregnant on the night of the disaster (eventually experiencing a miscarriage) and has since been unable to conceive, and Rashida Bi, who lost five immediate family members while she herself is riddled with permanent health defects. They continued the hunger strike for 19 days until they were hospitalized. Among manifold targets, their hunger strike protested the Central Bureau of Investigation (CBI)’s 1989 application before the Chief Judicial Magistrate in Bhopal to withdraw the charges of culpable homicide against UCC and its former CEO Warren Anderson. The activists also protested the Indian government’s complicity with neo-imperial US corporations and pressed the issue of Anderson’s extradition, an issue never seriously pursued by

¹⁵² Jantar Mantar has been a gathering place for progressives in India. The protest originally began with a sit-in by 200 activists on June 26, 2002, and the hunger strike began on June 29.



Figure 6. 1 Women Activists [Rashida Bi at the Centre] at a Demonstration on the 34th anniversary of the Bhopal disaster, December 3, 2018. Source: author.

India's public administration lest they should lose their healthy investment climate (Chapter Seven). It is important to note that the demolition of the Nehruvian model of development had already been completed in the 1990s, when the Indian economy went through a massive market liberalization process, foreign investment having increased by more than 50 times in a single decade (Edwards 2014). Politicians pressured the relevant agencies, including the foreign ministry of India, not to advance the Bhopal issue, but the demonstration in New Delhi successfully forced the CBI to reinstate the charge of culpable homicide against UCC and Anderson.

The Bhopal Movement also buoyed up and dovetailed with the women's movement for justice in India.¹⁵³ Women in the Bhopal Movement have outnumbered and continue to outnumber men, challenging religious and patriarchal traditional values (Botelho and Zavestoski 2014; Mukherjee 2010; Sarangi 1996). Dhingra, during our conversation, referred to another socially significant element of women's participation. To Dhingra:

In a conservative society like Bhopal, where women suffered profound consequences due to the gas leak, participating in the struggles has a *therapeutic* effect because it offers them space to express and share the angst caused by the disaster. This is especially true for women survivors who do not typically have a social support system in India (Interview. July 30, 2018, emphasis added).

Women activists, who were no less than the fulcrum of the Bhopal Movement, found their well-deserved limelight when two of their front runners, Rashida Bi and Champa Devi Shukla,¹⁵⁴

¹⁵³ Movement organizations and members express solidarity with and participate in other movements, such as the Narmada Valley Movement protesting the injustice against marginalized people, especially women. . More importantly, Two Bhopali women activists use the money they received from the Goldman Environmental Prize to give an annual grant, the Chingari award, to women fighting to protect the environment and fighting corporate crime across India.

¹⁵⁴ Although survived the night of the disaster, Shukla lost her three children and her husband immediately after the disaster.

were awarded the 2004 Goldman Environmental Prize, Asia. Additionally, Bi and Shukla went on to lead a class-action lawsuit, demanding the decontamination of the toxic site and additional compensation for gas and water sufferers. In 2006, they used the award money to form the Chingari Trust to build the Chingari Rehabilitation Centre, which, among many other things, provides treatment for children born with disabilities from parents' exposure to MIC (Chapter Five). It was this reproductive violence against Bhopali women, for that matter, that, though receiving little to no attention in academia, drove women to lead the Bhopal Movement.¹⁵⁵

Fighting the Politics of Betrayal and Travesty

The catastrophe in Bhopal has taken multiple forms. Besides the woe of the survivors of the gas leak, Bhopalis who live nearby Union Carbide's factory suffer many health problems because of ongoing environmental contamination, which was caused by the chemicals left in the abandoned factory. UCC in effect disappeared as the agent of multiple catastrophes in Bhopal when, in 2001, it was acquired by another giant chemical corporation, Dow Chemical. Their merger inflicted a heavy toll on the gas sufferers because liability was further deflected.

Because Dow proceeded to invest approximately \$1 billion in India in one decade,¹⁵⁶ the activists turned to target Dow for clean up of the contaminated site. "Dow Quit India" has been one of the central slogans of the Bhopal movement since 2001. After more than ten years of protests to hold Dow responsible, Dow was summoned by the Bhopal Chief Judicial Magistrate (CJM) in 2013., Yet Dow did not respond to the summons, maintaining that they have no responsibility for the prior actions of an acquired company.¹⁵⁷ Pointing to Dow's disregard for

¹⁵⁵ Fifty five of sixty interviewees conducted for this study are with women survivors and/or activists.

¹⁵⁶ Dow had a total of \$200 million investment in India 10 years ago. It has employed approximately 900 people in India.

¹⁵⁷ See Dow's official statement here: <https://corporate.dow.com/en-us/about/issues-and-challenges/bhopal>

the courts summon, activist Balakrishna stated: “Dow is an absconder from Justice.” The Indian state so far has not initiated any steps to make Dow responds to the court’s repeated summons to explain the whereabouts of Union Carbide.

It is important to note that Greenpeace’s 1999 report on ongoing environmental contamination in Bhopal brought this issue to the forefront. Greenpeace entered India through its connection with the Bhopal Movement, eventually creating its India office. From 1993, when Annie Leonard, the former president of Greenpeace, visited India to examine the potentiality of environmental movements in India, Greenpeace gradually developed a connection with the Bhopal Movement (Mac Sheoin 2003; Zavestoski 2009). Beyond this, Greenpeace’s 1999 report on Bhopal, which declared Bhopal a “toxic hotspot,” made the Bhopal disaster the crux of its anti-toxic movements. Amnesty International’s 2004 report on Bhopal likewise highlighted the significance of the struggle by Bhopal victims against continuous social and environmental injustice.¹⁵⁸ These international organizations contributed to the sustenance of the Bhopal Movement at the international level. Over the last one and half decades, the Bhopal activists organized, attended, and mobilized many demonstrations, national and transnational.

A Walk for justice

To activists, such as Balakrishna, “the Indian government has equal responsibility for the crime in Bhopal because it has been indifferent to the suffering of Bhopal victims.” In 2008, in an effort to make the Indian government listen to their long-neglected demands, demands including but not limited to the cleaning up of toxic waste that remained at the factory site, at least fifty “valiant” victims of the Bhopal disaster walked approximately 800 kilometers (500 miles) from

¹⁵⁸ Importantly, as Zavestoski (2009) notes, Amnesty International for the first time highlighted an injustice caused by corporate negligence; previously it only focused on the state violations of human rights. For a scathing analysis of Greenpeace’s involvement with Bhopal, see Mac Sheoin (2003).

Bhopal to the capital city of New Delhi.¹⁵⁹ Most of these protesters were second-generation victims who have grown up with genetic impairments due to their parents' direct exposure to MIC gas and prolonged contact with a contaminated environment. The survivors and activists demanded that Dow Chemical clean up the contaminated site and pay for their chronic health conditions. Gulab Bai, a Bhopal survivor activist, echoed the sentiment of her fellow activists: “those of us who marched to Delhi consider ourselves successful because we, for the first time in our movement, garnered national and international attention to our lifelong suffering.”¹⁶⁰

The 2008 march to Delhi included many demonstrations. They employed such tactics as hunger strikes and writing with the blood of victims.¹⁶¹ These survivors and activists gathered in a camp at Jantar Mantar, a public sphere built near a historic site and known for its gatherings of radical minds — journalists, writers, and artists. Activists planned to stay there for two months, but as the government officials repeatedly denied any meetings with the Bhopal representatives, the demonstration continued for more than four months. Many activists, such as Sabina Bai (on July 25, 2018), recounted how the police repressed their demonstration in Delhi. Chirongi Bai, now in her 70s, affirmed that, despite her perpetual frustration, she knew that “the activists did all that they could...they marched, they fasted, and they stopped the trains.” Ram Bai (on July 21, 2018), another survivor activist, said something similar: “it was not easy, but we came this far, and we will go further. Our mobilization against crime in Bhopal will never end.”

The demonstration in Delhi took several forms, some of them remarkably impactful. In one case, both Bhopali children and old survivors donated blood, and Bhopali children used it to write their demands. Three teenage girls who had been very active in the Bhopal Movement,

¹⁵⁹ This was their second march to Delhi in two years. The first one was in 2006 when the activists walked to Delhi demanding safe drinking water and decontamination of toxic sites. The very March was in 1989, discussed earlier.

¹⁶⁰ The news of this march was reported in international news outlet, including BBC, Al Jazeera, and Guardian.

¹⁶¹ Banerjee (2013) wrote an article in *Contemporary South Asia* on the 2008 march to Delhi. His analysis was based on an ethnographic understanding of that campaign.

crafted a blood-written letter to the then Prime Minister, Manmohan Singh, asking for a face-to-face meeting. The letter—along with many powerful photographs of their demonstrations—though addressed to the Prime Minister, was designed to garner public attention through shame tactics, rendering visible the apathy and negligence of the state managers and responsible corporations toward Bhopal victims (Banerjee 2013). The Bhopali children then took the blood-letter to the residence of the Prime Minister.

In another campaign “Have a heart, Prime Minister,” a group of Bhopali children went to different places, including local slums, to promulgate the continuous, harmful consequences of the disaster and draw attention to the government’s blatant indifference to their demands. The Bhopali children asked people to cut out paper hearts and write something on them addressing the Prime Minister to pay attention to the plight of the Bhopali children. The hearts symbolized their request that the Prime Minister has a functioning heart of his own, one that would show sympathy toward the marginalized masses. Both the blood-letter and “Have a heart” demonstrations, as Banerjee states (2013), not only reveal the failure of political relationships between citizens and state, but also point attention to the biological harm caused by the Bhopal disaster. The 2008 march to Delhi was significant on other counts as well; for it gave prominence to discriminatory access to medical care, education, and other social services across class and caste lines in India. Importantly, this march moved the administration to provide the water contamination victims with clean drinking water.¹⁶² On the one hand, the daily hardship of *Gas Pedit* demonstrates how marginalized groups experience power in everyday life and are deprived and dehumanized by the powerful actors in the contemporary world. Bhopali activism,

¹⁶² In retrospect, the Indian Supreme Court in 2004 ordered the Madhya Pradesh (MP) government to supply clean drinking water to the victims of water contamination. Finally, since 2010, the MP government started providing the sufferers with drinking water, although the supply is intermittent and the water quality is poor, according to respondents.

on the other hand, demonstrates the ways in which these marginalized individuals contend with and penetrate regnant power structures, such as the state. The following discussion further illustrates how Bhopal activists have created a new political society founded on challenging the official, corporate narrative of justice.

Against Denial and Official Memory

Activists protest the state's denial of the suffering of Bhopal victims. In 2009, during the 25th anniversary of the Bhopal disaster, survivors opposed the findings of the government's report, which ridiculed their complaints about ongoing chemical contamination. The reports were prepared in 2010 by two government organizations: Defense Research & Development Establishment (DRDE), which conducts research and development on detection of and protection against toxic chemicals; and the National Environmental Engineering Research Institute (NEERI), which conducts research and development studies in environmental science and engineering. Bhopal survivors protested the mendacity of the report by arranging a symbolic lunch presentation (Figure 6.2).

The findings, which suggested that the site was not severely contaminated, were deliberately and patently false, as several non-profit organizations, including Greenpeace International (1999) and Centre for Science and Environment (2009), had verified that soil and water around the factory were, as a matter of fact, densely contaminated with dangerously toxic chemicals once produced by the factory.¹⁶³ The lunch invitation activity (Figure 6.2), what survivors called a "Benign Buffet," was a protest not only against the report but also against the trauma that the disaster and the lingering social and environmental consequences inflicted upon the Bhopali poor.

¹⁶³ For a criticism of the official reports see <http://www.indiaenvironmentportal.org.in/files/Critique%20of%20NEERI%20%20NGRI%20reports%20by%20Bhopal%20Survivor%20Org.pdf>



Figure 6. 2 Lunch Performance to Protest the Official Denial of Suffering. Source: *The Hindu*, 2009.

The Bhopal Movement is, thus, what scholars call the “environmentalism of the poor” (Guha 2000; Martinez Alier 2002; Nixon 2001), but with specific features because the movement is also against social and environmental harms that are long in the making and that are attempted to make invisible by neoliberal actors in power. Bhopal victims have long urged the government to take adequate action to clean up the site in which Bhopalis have been forced to live for more than 30 years. These official reports, rather than offering any explanations to the sources of the pollution, attempted to invalidate the ongoing contamination in Bhopal. The reports stated that the toxicity in the factory’s vicinity was benign and harmless. To protest this authoritative claim, the *Gas Peddit* arranged a meditated lunch performance. They served food with the same chemicals that the report claimed were unarmful.

Science, knowledge, and research on Bhopal are inseparable from power and thus pose to go against the suffering of the *Gas Peddit*.¹⁶⁴ The grassroots activists, as says Sukla Bee, “do not necessarily understand the complexity of science,” but they wanted, Bee continues, the

¹⁶⁴ ICMR, the government’s biomedical research organization, which conducted 26 epidemiological studies on the health effects of Bhopal stopped doing research in 1993 and did not publish its results until 2004. This report claimed that they could not make any conclusive statements about the biomedical consequences of the disaster.

authorities to heed their concern: the long-term effects of the toxic gas. Cleaning up the contaminated site, as stated by Nafeesa Bee, “is one of our primary goals now.” Bhopal activist Waheedan Bee describes the position clearly:

Our movement is also an environmental struggle because our life is dependent on water and soil around us. We have been drinking this contaminated water for decades, and we, along with our kids, are having many health problems because of this. It is not easy to continue the fight. On the one hand, the problems continue to persist and multiply; on the other, the issue is considered old and resolved by power. Sometimes I get frustrated thinking that nothing may come, but then I realize nothing will come if you stop fighting. (Interview. July 13, 2018).

The statement above demonstrates that the Bhopal Movement is not limited to what movement scholars call material and monetary compensation (Burawoy 1985, 2003; Shefner and Stewart 2009; Piven and Cloward 1968). Instead, it is, as Fanon (1963) implied long before the advent of neoliberal globalization, a blend of struggles over several resources, material, such health and financial compensation, and environmental, such as soil and water. Furthermore, Bhopal activists refuse to accept the top-down narrative of justice by challenging the official efforts of commemorating the disaster. The movement is, therefore, also for the recognition of their rights and memories.

For instance, in 2009, the Madhya Pradesh (central India) government commissioned SpaceMatters, a leading design firm in India, to build a memorial in Bhopal for the disaster. The Bhopal survivors are, in fact, in favor of building the memorial. They have long urged their state

government for its construction, but they wanted to have control over its design and content.¹⁶⁵ The government, however, did not consult with the survivors before finalizing the decision on SpaceMatters' design. Additionally, the Bhopal survivors posed a question: Does the state, which is complicit with the “killer” corporations, have the moral right to build a museum to commemorate the disaster victims? In other words, the survivors challenged the state with the question of whether its complicity with the ‘killer’ corporations negates its moral standing to build a commemorative museum. Given this predicament, the question is: how to make a site that evokes painful memories, as well continues to generate suffering by contaminating the environment, a historic observatory? The Bhopal survivors arranged a community-led exhibition protesting the state narrative of justice and of commemorating. The exhibition speaks for marginalized people living across the world, highlighting issues such as discriminatory economic growth, health impacts, biosocial and environmental harms, and corporations’ profit-seeking activities at the expense of the life and wellbeing of marginalized populations.

Following many acts of public disregard, activists insisted that there must be a prior agreement on who would clean up the site’s remaining chemicals. Because this cleanup issue has been the crux of the people’s movement in Bhopal, activists emphasized that it must be critically considered by the Indian government before building a memorial. Several activists asked me, “Can you imagine such a situation in developed countries such as America – kill poor people, destroy lives, and then ignore victims’ opinion?” On another front, many survivors opposed the government’s decision to destroy the wall in the factory site as it had been used for protest graffiti since the day of the disaster (Figure 6.3). Bhopal activists continue to use the factory wall to keep both the memory of the disaster and the fight for justice vibrant and visible.

¹⁶⁵ For a detailed discussion on Bhopal museum, see Lakshmi (2012). Lakshmi is an independent museum consultant and has been enlisted by activists for “collecting and cataloging the objects, conducting oral histories, designing and shaping the content” of the bus exhibition that travelled across India for one year.



Figure 6. 3 Protest Graffiti in UCC's Abandoned Factory's Wall. Source: IEP.

Certain survivor groups, subsequent to these contestations, embarked on traveling exhibitions by bus in 2009, hoping that the Bhopal memorial would be built according to the demands and sensibilities of the survivors. The bus traveled across India, particularly to other sites of local people's struggles against social and environmental injustice. With the help of the community, the survivors have since created their own museum, the Remember Bhopal Museum.¹⁶⁶

The museum, as stated at its entry door, is a survivor-led effort to collect and exhibit the “memories, artifacts and oral histories” of the people affected by the disaster. This museum, more importantly, is also the first of this kind in India to keep the memory of a disaster alive and to document the country's longest-running social movement since independence. The process of marginalization, therefore, shapes the politics of Bhopali *Gas Peddit*, a politics which reached a crucial milestone following the 2011 Rail Blockade Movement.

¹⁶⁶I visited the museum in the summer of 2018. The museum is located approximately one and half miles away from the abandoned factory and warmly welcomes visitors. Two women work at the reception desk, one of them is a second-generation victim and activist. The other one is a divorcee (employing a divorcee woman in Bhopal, a religiously conservative place, is significant as well) and is very proud of serving the museum.

Block the Rail Line, Paralyze the Nation

On December 3, 2011, the 27th anniversary of the Bhopal disaster, Bhopal survivor activists led what was one of the most strategic, vigorous, and effective resistance movements unlike any that India has seen for decades. The survivor activists blocked a train for almost an entire day in Bhopal, a transportation hub connecting the entire nation of India. The Indian government's faulty categorization process for the 1989 settlement, which was the main reason behind organizing the 2011 rail blockade movement, cost the affected dearly.

The simplified quantification of the complex exposure—which transformed a complex range of gas sufferer into highly simplified categories—is probably the terrifying legacy of the Bhopal disaster.¹⁶⁷ And the rail blockade movement was organized to protest the Indian government's effort to delegitimize the death and injury caused by the disaster. The activists had made several attempts to convince respective authorities, including the then Prime Minister Manmohan Singh, for amending the figures in the 2011 Curative Petition (CP), a petition filed by the Indian government at the behest of the Group of Ministers on Bhopal—ministers from all across India tasked with overseeing the Bhopal issue. The CP sought an additional compensation of \$1.7 billion for deaths, injuries, and environmental contamination. But despite several efforts made by activists to rectify the CP's figures on numbers of victims, the Group of Ministers supplied no response. To justify a rail blockade, the movement produced a list of ten complaints. The most important ones were that the government made a settlement in 1989 without talking to local victims and let the corporation walk away without paying adequate compensation or facing legal responsibility; that the government in its 2011 CP vastly underestimated the number of deaths and the gravity of injuries, even dismissing data prepared by ICMR, India's premier

¹⁶⁷ It may evoke the notion of what scholars call biological citizenship (Petrya 2002) in which citizens' a relationship is defined by a state providing welfare to its citizens.

governmental biomedical organization; and that the government seemed more eager to guard the interests of American corporations than those of its own victims.

Regarding the number of deaths, the CP used a figure of only 5,295. Activists argued that even the ICMR's official research and despite its inadequacies from their perspective (Baxi 2010; Eckerman 2005; Hanna 2014), nonetheless found that 2,500 deaths occurred in the first four days of the disaster and 9,667 deaths between 1983 and 1993. Since ICMR inexplicably stopped counting deaths in 1993, the activists extrapolated the number of deaths in subsequent years, using ICMR's statistical prediction. A 2010 Bhopal Group for Information and Action (BGIA) report puts it: "It is clear that as per ICMR in 1993, nine years after the disaster 11 people were dying every day as a consequence of the disaster...The conservative estimate of deaths from 1994–2001 is around 4,833...deaths from 2002–2009 is around 2,417... there have been 23,000 deaths attributable to gas exposure till 2009 and people continue to die." At least 5-6 Bhopal victims die every day. BGIA's calculation is consistent with the figures mentioned by all existing independent research, including research conducted by Greenpeace International (1999), Amnesty International (2003), and Centre for Science and Environment (2009).

Thus, the total death count based on reliable sources is, at the very least, four times greater than what the Curative Petition stated (5,295) and five times greater than what the 1989 settlement reported—3000. This gap is met with incredulity by activists. Since all branches of government are aware of at least 5,000 affected widows living in Bhopal, they asked, "How on earth, then, is there only a total of '5000' deaths?" ICJB's attempt to convince the governor of Madhya Pradesh and the Prime Minister of India¹⁶⁸ to rectify the figure went unheeded. In their

¹⁶⁸ They informed the GOM and wrote to the governor of Madhya Pradesh and Prime Minister, but it did not meet with success.

communication with authorities, the bereaved warned of a rail blockade if no amendments were added to the CP. Again, in spite of these efforts, activists were given no response.

Hapless Bhopal survivor activists ran a vigorous campaign¹⁶⁹ for a few days before finally stopping the train on December 3, 2011, the 27th anniversary of the Bhopal disaster (Figure 6.4). The 2011 Rail Roko Movement was a powerful organized protest by survivor activists; it did, however, grow violent. To escape the arrest, activists employed a strategy of scattered gathering. While thousands gathered in the railway station, many activists, following instructions not to expect guidance from their leaders, laid down on the railway line closest to their own communities. While protesters peacefully chanted slogans and halted trains, the police gathered in riot gear. Soon officers started arresting activists and charged the crowd with batons. Police brutality did not stop at elderly women; children were among the injured. Many were put in restraints, stripped of their clothing, and beaten while pinned to the ground. Despite such harsh police brutality, activists were able to stop the train for eight hours.

What they achieved and discovered through this rail blockade is as significant academically as it is politically. The effects of this protest differ in large measure from the short-term goals they had been fighting for such as adequate compensation. By paralyzing the focal point of India's rail system, activists made their suffering visible and exigent. More importantly, although the activists for strategic reasons rely on the institutions of law, the rail blockade movement served to reinforce the distrust of survivor activists in their own government. Activist Sarangi, from BGIA, said: "Bhopal is a live story. It's a story through which you can see how this system works. Survivors already know that UCC or Dow is not alone in this drama, their own government is a collaborator."

¹⁶⁹ They handed out pamphlets, informed the vendors, used loudspeakers on trucks to spread the news of their planned rail blockade movement.

7 STEPS TO GETTING PROPER COMPENSATION

from **UNION CARBIDE** and **DOW**

On 3 December 2011
STOP THE TRAINS

- 1 From today join your neighbours and other gas victims to make groups of 15-20 men women and children.
- 2 Get together with your group on December 3rd to wait for the signal to start the march.
- 3 On receiving the signal, go to the railroad track closest to your community.
- 4 When you reach the railway, all link arms together and lie down across the tracks.
- 5 When the police try to lift you up, let your body go limp.
- 6 Court arrest in a peaceful manner. Do not stop chanting slogans when being arrested.
- 7 If you aren't arrested but are taken and left somewhere, come back to the tracks and rejoin the protest.

Figure 6. 4 Seven Steps to Getting Compensation

Ultimately, harmed by the corporation and, in their view, abandoned by the state, the only thing survivor activists believe in is the power of their mobilization. Bhopal survivors are resolute; they derived the best possible “affirmative humanity” (Baxi 2010) from the worst industrial catastrophe in modern human history. Their resistance, paraphrasing Alan Badiou (quoted in the epigraph), lies not in their fragile body but in their dogged determination to remain something more than mere victims. Bhopal is a site of devastation, but it is also a site of a new form of politics in India, a politics that challenge the dominant narrative structure of the system, corporations and the states. Determination to fight Dow and its business in India is one of the examples of the politics of the affected.

“No Justice in Bhopal, No Business in India”

The Bhopal Movement over the years brought national attention to the ongoing suffering through campaigns and demonstrations across India. It has also been united with several international organizations and marginalized groups fighting corporate injustice. The 2010 London Olympics exemplifies this international solidarity. The Olympic authority announced Dow Chemical would be the main Olympic sponsor. Olympic partners are usually known for their philanthropic activities. This sponsorship would conceal Dow’s questionable business practices, including its responses to the Bhopal disaster as well as its refusal to accept any liabilities, stating that it never owned the Bhopal plant in India, and therefore, that the cleanup of the contaminated sites in Bhopal, according to its official statement, is not its responsibility.

The Bhopal activists responded to the announcement of Olympic sponsorship with a letter to the then Prime Minister of India, Manmohan Singh, urging him to take a stance against the International Olympic Committee. Yet, as activist Kanchan Bai said, “the Indian government always has refused to take a public stance with regard to this matter.” The ICJB mobilized more

than 20 activist groups to protest this decision. In collaboration with the Bhopal Medical Appeal (BMA)¹⁷⁰ and Drop Dow Now, the ICJB arranged a die-in demonstration during the 2012 London Olympics' opening ceremony, wherein activists laid on the ground with signs marked "Justice for Bhopal" (Botelho and Zavestoski 2014). Along with this demonstration in London, the Bhopal activists organized a Special Olympics behind Bhopal's old Union Carbide factory; children whose lives have been crippled by toxic contamination participated in several sporting events (Figure 6.5). The chemical giant Dow not only refuses to accept any liability for Bhopal, but it also lurked behind prominent Bhopal activists and scholars.¹⁷¹ Waheedan Bee asserts, "we fight to stop Dow from doing business in India. Our fight is not for compensation only, we stand up against bad corporations wherever they want to engage in questionable business practices."



Figure 6. 5 Disabled Bhopal Kids Performing a "Special Olympic" near UCC's Abandoned Factory in 2012. Source: left, *The Telegraph* 2012; Right, *the Bhopal Medical Appeal*.

¹⁷⁰ As the name implies, BMA helps the medical works in Bhopal to help the survivors. Depending on people's donation it founded the Sambhavna clinic in Bhopal and offer financial help to Chingari Rehabilitation Centre.

¹⁷¹ Several times Dow tried to hack and surveil activists of Bhopal. Bridget Hanna shares her story in her dissertation (2014:61-62) how Dow she was contacted by a Dow official to convince her about UCC's sabotage theory, which UCC still maintains. Many foreigners working for Dow went to Bhopal acting as researchers.

Though Bhopal activists were unable to change the decision on Dow being the Olympic partner, this mobilization bears witness to the movement's enduring impact. The 2012 Olympics protest accomplished at least three things. First, even after a more-than-30-year lapse, it impelled the audience to remember the Bhopal disaster; second, it challenged the existing narrative of justice by focusing on the disaster's slow and ongoing, adverse consequences. Third, it showed the intergenerational suffering caused by the disaster. Safreen, a second-generation gas and water victim, activist, and the main organizer of the *Children against Dow-Carbide*, asserted,

We fight not only because we are concerned about our wellbeing, but for those who endure social and environmental suffering around the world. If Dow really wants to show its seriousness for the victims, it must pay for the decontamination of the site. If it does not, we are not leaving the street and not letting it come to do more business in India.

(Interview. July 15, 2018)

The Bhopal Movement, therefore, created an intergenerational politics and stands in opposition to the forces of neoliberal globalization, which reject regulations. On the whole, this movement for biosocial and environmental justice taught the oppressed, exploited, and dehumanized social forces world-wide how to expose, challenge, and discredit the theories and practices of neoliberal globalization.

The Bhopal activists demonstrate three areas of their campaign: target, the state-corporation nexus; tenacity, the determination to fight the power structure; and objectives, biosocial and environmental justice in Bhopal. In 2018, at the inaugural Annual General Meeting (AGM) of DowDuPont Inc, which became the largest chemical corporation in the world after its merger with DuPont in 2017, shareholders expressed their concern over the issue of Bhopal. Shareholders voted on three resolutions concerning the Bhopal Disaster. A powerful statement

was read at the AGM on behalf of Rashida Bi, a recipient of the 2014 Goldman Environmental Prize and founder of the Chingari Rehabilitation Centre.

I heard the screams of the dying as I choked on the gas that was killing them, but I haven't come here to ask you for justice. I felt my loved ones' suffering across endless years until only death could end their agonies, but *I'm not here for your sympathy*. I watch the wastes from your factory poison new wells and new wombs, but *I'm not here to force you to act*. I've met thousands of children corrupted by your chemicals, for whom every day is a struggle you could never imagine, but *I haven't come here for charity*. We are suffering and dying still in Bhopal but I'm not here to trouble your conscience, *I'm not here to beg*. I'm here to make one thing completely clear to you all. *I'm here to promise you that I will give my dying breath to stop your company investing in my country*. I'm here to tell you that there are thousands more like me and that we will never stop. Don't ever say that you were not warned, that you did not know. *No justice in Bhopal, no business in India*. (Emphasis added).¹⁷²

“We all Live in Bhopal”

The Bhopal Movement has become a cornerstone of social and environmental justice struggles in India for its long sustenance, determination, innovative movement strategies and targets, and numerous accomplishments. Bhopal activists are aware that the struggle for justice is not without setbacks. “It takes time to convince and mobilize victims,” says Guddo Bee. Some activists have claimed that if more people (given that victims are hundreds of thousands) had been involved from the beginning, their achievements might have been greater and more readily won. Fights against the powerful forces, as Zarena Bee states, “get stronger when victims are united.”

¹⁷² See the statement here <https://www.bhopal.org/powerful-short-speech-by-rasheeda-bi-read-at-dowdupont-agm/>

However, people's apathy or fear of retaliation does not stop Bhopal activists from rallying for their biosocial and environmental rights. Showing to the author her fractured knee—the result of a police attack—Ram Piyari Bai, one of the main organizers of the Rail Railway Blockade Movement in Bhopal and a Bhopal survivor now fighting cancer, expressed why she is determined to continue the fight:

We have been fighting forever; our life is a story of struggle; I wish it was otherwise. Union Carbide corporation came here and ruined our peaceful and simple life. We have been betrayed by our own government, too. They injured me, broke my knee. We are also facing slow death due to ongoing water contamination. But I did not stop fighting, and we are not going away. We keep fighting. The fight will continue.”

I witnessed this determination during my second-phase of fieldwork in December 2018, the year of the Bhopal disaster's 34th anniversary. Bhopal activists arranged several events to commemorate the disaster, to protest the continuous suffering caused by ongoing contamination, and challenge the power structures, such as corporations, states, and the local administration in Bhopal. In the 2019 anniversary, five different protest events took place: On December 1, a press conference by the Sambhavna Clinic to present new research findings on the ongoing health consequences of the disaster¹⁷³ and a candlelight tribute to the disabled children of Bhopal organized by the Chingari Trust; on December 2, a rally and candlelight vigil with photographs of the people who died in the disaster organized by the Sambhavna Clinic and a torch rally of Bhopal survivors organized by four Bhopal gas survivor organizations; and on December 3, an effigy (of Dow CEO) burning after a rally organized by several survivor-led organizations. To Bhopal activists, the 2019 anniversary events were particularly significant because Dow in 2017

¹⁷³ The findings show that there is 28 percent more deaths among the exposed compared to the unaffected areas. Kidney failure rates are three times higher, cancer-related mortality and respiratory illness are twice.

announced its merger with Dupont, which will now be known as DowDuPont. Activists fear that this merger, like the one Union Carbide did with Dow in 2001, will render the issue of liability for the Bhopal disaster—and more importantly, the decontamination of the toxic site—more complicated (Figure 6.6). However, activists, such as Rashida Bi, emphatically state that “while they [powerful actors] pollute our water and soil and inflict suffering upon us and our children, we inculcate a politics of suffering in our children.”

That justice in Bhopal has been denied in the past is unmistakable. Thus, whether the Bhopal Movement has completely succeeded is an open question. Will it completely succeed in the near future, ensuring its demands are met? There is little hope in sight. The Bhopal Movement, however, has succeeded, first, in demonstrating how marginalized people have found themselves the victims of so-called development projects, and second, in showing how neoliberalism further marginalizes the affected people in in peripheral. Importantly, the Bhopal Movement added a new dimension to the county’s democratic, subaltern endeavors by showing that the exacerbated, intergenerational exploitation of the marginalized in Bhopal is not without political resistance.¹⁷⁴

The Movement has created a form of politics that has both common and distinguishable characteristics.¹⁷⁵ The gas and water victims and activists are well aware of the larger political

¹⁷⁴ The Narmada Bachao Andolon, a movement against large dams, has brought together several marginalized groups in India, including indigenous peoples and farmers. The movement is also one of the longest in India fighting against the displacement of millions resided in a vast geographical region. Similarly, antinuclear movements, such as the one against the Kudankulam Nuclear Power Plant (KKNP), the largest anti-nuclear protest in India, have garnered widespread attention. Fishing communities, along with other marginalized groups, are playing active role against this powerplant. For Narmada Bachao Andolon, see Baviskar 1995; Dwivedi (1997); Gadgil and Guha (1994); Paul Routledge (2003). For antinuclear movements in India, see Deb (2018); Kumar (2014); Mathai (2013); Ramana and Kumar (2014); Srikant (2009). Also see Hasan (1994), Punjabi and Johnson (2019).

¹⁷⁵ Levien (2018, 2013) finds a similar trend in his analysis of the politics of dispossession in India. He shows that farmers across India oppose the state governments’ efforts to forcibly transfer their land to private corporations. There is, however, a striking ontological difference between the politics of the affected Bhopalis and the politics of dispossession. The former is a long-lasting resistance and is not result of a threat to their means of production while the latter constitute “one-time threat to people’s means of production and subsistence” (2013:14), meaning they lose the fight once they are disposed from their land.



Figure 6. 6 34th Anniversary Rally on December 3, 2018. Source: author.

economic system and their situations within it. As the longest-running movement in Independent India, the Bhopal Movement has turned the hegemonic power structure, corporations and states, into a “focus of resistance” (Foucault 1980, 1991) and challenges the dominant narrative of truth, unraveling what neoliberal globalization looks like on the ground. Its activists continue the fight to resist a top-down approach of justice and the unflagging efforts of sovereign powers to designate them as disposable. The resistance by the affected, marginalized Bhopalis has become an exemplar of social and environmental justice struggles in India and across the world (Baxi 2010; Zavestoski 2009). Importantly, the Bhopal Movement is now an amalgamation of struggles over several resources—both material, such as health and monetary compensation, and environmental such as water and soil. The movement, more importantly, is against the slow violence of social and environmental destruction (Nixon 2011) in Bhopal.

In sum, like many other long movements, the Bhopal Movement has, *ab initio*, gone through many ups and downs at the beginning; however, its tenacity to reinvent its strength, targets, goals, and commitment are worthy of note. The activists know that without a constant battle, nothing would have been achieved, and thus their determination to move the struggle forward has continually increased. This movement, as I attempted to demonstrate, continues to develop political consciousness through developing the knowledge for liberation and alternative narratives needed to expose the irrationality of efforts for domination, control, and exploitation. The Bhopal Movement has wider applicability to other movement resistances challenging and opposing the state-corporation narrative of justice in other peripheral areas under neoliberalism.

The Bhopal Movement challenges the prevailing narrative of justice by spotlighting the myriad ways in which vulnerable populations suffer ongoing biosocial and environmental abuse. Relatedly, this chapter has investigated how the Bhopal Movement has developed protesting the

slow violence of social and environmental destruction (previous chapter) that continues to affect vulnerable populations in Bhopal. Going beyond mainstream political discourse,¹⁷⁶ Bhopal activists are determined to continue the fight against the biosocial and environmental assaults on the city's marginalized communities, showing how the process of marginalization operates in neoliberal India. Neoliberal India abandoned the ideology of development, as evident in the suffering of the *Gas Peddit*. The *Gas Peddit* people have been compelled to create a new kind of politics, which is different from labor and identity politics. They, more importantly, refuse to forget or accept any temporary negotiations with the state and/or corporations, thereby creating a new political society that sedulously exposes, challenges, and discredits the dominant narratives and practices of biosocial and environmental justice.

To conclude, Bhopal is the site of the world's worst Industrial disaster, and it continues to be a site of suffering, travesty, and betrayal. Yet, as well, Bhopal is a site of resistance and the longest-running movement in India. The quest for justice in Bhopal, which now hinges upon combating plutocratic power structures, may remain unresolved for quite some time. But the Bhopal Movement as a social and environmental justice movement, as the survivor activists would say, will never cease to show their unending suffering to the world nor cease to uphold the spirit of their clarion call: "We all live in Bhopal." This call is profoundly meaningful, not only as a symbol for the Bhopal movement, but, far more important, as a reminder for every victim,

¹⁷⁶ The Bhopal Movement is independent of mainstream party politics in India. Although the left politics has been sympathetic to the Bhopal Movement, it has understood primarily as a localized movement, or what Harvey calls militant particularism. The movement has been used as a political opportunity by bipartisan local politics, as was witnessed in the 2018 Bhopal municipal corporation election. The activists, on the contrary, use such elections as an opportunity for them as well. Since the gas-affected are the hundreds of thousands of constituents, the activism strategically strives to use their number to press to the local administration to pursue compensation in the national level. The Bhopal activists occasionally succeed from this strategy. But in most cases, political leaders make false promises before the election and change their position afterward. A recent example of this is "Intezaar-E-Insaf" (Waiting for Justice). In February 2019, survivor organizations through a press conference announced that 1000 survivors "will be waiting tomorrow [Feb 26] at Neelam Park for the Minister of Bhopal Gas Relief to meet with them." The Minister did not show up.

no matter their place, of the corporate destruction of society, culture, and the environment. “We all live in Bhopal” cleverly exemplifies two distinct but related points. One the hand, it emphasizes the disease of a system that thrives on the suffering of the marginalized masses in peripheral countries; in a sense, all of us really do live in Bhopal. On the other hand, it leaves to the world a lesson in political resistance. It shows the politics required to expose, refuse, and remedy this widespread disease. Whoever visits Bhopal—or writes about it—knows that at the heart of Bhopal’s unending battle lies the resistance of those who suffer.

Chapter Seven: Destruction without Redress: Legal Catastrophes in Bhopal

[...] Such abject poverty and the vastly different values, standards and expectations which accompany it are commonplace in India and the Third World. They are incomprehensible to Americans living in the United States.

- US Federal Justice Keenan in 1987 while sending the case back to India on the ground of *forum nonconveniens*. (cited in Izarali 2013)

Union Carbide will not appear [responding to a summon by a Bhopal court] because, as a United States corporation, it is not subject to India's jurisdiction.

- Robert Berzok, Carbide's Director of Communications, see *NY Times* 1996 ...the Act [Bhopal Act] made the criteria for being a gas-exposed person permanently legalistic. Medical complexity and indeterminacy would henceforth have to be simplified for the purposes of litigation
- Hanna (2014), *Toxic Relief: Science, Uncertainty, and Medicine after Bhopal*, p. 230

Let me begin this chapter with a legal fact about the Bhopal catastrophe. In June 2010—26 years after the disaster—a Bhopal court convicted eight Indian employees of the Union Carbide Indian Limited and sentenced them to two years in jail.¹⁷⁷ The convicted were granted immediate bail, and, thus far, they remain free. Such was the lone legal punishment for one of the worst industrial disaster in modern history. What factors allowed and still allow such a lenient sentence, or no sentence at all so far as Union Carbide Corporation (UCC) is concerned, are the foci of this chapter. Each requires a critical examination of how the involved corporations, with

¹⁷⁷ The 2010 verdict, which involved 178 witnesses and over 3,000 documents, showed the evidence of criminal negligence by the corporation, Union Carbide. Several survivor groups criticized the effort because of its poor preparation for the case. Following an outrage over this controversial verdict, the Home ministry had set up a Group of Ministers (GOM) on Bhopal to reassess the Bhopal case. I bring this discussion in the section on Curative Petition later in this chapter.

the help of both Indian and US state managers, succeeded in eluding punishments for *culpable homicide*, a charge brought against UCC by the Bhopal court in 1987.

The Bhopal catastrophe, widely recognized as the world's worst industrial disaster in modern human history (Jasanoff 2016; Mukherjee 2010; Nixon 2011; Visvanathan 2001; Walters 2009), continues to reveal what it means for poor and minority populations to be integrated with the globalized world economy. If the initial disaster had shaken the world due to its spectacle of death and destruction, its long-neglected ongoing adverse consequences, against which *Gas Peddit* activists continue their fight, demonstrate how powerful actors of global capital further marginalize the already marginalized, gas-afflicted people of Bhopal. In previous chapters, I have analyzed and described the Bhopal disaster as an event in the unending chain of global political-economic developments; how states and corporations in a shifting state of globalization in peripheral countries, like India, overshadow the slow violence of social and environmental destruction; and why the Bhopal victims and activists have been fighting for social and environmental justice for the last 34 years.

This chapter addresses whether the law—an institution claims to have been designed to safeguard victims of and against injustice—has played its “due” role in the wake of unprecedented catastrophes in Bhopal. After more than three decades there exists no credible official account of the total number of victims of the disaster (Baxi 2010; Eckerman 2005; Mukherjee 2010). Moreover, biomedical assessments of the health consequences have been underfunded, limited, and thus not scientifically conclusive, although that has not prevented their use in legal cases (Baxi 2010; Das 1996; Eckerman 2005; Hanna 2014). Moreover, there have been no efforts to clean up the toxic site. As a result, the contamination of the soil and water continues (CSE 2009; Greenpeace 2009, 1999). The lack of scientific evidence on the short-term

and long-term consequences indicates the ways in which state managers and corporations from the beginning strived, and succeeded, to suppress the legitimacy of victims' claims of an unending crisis in Bhopal. The Bhopal catastrophes compel us to engage with the following questions: how has the legal path been shaped in favor of certain actors and to the detriment of others and how the unequal application of the law is achieved in handling the Bhopal case?

This chapter underscores, on the one hand, the legal paternalism of the Indian state failed to provide justice to the victims of the worst corporate violence in Bhopal, and on the other, how the law, appreciated as a seemingly neutral force that civilizes humanity, has mirrored the interests of the actors of global capital. In other words, highlighting Bhopal as a site of legal disaster, this chapter shows the ways in which the law has proved unable to safeguard the weakest elements of Bhopal society: the gas-afflicted and marginalized. It also emphasizes how in a multilayered subsidiary corporation, such as UCC, the parent company, which owns the majority, is protected by what scholars call the veil of "liability firewall" (Prechel 2000). This chapter, moreover, illustrates that the law has been incapable of addressing long-term social and environmental harms continuing to affect poor and minority populations in Bhopal. In doing so, I emphasize the legal trajectory of the disaster and how a state-corporation nexus was able to use the law to understate as well as delegitimize the death and devastation in Bhopal.

Travesty of Justice

An Elusive Bail

The Bhopal catastrophe that occasioned an unprecedented scale of social and environmental devastation illustrates the multiple faults and failures of the Indian state, viz., in its complicity in corporate power and priority of maintaining a 'healthy' investment climate. The legal loopholes

that unfolded immediately following the disaster, as a matter of fact, lies at the core of the Bhopal catastrophes.

On December 7, 1984, four days after the explosion, Warren Anderson, the former CEO of UCC, arrived in Bhopal with an “assurance of safe passage” (Edwards 2014) from India’s foreign secretary.¹⁷⁸ Much to Anderson’s surprise, the Bhopali police arrested him, and a criminal charge of *culpable homicide* was filed against him. This nonbailable charge incurs a sentence of 10 years to life in prison; within six hours of the arrest, however, Anderson was released on bail. It was later found that after a personal intervention by President Ronald Reagan, the then Indian Prime Minister, Rajiv Gandhi, ordered Anderson’s release (see Edwards 2014; Samanta 2010). Despite signing a bond that he would present himself to court whenever directed, Anderson was never forced to return to India and never faced any punishments. India’s abandonment of its citizens, the *Gas Peddit*, comes as no surprise to Lalita Bai, a Bhopal survivor who lost her husband and two children.

Congress (Congress Party) and BJP (Bharatiya Janata Party) do not seem to have any remarkable differences when it comes to punishing foreign corporations for their crimes in Bhopal. Both parties have been in power since 1984. They did not act to save us; rather, they saved Anderson. Now they are saving Union Carbide and Dow. (Interview. December 8, 2018.)

The potential danger of retaliation by UCC and other multinational corporations, as the former Foreign Secretary Rasgotra implied in 2010 (*The Hindu* 2010), might have influenced India’s decision to release Anderson. Such acts by the Indian state, stemming from a fear of reproach and from a desire to maintain India’s attractive foreign investment climate, as demonstrated in

¹⁷⁸ Anderson himself was a lawyer and he came to Bhopal, according to later admittance, to “head off lawsuits.” He was accompanied by UCIL employees and US foreign commercial attaché James Becker. See, Fink (1986).

previous chapters, leads India to persist in failing the victims of the worst corporate crime in Bhopal.

Chasing Ambulance to Processing of Claims

The Anderson drama was still taking its course when, as early as December 7, 1984, profit-seeking American lawyers arrived in Bhopal to recruit individual plaintiffs for class-action lawsuits in the US (Divan and Rosencranz 1989; Hanna 2014; Jasanoff 2008/2007). Mark Galantar (1994), hired as an expert witness on behalf of the Government of India (GOI), calls this invasion of profit-seeking lawyers in Bhopal “the great ambulance chases.” American litigators filed at least a total of 160 suits in various courts in the US.¹⁷⁹ One of the many ramifications of this crowded legal presence was that many survivors lost their original documents to lawyers, which precluded them from being added to the list of total gas-affected (see Baxi 1990; Hanna 2014). In addition, survivors only had to wait for years to realize that their expectations raised by these lawyers are flawed and not consistent with the reality on the ground.

The mass involvement of American lawyers did not help Bhopal survivors; on the contrary, as I will discuss in this chapter, it served only to clear a path for the Indian government, entangled with the UCC, to regulate the litigation process. The government of India, well aware of this potential legal development, were indeed concerned that American lawyers would exploit the gas-disaster victims.¹⁸⁰ Yet, importantly, the Indian government’s primary liability concern was that American lawyers might include India’s public administration in their suits, since the government had a 22 percent share in the Bhopal plant (discussed in Chapter Two).

¹⁷⁹ In February 1985, Judge Kennan of the Judicial Panel on Multidistrict Litigation ruled to merge all suits in the Southern District of New York.

¹⁸⁰ Especially, a maximum of 33 percent contingency fees in US dollars would diminish any compensation awards directed toward victims.

Nevertheless, the Indian government knew that unless a law regulating the litigation process was passed, it would be difficult to represent the Bhopal victims in an American court. They realized as well that US courts were the most effective forum for the proceedings, given the scale of devastation and fantastic lethargy of India's justice system.

Legal Guardian and Multilayered Subsidiary Corporations

In March 1985, the Indian government took charge of the Bhopal issue, and, by presidential order, it was granted the absolute right to represent all victims of the disaster. It was on March 18, 1985, that the Indian parliament passed the legislation—the Bhopal Gas Leak Disaster Act (Bhopal Act, hereafter)—making the UOI *parens patriae*, a principle under which the government is deemed the lawful guardian of citizens who are incapable of protecting themselves, to file suit on behalf of the victims.¹⁸¹ The president signed this bill into law on March 29, 1985. Simply stated, the Bhopal Act granted the Indian government an absolute authority to act as plaintiff. While the main objective, as the official statement specified in the Bhopal Act, was to protect the victims of the disaster from legal mistreatment, what would happen later obfuscated the entire legal process, culminating in further exploitation and gross mismanagement of the ensuing crisis. The Bhopal Act essentially barred survivors from suing their own government, which owned approximately a quarter of UCIL stock in 1984; and enabled the Indian government to control everything, including categorization, processing, and the adjudication of claims.

UCC since the beginning of the disaster was trying to solve the issue of liability outside the court. In 1985, prior to the Bhopal Act, the Indian government had already turned down a \$200 million settlement offer from UCC, equivalent to UCC's insurance coverage. In the same

¹⁸¹ See Bhopal Gas Leak Disaster Act, 1985. Pub. Law no. 21/1985, reprinted in *Int'l Leg. Mat.* 25 (1986): 844.

year, in April 1985, the Indian government, representing all victims, filed a suit against the UCC in the Federal District of New York for the Southern District of New York, highlighting that the Indian legal system was not prepared to handle a case like Bhopal (Cassels 1993; Galanter 1985; Rosencranz 1988).

UCC, however, contended that the case should be sent back to India, given that India's judiciary was capable of offering an adequate tort solution for the matter.¹⁸² In line with the UCC's statement above and by referring to a difference of values and standard of living between America and India (Judge Keenan epigraph quote), Justice Keenan sent the case back to India (Figure 7.1), on the ground of *forum nonconveniens*.¹⁸³ Besides playing a jurisdictional trick, what the judge Keenan implied was that life in India is less valuable in monetary terms than in the US. The Bhopal litigation shows that the law, which claims to view all people equally, is unequal. Such unequal application of law will become more evident when India completely embraced neoliberal ideology. The unequal and racist imp(application) of law was similarly indicated by Bud Holman, a UCC lawyer, who in a hearing before Judge Keenan, said:

They [*gas peddit*] have tuberculosis, which is endemic in that area, some have emphysema, which is endemic in that area, some have malnutrition, which is a troublesome thing in that area. Each individual history has to be examined in order to determine what damage he has, or whether he has a claim or not. The claims include a considerable number of fraudulent claims, we expect (see, Hanna 2014:16; Morehouse, et al. 1986:95)

¹⁸² Mark Galanter, a US academic who had expertise in Indian law and was hired by the Indian government, notes that India had only approximately 600 tort cases in the fifty years from 1914 to 1965 and there was no precedent for a class action lawsuit in India.

¹⁸³ For the hearing, See, Baxi (1990), Fortun (2001). The notion of *forum nonconveniens* indicates "the judge's discretionary power of dismissing a case when another forum exists, and the latter is more appropriate for settling a certain dispute" (Nicita and Winkler (2009:295).



Figure 7. 1 Timeline of Major Bhopal Litigation Proceedings. Source: IEP.

Moreover, Judge Keenan used the testimony of UCC employees and argued that UCC could not be held responsible for the design and safety failures of an overseas plant. His conclusion: “the plant has been constructed and managed by Indians in India...communications between the plant and the United States were almost non-existent” (see, Edward 2014). Judge Keenan did acknowledge, however, that the UCC did not follow the “best industrial practice” when they produced and stored vast quantities of lethal chemical MIC in the Bhopal plant, located in densely-populated shanty towns in the capital of Madhya Pradesh (Central India).

Contrary to Keenan’s claim about the construction and management of the Bhopal factory, there is overwhelming evidence (Chapter Two), to suggest that UCC was in complete control of the design, construction, safety, and operation of its plant in Bhopal. In several interviews afterward, even UCC officials themselves, contradicting their statements presented in the US court, confirmed that the detailed design and safety features in the Bhopal plant were controlled by UCC. And for that matter, Union Carbide had built the MIC unit in the Bhopal plant by transferring corroded technologies from Institute, WV, an expedient driven by the UCC’s goal of maintaining majority equity over its entire range of businesses in India. Any major modifications at the Bhopal plant required prior approval from the UCC. Once Judge Keenan added that the Bhopal disaster litigation provided a unique opportunity to advance tort law in India, the UCC had succeeded to send the case back to India. The case was returned to India (see Baxi and Paul 1986), and the question of compensation was left to the Indian court. More than 34 years after the disaster, in fact, the issue of interim and final compensation has yet to be resolved.¹⁸⁴

¹⁸⁴Bhopal activists had put a tremendous pressure on local political leaders over the issue of compensation before the 2018 election in Bhopal, Madhya Pradesh. Political leaders from both parties promised to address the issue of compensation, but no efforts have yet to be taken.

The situation on the ground grew dire as the gas-affected nervously awaited their medical care. Galvanized by the escalation of civil unrest, the District Court of Bhopal in December 1987 ordered UCC to provide a “temporary compensation” of \$270 million. Upon UCC’s appeal to this order, India’s High Court defended the ruling on temporary compensation while reducing the amount to \$170 million (see, Desai 1993; Nicita and Winkler 2009; Rosencranz 1988).¹⁸⁵ UCC refused this order, asserting that the judgment was “arbitrary and wholly perverse” (see, Cassel 1993), and that it did not “have to abide by the Bhopal Act or the order for interim compensation” (See, Hanna 2014:239).

Although UCC was in charge of all major decisions in the Bhopal plant, its refusal to obey Indian law demonstrates what scholars call a “liability firewall” (Prechel 2000; Prechel and Touche 2014) for the parent company. In multilayer-subidiaries, like UCC, in which the majority is owned by a parent company, subsidiaries are considered separate legal entities. The parent company is protected by this veil, and risk and liabilities are isolated to subsidiaries, a strategy repeatedly employed by the UCC in the wake of the disaster in Bhopal. In 1989, UCC appealed to the Indian Supreme Court for refusing the order of interim compensation. UCC also threatened to delay the legal process if a final settlement was not granted soon (Das 1995). Given such legal complications, the Indian government, under the doctrine of *parens patriae*, had made a sudden decision to act the real guardian of the gas-affected, settling the issue with the Union Carbide for *an ex gratia* lump-sum of \$470 million. The 1989 settlement shaped all the subsequent legal process against *Gas Peddit* and favored the neoliberal actors in power.

¹⁸⁵ Also, see Court of the District Judge, Bhopal, *Order on Interim Relief*, 17 Dec. 1987, Gas Claim Case 1113 of 1986, *Union of India v. Union Carbide Corp.*

Victims of Legal Paternalism

This section addresses how the Indian state's paternalistic takeover of *Gas Peddit* has resulted in more harm than good for the victims. In 1987, while UCC's appeal to the Indian Supreme Court for the dismissal of interim compensation was still pending, the government of India negotiated, and agreed to, a "full and final" settlement of \$470 million from UCC. Initially, the India government ought \$3.3 billion of compensation; however, it impulsively accepted an *ex gratia* \$470 million settlement package and dismissed all criminal charges against the UCC and other accused. Mentioning the urgency of compensation, Chief Justice of India Pathak argues that the 1989 settlement is a 'preeminent fit' given the harsh situation on the ground, and "all criminal proceedings related to and arising out of the disaster shall stand quashed wherever these may be pending" (see Desai 1993: 174).¹⁸⁶

A range of factors is noteworthy here. First, the settlement was finalized without hearing the perspective of any survivors or advocacy groups. Cassels in his *The Uncertain Promise of Law*, adequately states that by securing and providing very "limited and conditional interim relief, it [the Act] left the victims as stakeholders in the litigation, at the same time denying them an effective say about their future" (Cassels 1993:122). Second, later the Indian government and the judiciary realized that they had grossly undermined the scale of the devastation brought about by the Bhopal disaster. Third, the 1989 settlement, which continues to haunt the legal process for Bhopal, transformed a complex range of exposures into a legal category "managed, policed, and populated by the state" (Hanna 2014: 226). The legalistic stance has simplified the multi-dimensional gas-exposures, thus forcing the medical and scientific inquiry to be as simple as possible (see, Baxi 2010; Hanna 2014). To define gas survivors, the Bhopal Act assigned

¹⁸⁶ See the full verdict here: *Union Carbide Corporation v Union of India and others* in C.A. Nos. 3187 and 3188 of 1988 with S.L.P. (Civil) No.13080 of 1988; A.I.R. 1990 SC 273.

lawyers, instead of doctors, in order to categorize the gas-affected. The suffering in Bhopal, therefore, was totally been reduced to a legal cost-benefit analysis. It was later discovered that the categorization of the gas-exposed was suggested by the UCC (Hanna 2014). Union Carbide proposed that the Bhopal Act split the gas-affected into four categories, ranging from “no injury” to “total disablement.”¹⁸⁷ The government then set up places for registration, and many gas survivors failed to report on time or were not informed about the registration (Cassels 1993). Many gas-affected, more than 50 percent, never received any medical examination for the categorization process, thus they are put into the lowest category of compensation, “minor injury.” (Medico Friends Circle 1993; Hanna 2014).¹⁸⁸

Shri Amarprosad Chakrabarty, a member of parliament, raised his concern that the Bhopal Act did not adequately address the issue of compensation (Sabha 1985:251). Sabina Bai, a gas and water victim receiving treatment from the Sambhavna Trust Clinic, told me:

I am a *Gas Peedit* (gas sufferer) as well, but since I could not register in time and as I did not keep any records for proof, I was not eligible to receive compensation. Still, do you think I should receive compensation for being a water victim? The same corporation that came to kill us left us with contaminated water, and we have been drinking this for decades. Where is the law and compensation for me? (Interview December 8, 2018).

The registration process undertaken for the legal remedy, therefore, created a huge controversy. Several long-term consequences, on the one hand, were unknown at that time, and, on the other

¹⁸⁷ The categorization was formed following the Indian Railways Act, which was created to provide compensation to injured railway workers. UCC asked to follow this existing format. Five categories are “no injuries,” “minor injuries,” “temporary disability,” “permanent disability,” and “utmost severe cases.”

¹⁸⁸ The doctors working at the behest of the Bhopal Gas Tragedy Relief and Rehabilitation Department (BGTRRD) deemed an impossibly small number, 42 individuals, as having “utmost severe disabilities.” (See Hanna 2014:247)

hand, several acute and immediate injuries were disappearing.¹⁸⁹ The categorization and registration process took more than five years, which, of course, was preceded by the 1989 settlement. This suggests that the Indian government made the final settlement without knowing the extent of injury and devastation. When the government started distributing the money, many *Gas Peddit* were already in debt because of their paid fees to lawyers or bribing to get included.

Additionally, 93 percent of the gas-affected had been identified as having only “temporary injury,” the lowest in the categorization process with the amount of compensation Rs. 25000 (\$795).¹⁹⁰ Figure 7.2 shows the amount of compensation received by the gas-affected of JP Nagar, the area hit hardest by the disaster. The “full and final” settlement with the Union Carbide influenced the official biomedical and environmental research, which undermine the short-term and long-term devastation in Bhopal. Although independent research shows prolonged devastation in Bhopal, UCC used the settlement to repudiate all the proof of biosocial and environmental destruction that continues to haunt Bhopal. Indian state’s so-called protective takeover, and its efforts afterward to justify it, buried the knowledge of the disaster and its lingering consequences. For instance, the final settlement of \$470 million assumed that the death toll was only 3,000 and there are only 52,000 injuries. As I discussed in earlier chapters, the death toll in Bhopal, based on all reliable calculations, is at least 25,000, and there are, even by official account, at least 575,000 gas-affected individuals. This out-of-court settlement, therefore, furthered and prolonged the suffering of the *Gas Peddit* people in Bhopal. This settlement, as we will in the following sections, shielded UCC from any and all future challenges.

¹⁸⁹ The doctors who diagnose for categorization used X-rays to determine health problems of the victims, although research, including the research by the government’s main research organization, ICMR, shows that despite no clear finding on X-ray, the gas survivors have serious health-related problems, and it was difficult to find correlation between the breathing problems and diminishing functions of lung (Sriramachari no date:xx).

¹⁹⁰ The Indian government did not distribute the full \$475 million in the 1990s, thus, in 2004, survivor groups placed the demand to the Supreme Court to distribute the remaining amount. Then survivors received another Rs. 25, 000, making the total figure \$1344. Less than Rs. 12 (\$.01) per day.

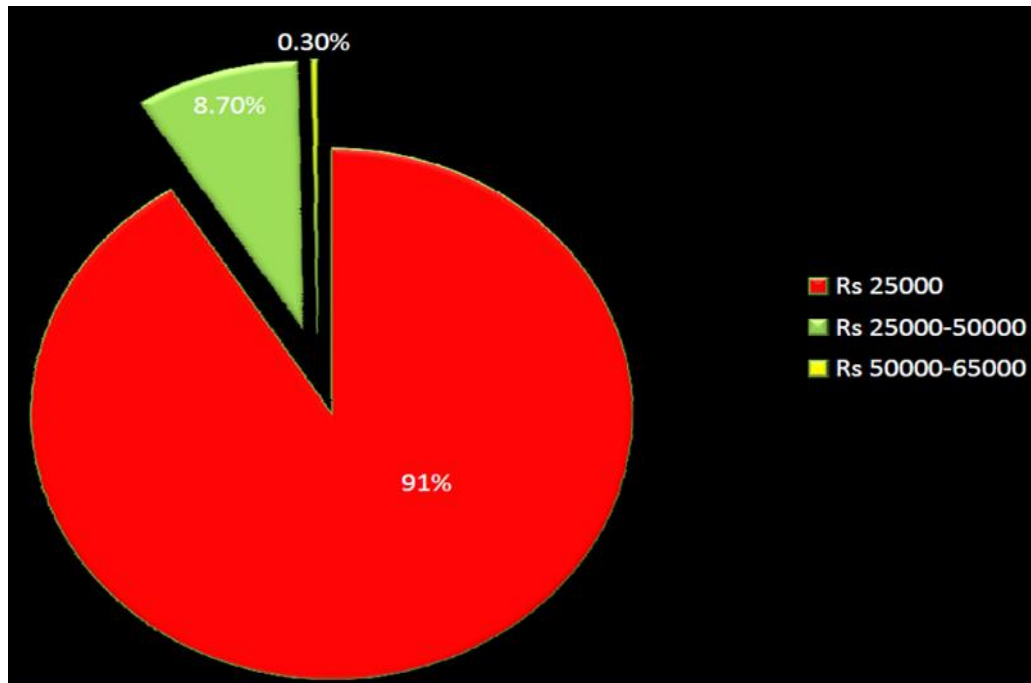


Figure 7. 2 Breakdown of compensation in the worst-affected JP Nagar. Source: Sambhavna Trust.

The 1989 settlement shocked the gas-sufferers, the involved advocacy organizations, as well as those who were sympathetic to the victims. Quite naturally, then, a harsh outcry had followed. After revisiting the judgment upon a review petition in 1991, the respective bench upheld the settlement without any trials. The categorization of the gas-exposed, influenced by the litigation procedure, sustained. It has become, among many other things, a source of major ongoing travesty in Bhopal.

The official research organization, ICMR's study, could have been used to further question the 1989 "full and final" settlement, but ICMR neither entirely published the results of its study nor offered any systematic conclusion. Although this official medical research, still exceptionally inadequate in its methods (Das 1995; Eckerman 2005; Hanna 2014), has shown ongoing adverse health consequences of the Bhopal disaster, it has made no practical impact on the categorization process to date. To the *Gas Peddit*, as Sukhla Bai says, the Indian government "deliberately" underestimated the damage caused by the disaster. In the first few days, the

doctors who were in charge of conducting autopsies signed approximately 10,000 death certificates (Rajagopalan 2014). The 1989 final settlement has no reflection of such records. The Indian state's response to the biosocial and environmental suffering of the *Gas Peddit* worsened with India's neoliberal reform in the 1990s.

Extradition of Fugitives under Neoliberal Reform

The Central Bureau of Investigation (CBI), the premier Indian investigating agency, filed a charge sheet to the Chief Judicial Magistrate (CJM) of Bhopal in 1987. The charge of "culpable homicide" was placed against 12 accused, including then CEO of UCC, Warren Anderson.¹⁹¹

The charge sheet mentions:

UCC was nominating its own Directors to the Board of Directors of the UCIL and was exercising strict financial, administrative and technical control on the Union Carbide India Limited. Thus all major decisions were taken under the orders of the Union Carbide Corporation of America. The evidence collected during the investigation proves that UCC was in total control of all the activities of UCIL. (Quoted in Edward 2014, page 64).

After issuing a number of summons against UCC and Anderson, UCC's director of communication, Berzok, replied that because UCC was an American corporation, it was not subject to India's jurisdiction. In 1989, after a round of failed summons against UCC and Anderson, the CJM of Bhopal declared Warren Anderson and UCC as absconders/fugitives, issuing a further arrest warrant. Against the backdrop of these legal crises, UCC convinced the Indian government to have a "full and final" settlement. With growing pressures from survivor activists, the CJM issued another arrest warrant against Anderson in April 1992 and requested

¹⁹¹ CBI, however, mentioned that an investigation of the Institute, West Virginia plant would be required to compare the safety situation in the Bhopal plant. This investigation never happened.

the CBI for an extradition proceeding. For a couple of years, the Indian parliament, Lok Sabha, postponed the extradition process, alleging it had been under consideration.

It is important to note that although business and trade between India and the US has become stronger since the 1970s—and America has gradually become India’s biggest foreign investor and technology exchange partner— with the rise of India’s new economic reform in the middle of 1990, e.g. increasing market liberalization (see, Levien 2018, 2013; Palit and Bhattacharjee 2008), the issue of extradition became less important. For instance, foreign investment in India increased from approximately \$130 million in 1992 to more than \$5 billion in 1995. A former CBI official, BR Lall, who headed the investigations of the Bhopal gas tragedy from 1994 to 1995, said in a later statement that “he was categorically told [by the Foreign Ministry] not to press for Anderson's extradition.”¹⁹² In 2001, a ruling by a US Appeals court to at least 15 claims filed in New York by survivors, under Alien Tort Claims and international human rights law, stated that the 1989 final settlement had precluded any other claims against UCC and Anderson, though it did acknowledge this time that UCC was profoundly in control of management over the Bhopal plant.

With the neoliberal reckoning of a healthy investment climate, the Central Bureau of Investigation (CBI), in 2002, suddenly asked the CJM to shift the charge against Anderson from culpable homicide to criminal negligence, an offense that does not require extradition. Survivor organizations arranged a hunger strike¹⁹³ to reject the CBI’s request, and the CJM upheld its initial judgment, directing the CBI to continue the extradition proceeding. In 2003, 19 years after

¹⁹²See the comment here: <https://www.ndtv.com/india-news/was-told-to-go-soft-on-warren-anderson-former-cbi-official-420245>

¹⁹³ Rashida Bee and Champa Devi Shukla, two survivor activists and the winners of 2004 Goldman Environmental Prize, organized this 19-day hunger strike (without water) in New Delhi in 2002. I discussed this in the previous chapter on activism.

the tragedy and a series of contentious debates in the Indian parliament, the Indian government finally requested that the US government extradite Anderson.¹⁹⁴

More than a year had passed before the US Department of State made a reply: the GOI's request could not be executed as it did not meet the requirements of the Extradition Treaty. There is growing evidence to suggest that US officials and large business entities conspired to pressure the Indian and US governments to extinguish the extradition issue.¹⁹⁵ Union Carbide's vice president at the time, Joseph Goeghan, went further still and admonished the serious consequences of this extradition. To him, the issue of extradition would seriously jeopardize "U.S. business leaders' confidence." He continues:

Extradition in [a] case like this would place in jeopardy any officer of an American corporation with significant interests in foreign enterprises anywhere in the world in the event of some future disaster. The chilling effect on American investment abroad cannot be overstated. (Quoted in Edward 2014: 71-72).

The last extradition request to the US was sent in 2011. Warren Anderson died as a fugitive from justice in 2014. UCC, an American industrial giant of the 20th century and a once-Fortune-500 company, and Anderson, the former CEO of UCC, remain a fugitive to date. UCC had since disappeared under another chemical giant, the Dow Chemical Company from 2001, when it became a wholly owned subsidiary of Dow. Overdue as it was, the issue of contamination has also entered the legal battle. In 2004, Alok Pratap Singh, a Bhopali resident and activist, filed a case in the Madhya Pradesh high court, demanding Dow be held responsible for ongoing

¹⁹⁴ While the Government of the United States of America and the Government of the Republic of India were under the terms of the Treaty signed in 1931, when India was under British Rule,¹⁹⁴ India has signed a renewed extradition treaty with the USA in 1997. See the extradition treaty document <https://www.state.gov/documents/organization/101685.pdf>

¹⁹⁵ Released emails and cables, although many documents are still significantly redacted, under the Freedom of Information Act, show US officials' concerns for the issue. See Edward (2014).

pollution in Bhopal. The central government maintained this position, asking Dow to deposit \$1 billion for environmental remediation. Dow responded by lobbying, with the aid of industrialist Ratan Tata and former finance minister, P Chidambaram, in an attempt to pressure the Indian government to withdraw its support. As of yet, Dow has refused to respond to several summonses issued by the Bhopal court to explain the whereabouts of UCC. Activist Balakrishnan says:

UCC can hide anywhere it wants. But since Dow owns UCC, it owns its previous responsibility too. Dow's refusal to accept responsibility does not make it legally right. It could refuse to comply because it has power, which it can use to influence powerful actors in India in its favor. (Interview. July 19, 2018)

Only eight of UCIL's Indian employees were given sentences, and negligible ones at that, for the worst industrial disaster in Bhopal. Legal proceedings of the Bhopal catastrophes have not, to this day, met with any substantial progress. The Indian state failed not only to protect its citizens from an 'avoidable disaster' but also to redeem itself by bringing responsible corporations to justice. India continues to work for creating and maintaining a contemporarily acceptable, commercially desirable foreign investment climate to increase its economic growth. The Bhopal disaster—that killed at least 25,000, injured hundreds of thousands, and left devastating social and environmental consequences for future generations—would remain a watershed event in India's economic growth story. And the US government's¹⁹⁶ contribution to the social and environmental destruction in Bhopal, caused by one of its many multinational giants, continues to play a leading role. Moreover, when the Indian government was given an opportunity in 2011 to redress its past mistakes, it continued its callous disregard for the gas-sufferer, all the same.

¹⁹⁶ Six activists requested a meeting with Barack Obama when he visited India in 2014. They did not succeed. In 2016, ICJB activists petitioned the White House (We the People) to stop shielding Dow Chemicals from accountability in Bhopal. The White House declined to comment on the issue.

Curative Petition: A Hope or Another Catastrophe Awaiting?

In 2010, the Group of Ministers (GOM) on Bhopal, which was created in 2004 to assess the consequences and compensation in relation to the Bhopal catastrophes, after the disputable verdict by Bhopal court in which eight Indian employees of Union Carbide were sentenced to two years in jail, ordered the Government of India to file a Curative Petition.¹⁹⁷ They declared that the 1989 civil case with the UCC, which settled the issue with an *ex gratia* lump sum, was legally flawed. Following this order, in 2011, on the 26th anniversary of the disaster, the Indian government filed a curative petition asking for additional compensation of \$1.75 billion, as mortality and adverse consequences have increased since 1987. The provision of Curative Petition was created by the Indian Supreme Court to challenge the previously dismissed review petition which failed to address the question of injustice. To elaborate, the supreme court of India kept the issue of further petition open in its 1991 review of settlement. It stated, “if the settlement-fund is found to be insufficient, the deficiency is to be made good by the Union of India..” (Misra 1991:81, viii). The Supreme Court of India came up with the notion of Curative petition in the 2002 case of Rupa Ashok Hurra vs. Ashok Hurra and Anr. This petition is now a legal tool to examine if an initial review petition is flawed and failed to provide natural justice to the aggrieved person. Usually, a panel of three Justices hears a petition to review the original verdict.

The curative petition referred to the initial settlement in which the Justices stated that if the total number of deaths and injuries became larger or “the basic assumption underlying the [1989] settlement [became] wholly unrelated to the realities” (UOI 2010), the notion of justness

¹⁹⁷ This act was created by the Indian Supreme Court to challenge the previously dismissed review petition which failed to address the question of injustice. To elaborate, The Supreme Court of India came up with the notion of Curative petition in the 2002 case of Rupa Ashok Hurra vs. Ashok Hurra and Anr. This petition is now a legal tool to examine if an initial review petition is flawed and failed to provide the natural justice to aggrieved person. Usually a panel of three Justices hear a petition to review the original verdict.

“would seriously be impaired.” Given that the 1989 settlement grossly underestimated the number of deaths and injuries, and the official numbers of deaths and injuries have increased thereafter, the compensation amount legally must be adjusted. A North American ICJB activist, Rosana Chawla, says:

Bhopal is one piece of a larger, complex puzzle. One of the demands of survivors is that [Union] Carbide must clean up the site because it contaminated their backyard. The principle that guides us [activists] is the “polluter must pay” principle. Even when our kids do mess up something, we parents clean them up. That’s their [UCC’s] garbage. This is a commonsense knowledge: you pollute...you pay for it...health and environmental problems in Bhopal should be included in compensation amount.

(Interview/skype. May 10, 2019.)

Additionally, survivor activists in their present focus do well to criticize the official, reported number of deaths and injuries in the petition. The Curative Petition attributed only 5,295 deaths to the gas leak, a figure ridiculously lower than findings from any official and/or independent study. ICMR, the government’s research organization, mentioned approximately 10,000 deaths until 1993 (this was when, curiously, ICMR ceased conducting epidemiological studies).

Given the disaster’s interminable aftermath, the death figure is approximately 25,000 until today, based on ICMR’s statistical prediction. MIC, even according to the UCC’s infamous documents discovered later, is highly hazardous and capable of causing residual damage even if the exposed are given immediate treatment. The Bhopal MIC-affected were left unguarded following the disaster, and ‘victims’ have never truly received proper treatment. Amnesty

International’s 2004 report holds the figure of fatalities well over 20,000 in the first two decades, and research shows that 5-to-6 gas-affected die every day in Bhopal.¹⁹⁸

After the powerful Rail Roko Movement (discussed in Chapter Six), the GOM said that it’s too late to re-categorize the victims (Figure 7.3). Highlighting how the local and central administration of India has failed in their constitutional and legal duties, four survivor organizations in a press release, dated January 22, 2019, wrote the following:

In its 2008 Memorandum of Plan of Actions the BGTRRD [Bhopal Gas Tragedy Relief and Rehabilitation Department] has mentioned a figure of 5000 as the number of women who have been widowed by the disaster. It does not require an expert in Demography to assert that if the real figures of all single males, single or married females and children who died due to the disaster were added to this figure, the total number of deaths caused by Union Carbide in Bhopal would exceed 20, 000.

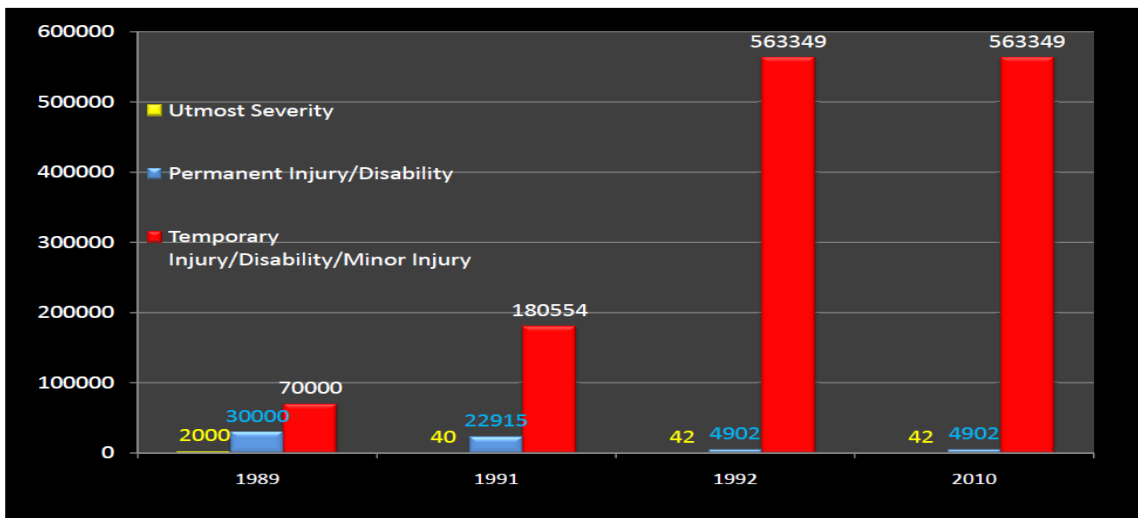


Figure 7.3 Official Figures of Injury Compensation Presented before Supreme Court. Source: Sambhavna Trust.

¹⁹⁸See <http://www.catchnews.com/national-news/bhopal-gas-tragedy-even-after-34-years-five-to-six-bhopal-gas-tragedy-victims-dying-every-day-142033.html>; and <https://www.newsclick.in/five-six-bhopal-gas-tragedy-victims-dying-every-day-yet-its-not-political-issue>

The Indian Supreme Court is expected to hear the Curative Petition soon. While the gas sufferer and their sympathizers await the hearing with eagerness, they are duly suspicious of anything remarkable in their favor; their state colluded with the “killer” corporation and has failed, betrayed, and abandoned them over and over again. UCC (now a subsidiary of Dow), in its effort to delegitimize the petition, upholding the 1989 settlement as “fair, final and irrevocable,” made a flippant reply. They asked in a press release that the government not reopen the case, because the Government’s action, as UCC writes, “[would] serve only to undermine the global perception of India as a nation committed to the rule of law and the integrity of legally-binding agreement” and if reopened, it would damage the “certainty in ongoing investment in India by the international community.”¹⁹⁹

Yes, the old familiar plea: Investment Climate. Who are those economists who say that market is self-regulating, and hence, should be free? Even a corporation that no longer officially exists knows that corporations regulate the market. Not one parasite in nature seems diabolical enough for comparison. What is it exactly? Even my respondents, the victims, know: a shepherd letting wolves graze on the fold that he might share in the spoil, a system so feckless or sinister that it grants corporations a backstage pass to invade, destroy, and then slip away unscathed.²⁰⁰ In the end, the only growth the free market provides is a growth of suffering. The survivors are now rightly worried that any possibility of attaining final justice for the gas sufferer is remote at best.

While the disaster that took place under India’s shrinking developmental state inflicted irreparable injuries on poor, marginalized Bhopalis, neoliberal India since 1990 not only misled the public about the ongoing biosocial and environmental harms but also help shape the legal path against *Gas Peddit* in Bhopal. The possibility of redressing the legal catastrophes in Bhopal

¹⁹⁹ See UCC’s press release here: <http://storage.dow.com.edgesuite.net/dow.com/Bhopal/Petition.pdf>

²⁰⁰ I paraphrased this statement from one of my respondents Halima Bee, a survivor who lost several members of her family on the night of the disaster.

with the revival of right-wing politics in India become more uncertain than ever. The leaders of survivor organizations recently posted a brief note on the ICJB's website examining five years of the current Modi government. The statement begins by pointing out that the Government of India has always condoned the actions of UCC. The Bharatiya Janata Party (BJP) party, the local leaders of which deem the gas exposure a Muslim issue, has been in power for a total of 11 years since 1984. The part of the statement titled "Five Years of Modi and Bhopal Gas Disaster" says,

There is substantial documentary evidence pointing at the Government of India's complicity in the crimes committed by US multinational Union Carbide before and in the long aftermath of the Bhopal gas disaster on December 2-3, 1984. In the 34 years following the Union Carbide disaster in Bhopal, the BJP/NDA has been in power at the center for 11 years. Curiously, while in the public memory the quite valid charge of collusion with a foreign corporation remains stuck against the Congress party, and in particular Late Rajiv Gandhi while those against BJP/NDA's have largely slipped. Factually, for each act of collusion by the Congress government in 23 years, there is documentary evidence of the unholy corporate-government nexus that matches it during the 11 years of BJP/NDA rule.²⁰¹

To activists, the Modi government has "outdone the Congress in terms of protecting the interests of the US multinationals and denying the rights to justice and a life of dignity to the survivors of the world's worst industrial disaster."²⁰² In February 2018, survivor organizations asked the Modi government to direct the CBI to form a prohibitive writ, halting the split of UCC's asset. To clarify, Dow is now completing its merger with DuPont to form DowDuPont Incorporated. UCC had so far been an independent 'legal' entity, but this merger—to complete a three-way

²⁰¹ NDA stands for National Democratic Alliance, a coalition of conservative, right-wing political parties in India. The lead party is BJP, although it has 13 other parties, including Shiv Sena, a party of Hindu chauvinists.

²⁰² See ICJB page here <https://www.bhopal.net/five-years-of-modi-and-bhopal-gas-disaster/>

split of its business—would split UCC as well. But the Prime Minister’s office has not taken any preventive steps thus far.

The chapter has demonstrated how the unequal application of the law was achieved by powerful actors in the wake of an unprecedented, avoidable disaster. Judge Keenan basing his argument regarding the higher living standard of populations in the US than those that of India essentially showed that the law is unequal, and it is not immune from neoliberal racism. After decades of the disaster, Kathy Hunt, Dow Public Affairs Specialist stated, “\$500 is plenty good for an Indian.” It is a simple reiteration of what Judge Keenan implied in his verdict. And, the Indian government’s paternalistic takeover of claims and compensation with its so-called good intention to save the victims of the “largest peacetime Industrial disaster,” a phrase Judge Keenan used in 1985, from legal misuse, produced much suffering to *Gas Peddit* people. The exercise of legal paternalism by the Indian state—which turned multidimensional exposures and sufferings into legalistic categories—in fact, has caused the deaths of many thousands over the last three decades. Even after 34 years of the disaster, there exists virtually no systematic diagnostic nor any proper treatment method for the biological harms caused by the disaster. The Bhopal Act is an example of government’s failure not only in compensating and rehabilitating the victims of the worst industrial disaster but also in bringing the corporations to justice. The Indian government’s Bhopal Act, in this sense, has shaped the legal path in favor of corporations and powerful states and to the detriment of the *Gas Peddit* Bhopalis.

The outcome of the Curative Petition will be announced any day now, but the fate of the sufferers hangs in the balance. The *Gas Peddit* Bhopalis are aware, as Guddo Bee says, that “the law did not and would not necessarily counter the abuse of victims” from local, national, and international power. Additionally, the whole saga of suffering, now tormenting a third

generation, seems impossible to have a legal remedy. However, *Gas Peddit* for strategic reasons relies on the rule of law to ease their ongoing suffering. Thus, the Bhopal survivor activists are currently demanding their government to revise the death toll of the disaster as a first step to ensuring justice. The Bhopal catastrophe has arguably done much to alter the face of global capitalism, including the law to regulate corporations and environmental law (discussed in the concluding chapter); however, these changes have done pittance to improve the situations of the gas sufferers in Bhopal. While the gas sufferers are left waiting to receive a legal remedy and restitution for the death and destruction that is nothing but visible, how to compensate the ‘victims’ of the *invisible* slow violence of social and environmental destruction in Bhopal is absent in the prevailing legal framework.

Chapter Eight: An Unfinished Conclusion

It [the issue of disasters] extends to the strange silence over Bhopal, the world's biggest industrial disaster. There is silence about the science, the medicine; there is vagueness to the roll-call of the dead...The survivors of Bhopal have become one more set of nameless victims that our democracy and our science have erased from memory.

- Shiv Visvanathan (2001), “Democracy, Governance and Science: Strange Case of the Missing Discipline,” p. 3685.

Throughout my examination of Bhopal, my purpose has been to confront at least three issues: the erasure of the event; its continuing consequences; and the ways in which the catastrophes have been understood—or misconceived—in political, judicial, and academic discourse. Bhopal is far from over. In its killing of thousands and maiming of hundreds of thousands, the spectacular disaster shook the world in 1984, and the aftershocks wear on. The prolonged, invisible catastrophes are what defines Bhopal. Unfading biosocial and environmental suffering, guileful attempts to delegitimize and whitewash oppression by the political-economic ministers of neoliberalism, by state managers, corporations, and the law—such is the legacy. Political economic powers used modern democracy and science to erase the *Gas Peddit* and their suffering from our memory (Visvanathan in epigraph quote). And in academia, especially those who claim to practice critical and transformative thinking seem short of the vocabulary required to fathom the worst industrial catastrophe in modern human history in its long-term and newly politicized effects.

“Those who died on the night of the disaster are the luckiest” is a common saying among the gas and water sufferers (*Gas Peddit*) today. Nothing makes their suffering more visible, perhaps, than the second and third generations of children born with disabilities because of their parents and grandparents’ exposure to poisonous gases and the uncertain effects of drinking

contaminated water for decades. To give the cursed children of Bhopal their due account would take another dissertation entirely. It is a daunting task to cover the more-than-three-decades-long saga of biosocial and environmental devastation and travesty of justice in Bhopal. However, this chronicle of destruction is only one side of the story. On the other lies the epic of relentless resistance by the victims, led equally as long and giving rise to a new political society in Bhopal.

The Bhopal catastrophe “was the largest poison gas attack ever on a civilian population, and it occurred outside the context of war” (Jasanoff 2016:68). The question is did the Bhopal disaster of 1984 change the way global capitalism operates? The answer is no. In terms of the neoliberal “governance” and management of disasters, there has been a useful advancement of industry safety standards and accident preparedness since the event.²⁰³ Within months of the Bhopal disaster, the Chemical Manufacturers Association (CMA) introduced its Community Awareness & Emergency Program for emergency response in the US. In 1995, the Indian Parliament passed the National Environment Tribunal Act (NETA), following the Supreme Court’s 1989 decision on the Bhopal Tragedy.²⁰⁴ The act was devised, in principle, to provide compensation to victims of environmental disasters; regardless, whether the number of industrial accidents increased or decreased and/or accident preparedness improved or declined has not been the focus of this dissertation (though they may be important factors for measuring progress in

²⁰³ Accidents linked to industrial activities continue to happen though. The incidence of large-scale disasters seems evident and has become a commonplace. Gas leak explosions in Nigeria happen every now and then. In 2019, an explosion at a Chinese chemical plant killed more than dozens. In 2013, Rana plaza factory building collapse killed 1200 workers and injured thousands. These incidents are not distant and are part of global dynamics. China, for example, is now an unavoidable part of global capital and the pressure to increasingly dominate the global market creates many adverse consequences for its marginalized people. Bangladesh’s garment industry is the largest industry Bangladesh and it is the second largest exporter of garments to the US.

²⁰⁴ The act is part of Ministry of Environment and Forests (MoEF). The Act, as MoEF webpages says, “devised to provide for strict liability for damages arising out of any accident occurring while handling any hazardous substance and for the establishment of a National Environment Tribunal for effective and expeditious disposal of cases arising from such accident, with a view to giving relief and compensation for damages to persons, property and the environment and for matters connected therewith.” See the act here: <https://www.indiawaterportal.org/articles/national-environment-tribunal-act-ministry-environment-and-forests-1995>

industrial activities). Such improvements do not touch either the structures of neoliberal capitalism in the Indian periphery nor the movement resistance to it.

Instead, this dissertation has attempted to unravel the political economic and political ecological forces behind correlated catastrophes in Bhopal, including the methods by which neoliberal actors continue to trivialize the slow violence of social, health, and environmental destruction in the region. Thus, even while trying to create new industrial standards and avoid future industrial disasters, Bhopal reveals both the lingering devastation inflicted on the marginalized and also the ways in which neoliberal India sells its own lifetime destruction at a discount. UCC's Bhopal plant, which was set up in the middle of shanty towns to inaugurate a chemical revolution in India, continues to spread water and soil contamination in several residential areas.

The disaster took place when economic globalization was taking a neoliberal turn and India's developmental state was in decline. As discussed throughout this dissertation, this neoliberal plunge played an integral role in creating and particularly in prolonging and suppressing the ongoing crises in Bhopal. Stationing the pesticide factory in shanty towns—which embodied the pathology of India's developmental state given that Bhopal had already been geographically segregated along class and religious lines—was intended to maximize India's profit strategy for a booming pesticide market in the era of Green Revolutions. Their plan was evidently successful, since it enticed America's foremost chemical giant of the twentieth century, UCC, to lead a chemical revolution in India.

It was, hence, a time when India's Nehruvian development developmental state was still flourishing while neoliberal economic reform was looming in India's horizon. As the US was on track to become India's largest foreign and technology exchange partner, the American

multinational corporation UCC was desperate to retain majority control over its complete businesses against nationalist developmentalism in India. Thus UCC, champing at the bit, transferred its corroded technologies from West Virginia to Bhopal in order to set up an MIC unit for cheaper pesticide production. As I discussed, when state regulation was weakening in India, UCC employed political influence to build this risky factory. As their plans ultimately fell through, however, UCC took dramatic cost-cutting measures, sowing the seeds of the worst industrial disaster. It is unfathomable why UCC allowed such massive quantities of MIC to be kept in three separate tanks in the Bhopal plant, a factory that was dangerously close to shanty towns in old Bhopal. Then in the aftermath, capitalizing on their knowledge monopoly, UCC deliberately refused to provide information on the deleterious effects of MIC, which could have reduced the number of deaths and adverse, long-term health consequences.

The Indian and American states could have changed the legacy of the Bhopal disaster if they had just handled it properly. Rather than risk deterioration in relations with foreign investors, India's paternalistic takeover of the consequences of the catastrophe—and their acceptance of a highly disputable settlement in 1989—provided UCC with impunity. UCC has never been convicted of a homicidal crime in Bhopal. To maintain a healthy investment climate, the Indian government made no attempts for the extradition of UCC's former CEO, Warren Anderson, save for a hollow effort more than a decade after the disaster in 2003. Nor, moreover, did the American government cooperate with India's extradition request. On the contrary, India and the United States merely fraternized with the perpetrators in hopes of grabbing the low-hanging fruit.

The 1989 settlement with an *ex gratia* lump, which survivor activists have been protesting for decades, was no less than a shameless effort to wipe away their mistake and wash

their hands of the matter in full. One of the worst consequences of the settlement is the facile quantification of large-scale, complex, individualized exposures for legal purposes. The government not only underestimated the death figures, but it placed approximately 93 percent of the sufferers into “minor” injury categories, yielding each the paltry sum of Rs.25000 (US\$795). Official research on the health and environmental consequences, conducted by ICMR, the government’s premier biomedical research organization, is far from sufficient, failing to offer any systemic conclusion on the biological harm caused by the disaster. Although severe and adverse health effects continue virtually unabated, ICMR mysteriously stopped its epidemiological research in 1994. Official research on environmental consequences remains similarly questionable.

All the while, more and more marginalized people living in the factory’s shadow suffer from ongoing soil and water contamination from chemicals left uncleaned in the abandoned factory, from the factory’s processed waste, and from product dumped in an open pit (the solar evaporation pond). Much independent research confirms the adverse social, health, and environmental consequences in Bhopal. *Gas Peddit* suffer from serious health problems, including reproductive (Dhara 1993; Malla 2010; Narayan 1990; Sadgopal 1985; Varma 1987), ocular (Anderson N 1984), pulmonary (ICMR 2010; Malla 2010), mental (Hanna 2014; Murthy 1997; Sriramachari 2006) and carcinogenic (Bhagat²⁰⁵ 2007; Eckerman 2005; Hanna 2014). A 2013 survey (Murthy 2013) shows that more than 80 percent *Gas Peddit* think that they have severe health problems, although doctors offering treatments suspect their illness continuously and use the categorization created for the 1989 settlement to justify their suspicion. An overwhelming amount of research shows evidence as well of ongoing soil and water

²⁰⁵ Bhagat (2007) criticizes Bhopal Cancer Registry (BCR) for their methodological error including the cancer incidences in relation gas exposure. Bhagat finds that BCR authority visited only a handful of clinics (5 or 6 out of 63 centers, although they regularly visited only three cancer hospitals)

contamination caused explicitly by toxic chemicals once used by the Bhopal factory (CSE 2009; Greenpeace 1999; Amnesty International 2004). Marginalized Bhopalis have been drinking contaminated water for almost three decades until 2011 when the local administration started providing the victims with clean drinking water. The water victims, however, have multiple complains about the quality of supply water.

Bhopal is multiple catastrophes: an initial catastrophe, caused by UCC's gross negligence; a legal catastrophe, orchestrated by the corporation and carried out by the paternalistic Indian state; a biomedical catastrophe, due to experts' failures to determine the health effects of the tragedy; and a long-term social and environmental catastrophe, rendered invisible by neoliberal India. However, the affected Bhopalis have risen from the ashes of destruction and refused to accept the dominant narrative of justice, making their biosocial and environmental suffering visible from the outside. Writing this dissertation, to say the least, would not have panned out without the inspiration of Bhopal's most "valiant victims." And, too, the visibility of Bhopal, regardless of its extent, would not have been possible without the movement resistance of the marginalized.

It is indeed true that the Bhopal disaster provided opportunities for envisioning a development model that would protect the democratic and environmental rights of the disadvantaged across the world. But, today, decades after the green revolutions, marginalized farmers and farm workers remain to be the worst sufferer of pesticide-related illness and death (Nyakundi et al.2010; Devi 2012). Notwithstanding the set of new rules and regulations for corporations in the wake of this unprecedented catastrophe in Bhopal,²⁰⁶ research abounds in its

²⁰⁶ It is true that number of casualties and injuries linked to industrial activities are less than before and there are more rules and regulations for corporations than what was in place in 1984. For examples, United Nations in 1988 has established the Environment Program Awareness and Preparedness for Emergencies at the Local Level (APELL); Organization for Economic Cooperation and Development in 1991 has adopted Guiding Principles for

demonstration of how social and environmental destruction disproportionately affects marginalized locales and impoverished minorities on the whole.²⁰⁷ Thus, while it may be true that the prevailing global *risk society* respects no boundary, class, or ideological divide, a surplus of evidence indicates that impoverished, marginalized people bear the inordinate weight of social and environmental harms.

Furthermore, this dissertation has demonstrated that the neoliberal takeover of peripheral countries, such as India, proliferates a vast cluster of biosocial and environmental destruction, as exemplified by the Bhopal catastrophes. Such prolonged destruction can be deemed as a form of “primitive accumulation,”²⁰⁸ but it deviates from Marx’s postulate that such accumulation is a precondition for the development of capitalism and a pathway to socialism. Rather, its end is to make the devastation unseen and forgotten by many actors. The biomedical analysis took part in failing the victims (Das 1995; Eckerman 2005; Visvanathan 2001), be it deliberately or unintentionally, by not understanding the injury. Corporations and state managers in neoliberalism, in fact, have devised new tactics, such as making the suffering invisible by prolonging it, to put profit over society and environment. In this regard, what Bhopal shows is that suffering, which by the day grows painfully slower, is not invisible by default; it is the inexorable product of global neoliberalism. The suffering in Bhopal under neoliberal India lives on in adversity, but perhaps the most diabolical feature of neoliberalism is that those in power

Chemical Accident Prevention, Preparedness and Response; the Environment Protection Agency (EPA) in 1986 instituted Local Emergency Planning Committees (LEPCs), to ensure the right of community to know what hazardous chemicals are in use in local industry.

²⁰⁷ In 2018, a report by Yale and Columbia Universities along with the World Economic Forum listed India listed in among the bottom five countries on the Environmental Performance Index, which is linked to worse performance in the environment health policy

²⁰⁸ Karl Marx (1876) in his analysis of ‘primitive accumulation’ shows that peasants’ dispossession from their own land, and turning them to be wage earners, was a precondition for the development of capitalism. Harvey (2009), however, illustrates that “accumulation by dispossession” is not only specific to the precondition for capitalism, this is “new imperialism” expands.

imply that victims must make their suffering drastically manifest before they can be treated as *Gas Peddit*.²⁰⁹

Bhopal, moreover, illustrates the necessity to reexamine our notion of social and environmental justice because most scholarship tends to overlook the interplay between the political economic and ecological aspects and many prolonged social and environmental harms necessary to understand the multiple, sometimes invisible, ways marginalized people suffer enduring social and environmental destruction in neoliberalism. This interplay is still absent in global environmental and development rhetoric. Moreover, as previously discussed, Muslims (in fact Bharatiya Janata Party—the party in power—considers Bhopal a Muslim issue), Dalits, and women represent a sizable part of the affected population. Neoliberal India has further marginalized these already marginalized groups, and the rise of right-wing politics has aggravated the issue to an epidemic scale. Bhopal, on the one hand, is an example of global capitalism on the ground, and, on the other, is a symbol of how vulnerable populations living in marginalized countries suffer many pathological consequences of developmental and neoliberal states. Environmental justice scholars must, therefore, extend their analysis beyond the US.

Limiting the Bhopal tragedy to a moment of spectacle is, at the very least, an epistemic violence that scholars, disaster and STS scholars in particular, find it difficult to escape. The fact that I have offered a political economic and ecological analysis of the invisible, lingering devastation in Bhopal in 2019, after 34 years of the tragedy, is, in effect, an attempt to repair this intellectual violence. The afflicted Bhopalis have been subjected by powerful agents, such as

²⁰⁹The medical “gaze” on the affected seems complicates Foucault’s analysis of biopower, which, as Foucault (1990) argues in his *The History of Sexuality*, exercises power over body through diverse techniques, including through the knowledge of modern medicine (Foucault 1973). The diagnosis of the affected Bhopalis has never been completed and never offered any “concrete conclusions” (Hanna 2014; ICMR 2010). In this regard, it may be reasonable call it the bio-invisibility of the Bhopal disaster.

corporations and state managers, to be “abandoned” (Mbembe 2011) or to eke out “bare [lives]” (Agamban 1995).

But, the “valiant victims” (Baxi 1990) of Bhopal have been fighting for the last decades against the forces that caused their suffering, leading to the longest-running social movement in postcolonial India and making the Bhopal Movement one of the first major global social and environmental justice movements in this age of neoliberal globalization. Not only that, it is, in fact, the first movement that is making us see what is unseen. As biosocial and environmental suffering goes on in Bhopal, so does the affected peoples’ determination to carry the fight against the responsible corporations that caused their suffering. The Bhopal Movement is, borrowing from Chatterjee (2004), a political society, but with new characteristics. The Bhopal Movement has created a new form of politics that refuses to accept any ad-hoc remediation and the top-down narrative of justice. The movement, more remarkably, is fighting neoliberal destruction of their society and environment.

This dissertation, however, did not underlie many aspects that deserve separate attention. The Sambhavna Trust Clinic and Research Centre, founded in 1995 with the help of donations collected by the Bhopal Medical Appeal²¹⁰, offers systemic care to more than 40,000 gas and water sufferers, compensating for the inadequacy of the health care and research system for Bhopal survivors provided by neoliberal India. More importantly, Sambhavna was created soon after ICMR stopped conducting epidemiological research on Bhopal. As part of health documentation, the Sambhavna is the only clinic that records a general measurement of exposure level which includes location and quality of housing of the affected at the time of the disaster (as opposed to mortality-based locations that ICMR used). Surrounded by many medicinal trees, this

²¹⁰ Indra Sinha in 1994 ran an advertisement/campaign, “Bhopal Medical Appeal (BMA),” in *Guardian* and *Observer*. UK-based BMA does medical advocacy for Bhopal.

community clinic, which I observed during my fieldwork, although lacking many facilities required for complex diagnostics or treatment, offers allopathic, Ayurvedic, and Yoga treatments to gas and water sufferer.

Being disappointed with the institutions of law, the Bhopal activists have long sought alternatives. In 1989, activists made contact with an Italy-based international network of experts and scholars in the Permanent People's Tribunal (PPT) to bring a tribunal to Bhopal. The PPT organized a powerful session on Bhopal in Italy and identified the limits of the legal and medical process about Bhopal. More importantly, it found UCC and Anderson guilty and suggested prosecution. It also recommended the continuous monitoring of survivors. Predictably, this recommendation did not affect the official medical examination of Bhopal survivors. The PPT was the main inspiration behind creating the International Medical Commission on Bhopal (IMCB), which is run by more than two dozen experts from all over the world.²¹¹ Many went to Bhopal and made a useful contribution to the biomedical understanding of the exposed patients. IMCB's primary recommendation was the restructuring of the medical system and building of community-based primary care clinics. The idea for the Sambhavna Trust clinic derived from the suggestion of IMCB.

Similarly, the Chingari (spark) Rehabilitation Centre, founded in 2006 by two women survivor activists using money from the Goldman Environmental Award that offers therapies and special education to children disabled by the Bhopal disaster has not been emphasized in this study. I visited Chingari during my fieldwork in 2018 summer in Bhopal. Chingari has a total of 900 registered children disabled by the gas and 200 children regularly visit the center (picked up

²¹¹ By the time the IMCB was preparing its proposal, official research organization, ICMR, already stopped conducting epidemiological research. The commission was consisted of experts from Canada, China, Germany, Poland, the Netherlands, the US, the UK, Belarus, etc. The commission published its findings on the *International Perspectives in Public Health* in 1996.

by the Chingari's van). The center organizes annual candlelight vigils with the presence of disabled children with their mother in public places in Bhopal. On December 3, 2018, the candlelight vigil took place in Neelam park, Jahangirabad, located at the center of the city of Bhopal. It is a moment that silently captures the terrifying legacy of Bhopal.

Besides the strength, tenacity, and bravery of Bhopal survivor activists, one of the most important aspects of survivor activists like those who built the Chingari center is their challenge to the official construction of knowledge about the suffering of the affected. Challenging the official account, the Sambhavna Clinic and the Chingari center create and disseminate their own version of knowledge of the suffering. The continuous disregard toward *Gas Peddit* strengthened the suspicion of activist organizations toward the official and corporate narrative of the Bhopal catastrophe and its consequences. UCC used its monopoly on knowledge and refused to share the test results on the effects of MIC while maintaining its tale of industrial sabotage behind the disaster. And after the disaster, the Indian government not only politicized the law but also politicized the knowledge of the disaster and its consequences. Official epidemiological research on Bhopal was not published until 2004 and clearly failed to tell us about the nature of the biological harm caused by the leaked gas. Moreover, the existing medical support system in Bhopal continuously downplays the suffering of the *Gas Peddit* and attributes the suffering to lower socioeconomic status and related common behavior, such as tobacco use. "Being a poor [person] is hard" said Rumita Bee, a gas and water sufferer. But the fact that children are still born with disabilities to parents living in the exposed areas is an undeniably visible manifestation of their conditions. It, therefore, is not knowledge, or lack thereof, so much as it is power differentials that shape their lives. As Foucault (1980) argues, power creates a field of discourse through knowledge. While the 1984 catastrophe that slain thousands and injured hundreds of

thousands happened under India's waning developmental state, the invisibility and erasure of the consequences must be attributed to powerful actors in neoliberal India.

Bhopal activists who are fighting to expose gaps in the hegemonic knowledge and thus making their suffering visible have created a new politics in Bhopal. The *Gas Peddit* Bhopalis have risen like a Phoenix from the lethal cloud that smothered them in their sleep on December 3, 1984. The "spectacular" catastrophe that destroyed their life, family, and community has also brought out the best of their immense humanity. They stood up, refused to be expended, and challenged, what Rashida Bi, a gas survivor who lost five gas-exposed family members to cancer, says "those who threaten the planet and the magic and mystery of life."

The whole saga of Bhopal, having now projected its torments on a third generation, is impossible to relate in a single dissertation. If the event of the 1984 disaster was part of a long global political economic story, its long-term, invisible, and evolving aftermath is the epitome of the slow violence of biosocial and environmental destruction perpetrated by neoliberal political and economic actors in power. This power has obfuscated the tragedy as much as it has the pertinent medical, judicial, and environmental discourse. As if the initial catastrophe was not troubling enough, add to it the catastrophes that followed: intergenerational, biosocial suffering; gross underestimation of death and injury; heedless categorization of the complex exposures for legal expedient; brazenly incongruous compensation; inadequate epidemiological research; stigmatization of the victims for their lower socioeconomic status; unethical drug trials foisted on the survivors; and ongoing soil and groundwater contamination. Still, the fiasco is unresolved. In Bhopal, everything seems scandalous, much like our knowledge about it. "Come to Bhopal and watch the farce get worse," a Bhopal survivor activist told me. To be sure, the only nonfarfical aspect of the place was the resistance. By resisting the neoliberal forces that attempt to render

invisible the slow violence of biosocial and environmental devastation, *Gas Peddit Bhopalis* compel us to look for alternatives to existing frameworks in order to capture the multiple ways in which biosocial and environmental destruction affects marginalized groups in our era of global market dominion. Bhopal, because of its lingering socioenvironmental legacy and because the way the entire tragedy has been created and perpetuated by the actors in power, upsets our imagination. And it should, lest we forget it.

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Appendices

Appendix A. Cross-national Patterns of Industrial Disasters with Slow Violence Since 1984

Date/Year	Country	Location/Domestic	Injuries	Casualties	Consequences (in years)
31-Jul-14	Taiwan	Kaohsiung	330	33	5
13-May-14	Turkey	Manisa	300	310	6
07-Apr-14	USA	waco/west	160	15	3
13-Apr-13	Bangladesh	Dhaka	1000	1200	11
24-Nov-12	Bangladesh	Dhaka	113		10
08-Sep-12	Canada	Sherbrooke, Quebec	19	2	1
11-Mar-11	Japan	Fukushima	0	1	20
20-Apr-10	USA	Gulf of Mexico	0	11	15
16-Aug-10	China	Harbin	153	20	5
29-Oct-09	India	Jaipur	150	12	12
26-Aug-08	China	Guangxi Zhuang	60	20	6
07-Jan-08	S. Korea	Icheon	10	40	4
25-Mar-08	Iran	Arak	38	30	10
19-Feb-06	Mexico	San Juan de Sabinas		65	10
26-Dec-06	Nigeria	Lagos City		466	20
12-May-06	Nigeria	Lagos City	60	260	15
08-Jan-05	Bangladesh	Tengratila	10	1	18
17-Jun-05	Bangladesh	Tengratila	14		17
27-Jul-05	India	Bombay High		11	10
23-Mar-05	USA	Texas	170	15	5
11-Dec-05	UK	Hertfordshire	43	0	2
14-Feb-05	China	Fuxin		210	6
29-Mar-05	China	Huai'an Jiangsu	350	28	8
13-Nov-05	China	jilin	60	5	20
20-Jan-04	Algeria	Skikda	74	23	5
12-Apr-04	USA	Dalton	154	0	4
30-Jul-04	Belgium	Ghislenghien	132	24	2
23-Dec-03	China	Kaixian Chongqing	4000	243	14
21-Sep-01	France	Toulouse	3000	30	2
15-Mar-01	Brazil	Campos Basin		10	12
16-May-01	UK	Birkenhead	2		1
28-Apr-01	USA	Wood River			2
21-Sep-01	USA	Lake Charles	3		2
14-Aug-01	USA	Lemont			1
18-May-01	Taiwan	Taiwan	112	1	3
07-Jul-01	USA	Tulsa	138	0	4
16-Apr-01	UK	Humber River	185	0	6
25-Jun-00	Kuwait	Mina Al-Ahmadi	50	5	6
27-Mar-00	USA	Pasadena	69	1	2

10-Jul-00	Nigeria	Adeje town		250	11
13-May-00	Netherlands	Enschede	946	18	5
12-Sep-00	Mexico	Salamanca	0	0	6
25-Mar-99	USA	Richmond			1
08-Jun-99	Germany	Wuppertal	50		1
19-Feb-99	Greece	Thessaloniki	0	0	1
02-Dec-99	Thailand	Sri Racha	13	8	7
11-Mar-99	India	Bombay High			6
27-Jan-99	Canada	Taylor	15		2
25-Sep-98	Australia	Longford	8	2	7
09-Jun-98	Canada	St. John		1	1
10-May-98	Egypt	Ras Gharib			1
06-Oct-98	France	Berre l' Etang			1
17-Oct-98	Nigeria	Jesse, Niger Delta	0	1100	20
25-Dec-97	Malaysia	Bintulu	12		8
14-Jun-97	Bangladesh	Magurchara	4		20
22-Jun-97	USA	Deer Park	30		2
	S. Africa	Mossel Bay			1
21-Jan-97	USA	Martinez	46	1	1
15-Sep-97	India	Visakhapatnam	100	60	10
21-Nov-96	puerto rico	san Juan	100	33	6
26-Jul-96	Mexico	Cactus	30	6	8
16-Oct-95	USA	Rouseville	3	4	2
15-Jul-95	Iran	Astara	200	3	2
28-Apr-95	S. Korea	Taegu	104	101	7
10-Apr-95	USA	Savannah	300		6
24-Jul-94	UK	Milford Haven	26	0	1
13-Dec-94	USA	Port Neal, Iowa	18	4	5
27-May-94	USA	Belpre		3	1
02-Nov-94	Egypt	Donca		410	2
07-Dec-94	S. Korea	Seoul	50	7	2
26-Nov-94	China	Shuangpai		61	2
25-May-93		Lake Maracaibo	11		1
	India	Panipat	25	3	1
28-Dec-93	Venezuela	Las Tejerias	0	36	3
01-Nov-93	Vietnam	Nam Khe	50	47	8
11-Jan-93	China	Baohe		70	2
06-Aug-93	China	Shenzhen	170	12	2
04-Aug-93	Columbia	Remeios		430	2
07-Jun-93	China	Zhengzhou	32	27	6
07-Jan-93	S. Korea	Chongju	50	27	2
16-Oct-92	Japan	Sodegaura	10	10	2
22-Apr-92	Mexico	Guadalajara	1460	206	10

01-Sep-92	Greece	Elefsina	21	20	1
09-May-92	Canada	plymouth Nova Scottia	26		1
08-Aug-92	Turkey	Corlu	64	32	2
29-Apr-92	India	New Delhi	20	43	7
24-Mar-92	Senegal	Dakar	300	40	10
11-Mar-91	Mexico	Coatzacoalcos		3	1
12-Mar-91	USA	Seadrift		1	1
20-Jun-91		Dhaka			1
11-Mar-91	Mexico	Pajaritos	122	3	2
01-Sep-91	China	Shaxi	650	30	5
24-Sep-91	Thailand	Bangkok		63	1
01-May-91	USA	Sterlington	123	8	1
06-Nov-90	India	Nagothane	22	31	6
15-Nov-90	Portugal	Porto de Leixoes	76	14	2
20-Mar-90	UK	Stanlow	5	1	1
05-Nov-90	India	Maharashtra		35	1
25-Jul-90	UK	Birmingham	60	0	2
04-May-90	Cuba	Matanzas	374	3	4
18-Mar-90	S. Korea	Daesan	100		1
23-Oct-89	USA	Pasadena	314	23	7
07-Mar-89	Belgium	Antwerp	11	32	5
24-Dec-89	USA	Baton Rouge	12	4	2
19-Mar-89	USA	Gulf of Mexico			1
20-Mar-89	Lithuania	Jonava	658	1	1
04-Jun-89	USSR	Siberia	706	645	6
20-Mar-89	USSR	Ionava	53	6	3
06-Jul-88	UK	Piper Alpha		165	2
05-May-88	USA	Norco	48	7	2
22-Sep-88	UK	North Sea		1	1
04-May-88	USA	Henderson	350	2	1
21-Nov-88	Germany	Worms	25	3	3
11-Nov-88	India	Bombay	16	35	9
22-Jan-88	China	Shanghai	17	25	8
23-Jun-88	Mexico	Monterrey	15	4	4
15-Jun-88	Italy	Genoa	2	3	2
25-May-88	Mexico	Chihuahua	7		1
14-Nov-87	USA	Pampa	43	3	1
22-Mar-87	UK	Grangemouth	2	2	1
03-Jul-87	Belgium	Antwerp	20	5	2
23-Jun-87	Canada	Mississauga			1
29-Oct-87	France	Nantes	28	0	2
12-Dec-87	India	Maharashtra	23	25	6

24-Mar-87	USA	Nanticoke			1
15-Dec-87	Mexico	Minatitlan	200		2
30-Jan-87	USA	Texas City	255		4
26-Apr-86	Ukraine	Chernobyl	600000	4056	30
19-May-85	Italy	Priolo	11	23	2
05-Nov-85	USA	Mont Belieu	13	4	2
06-Jul-85	USA	Clinton	8	5	2
26-Jun-85	USA	Anahein	350	1	1
04-Dec-85	India	New Delhi	82	43	4
01-Nov-85	India	Padaval	135		2
26-Aug-85	USA	South Charleston	236		2
26-Feb-85	USA	Coachella	12		1
03-Dec-84	India	Bhopal	500000	25000	35
23-Jul-84	USA	Romeoville	76	15	6
19-Nov-84	Mexico	San Juan Ixhuatpec	6400	650	15
24-Feb-84	Brazil	Cubatao	221	508	15
01-Dec-84	Pakistan	Gahri Dhoda		60	4
30-Aug-83	UK	Milford Haven	6	0	1
29-Sep-83	India	Dhulwari	100	41	9
31-Aug-83	Brazil	Pojuca	100	42	8
14-Apr-83	India	Bontang			1
19-Dec-82	Venezuela	Tacoa, Caracas	500	150	15
15-Feb-82	USA	Grand Banks	0	84	2
25-May-82	Italy	Todi	140	34	3
07-Apr-81	USA	Corpus Christi	30	9	6
08-Apr-81	Mexico	Montanas	50	29	10
15-May-81	Venezuela	San Rafael	35	18	8
01-Jun-81	USA	Geismar	125		2
21-Oct-80	USA	New Castle		5	1
18-Aug-80	Iran	Gach Saran	45	80	5
29-Nov-80	Spain	Ortuella	100	75	3
Na	USA	Alaska		51	2

Appendix B. ICMR's Major Studies

Study	Result
Establishment of the population-based cancer registry	The cancer registry was supposed to produce data to compare the incidence of cancer between the exposed people and the non-exposed people, but it does not do so. While it has been pointed out that the time period that has elapsed since the disaster is not sufficient for making any judgement about the increase in the incidence since the disaster, data from 1990 and 1996 shows that health risk of a person living in Bhopal is higher than that of people living even in metropolitan cities like Delhi and Mumbai. In Bengaluru, lung cancer is the third most common cancer and in Chennai, it is the second most common cancer, whereas in Bhopal it is the most common cancer. Incidence is also higher than in other centres
Clinical studies including respiratory function tests among toxic gas-affected people (adults)	About 98 per cent of the 158 people studied had difficulty in breathing. Later the problem persisted in 22 per cent and progressed in two per cent
Follow-up studies of ocular changes in toxic gas-affected subjects	Immediately after the disaster nearly 95 per cent of the exposed people suffered from eye problems. A six monthly follow-up study on 8,000 people showed that the major morbidities were chronic conjunctivitis, trachoma, corneal opacity and cataract. Cataract was nearly four times higher in exposed area compared to the control area
Studies on lens protein in cataract extracted from toxic gas-exposed population of Bhopal (multi-centric)	In the affected lens, there was a loss of lenticular proteins, conversion of soluble proteins to insoluble fractions. The methodology was not found to be very good and an alternative method had to be found
Clinical and forensic toxicological studies in toxic gas-affected persons	The initial studies showed that the cyanide poisoning was there. Sodium thiocyanate was suggested as a suitable antidote. The study also found a persistent pool of cyanate remained in the body
Study of pulmonary function tests, including blood gas analysis	Blood gas analysis studies showed that the toxic gases had passed through the pulmonary barrier and entered the tissue leading to carbamylation. 241 out of 269 people had abnormal pulmonary function test results. In 1989, it was seen that 40 per cent of these cases were showing deterioration in the lung function values. Tests carried out after six years showed that only 30 per cent of the people living in exposed areas had normal respiratory function
Genetic risk evaluation of toxic gas, cytogenetic studies	Urine samples show that there was no difference between the mutagenicity in exposed people
Mental health studies in toxic gas-exposed population	Initial studies show that 22 per cent of the screened population had mental disorders
Study of immunological parameters in toxic gas-exposed victims in Bhopal (multi-centric)	As many as 65 exposed people were studied for the presence of MIC-specific antibodies. In 1985 the studies also revealed that the exposed people had inflammation and tissue necrosis. In 1990, studies showed that there was a reduction in the number of antibodies showing immunosuppression. This may be due to consumption of steroid
Broncho alveolar lavage in toxic gas-affected people. Genetic risk evaluation of pregnancy outcomes in women exposed to toxic gas at Bhopal	A study of the lower respiratory tract showed that there was unusual accumulation of macrophages, inflammatory and immune effector cells in the exposed people. These cells were higher in smokers showing that it is a risk factor. As many as 2,566 women were followed to the end of the pregnancy. The results showed that there were 373 abortions and 82 still births. The incidence of abortion was higher
Study of pulmonary effects on children (6-15 years) exposed to toxic gas	During 1984-85, the children were found to suffer from persistent cough, breathlessness and loss of weight. Lung function also showed obstruction. During 1985-86, it was found that respiratory problems persisted in 69 per cent of the children. A three-year-analysis showed that 15.4 per cent of the children in the age group of 6-15 years had obstructive lung diseases as compared to just 8.3 per cent in the control area
Study of mucosal, gingival and orodental abnormalities in children whose mothers were exposed to toxic gas	Children of the pregnant women exposed to the gas did not have any congenital malformation of the face and arches. Black and brown pigment of the mucosal and tongue area was common. The children teethed earlier
Follow-up studies on the children (0-5 years) at the time of gas exposure	A study carried out in 1986, showed that the incidence of respiratory problem was higher in the exposed children. Incidence of fever, cold cough, breathlessness, vomiting, loose motions, eye and ear discharges and multiple boils was higher in exposed children. The exposed children also had problem keeping up with studies

Source: ICMR reports, 1985-1994, Delhi

Appendix C. Toxic Pollutants in and around the Bhopal Factory

Chemicals dumped by UCIL in and around the factory			
Chemical	Quantity in tonnes	Use in factory	Nature of pollution
Aldicarb	2.0	Product	Air, water and soil
Alpha-naphthol	50.0	Ingredient	Air and soil
Benzene Hexachloride	5.0	Ingredient	Air, water and soil
Carbaryl	50.0	Product	Air, water and soil
Carbon Tetrachloride	500.0	Solvent	Air and water
Chemical waste tar	50.0	Waste	Water and soil
Chlorobenzoyl Chloride	10.0	Ingredient	Air, water and soil
Chloroform	300.0	Solvent	Air and water
Chlorine	20.0	Ingredient	Air
Chlorosulphonic acid	50.0	Ingredient	Air and soil
Hydrochloric acid	50.0	Ingredient	Air and soil
Methanol	50.0	Solvent	Air and water
Methylene Chloride	100.0	Solvent	Air and water
Methyl Isocyanate	5.0	Ingredients	Air, water and soil
Mercury	1.0	Sealant pan filter	Water and soil
Monochloro Toluene	10.0	Ingredient	Air, water and soil
Monomethyl Amine	25.0	Ingredient	Air
Napthalene	50.0	Ingredient	Air
Ortho Dichlorobenzene	500.0	Ingredient	Air
Phosgene	5.0	Ingredient	Air
Trimethylamine	50.0	Catalyst	Air
Toluene	20.0	Ingredient	Air, water and soil

Source: Testimonies of ex-UCIL workers, and CSIR and IICT findings submitted in USA and in the Supreme Court of India

Appendix D. Maximum Concentration of Contaminants

	Maximum concentration found in soil (ppm**)
Organic contaminants	
Carbaryl	51,003
Aldicarb	7,876
Dichlorobenzenes	2,049
HCH isomers	99,700
Alpha naphthol	9,914
Heavy metals	
Mercury	128,000
Lead	406
Chromium	1,065

* Specific places include storage, processing, dump areas; ** parts per million

Source: Action plan: Environmental Remediation in and around UCIL, Bhopal, CSE 2013

Vita

Nikhil Deb was born in a remote, highly disadvantaged rural area (in Bangladesh), a place deprived of basic human conditions we take for granted. He learned from his parents that we should not allow our struggles to define us; rather, we must render our experiences powerful in order to create a better world. He completed degrees in sociology from Ohio University (MA) and Shahjalal University of Science and Technology, Bangladesh (BSS and MSS). He joined UTK sociology program as an Assistant Professor on leave from the Shahjalal University of Science and Technology. His research and teaching interests include political economy & globalization, environmental justice and movements, unequal development, political sociology, and social theory. He taught several courses both in Bangladesh and in the US, including Globalization and Justice; Society and Environment; Sociological Theory; Social Movements; and Introduction to Sociology.