# A Socio-Legal Understanding of State Compensation for Silicosis in India

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## Abstract

This thesis explores the emergence of government compensation for silicosis in India by interrogating two main ideas: first, that compensation for workplace disease is an outcome of a shifting relationship between capital, labour and the state on the proper locus of risk and responsibility for worker welfare. Second, labour law, as it developed in both Britain and the colonies excluded large sections of the workforce, often in order to facilitate resource extraction. It narrates the history of employer compensation for silicosis in South Africa and Britain, exposing its contingent, limited coverage and explicit exclusion of Black workers as well as non-industrial workers in fragmented or artisanal production. It uses this insight on exclusion to demonstrate how state compensation in India became possible as a result of lacunae in labour law's very origins. 'Informal' workers, always outside labour law's ambit, therefore were forced to use the language of rights and the public interest before the Supreme Court of India to advance their demands. This found form in the Public Interest Litigation, a form of legal petition, that variously constructed workers as a community facing unfair working conditions; residents suffering from air pollution; and finally, as victims of a human rights violation. These shifting constructions were played out along the backdrop of advancing marketization in the global political economy, as well as the Supreme Court's own role in dismantling formal labour law protections at the same time. This thesis situates the development of state compensation for silicosis within these developments, demonstrating that the rise of human rights to advance worker protection was concomitant with a broader assault on the working classes, within which the worker-employer relation has been reconstituted as a citizen-state relation.

**Table of Contents**

Table of Abbreviations ..... 4

Table of Cases ..... 5

Table of Statutes ..... 6

Acknowledgments ..... 7

Chapter One: Introduction ..... 9

Chapter Two: From Individual Responsibility to Industrial Risk ..... 15

- Discovering gold dust | South Africa (1902—1930) ..... 19
- Defining (and denying) disease | Britain (1918–1943) ..... 30
- Conclusion ..... 41

Chapter Three: Configuring Labour's Interest as the Public Interest ..... 44

- 'Cutting the Common Law Umbilical Cord': The Emergence of Public Interest Litigation ..... 47
- 'Dangerous Operations': Silicosis as an Unfair Labour Practice ..... 52
- 'A Thick Layer of Dust': Silicosis as Environmental Hazard ..... 55
- 'The Missing Employer': Silicosis as a Human Rights Violation ..... 63
- Conclusion ..... 69

Chapter Four: Costing Compensation, Constructing the Informal ..... 71

- Law's Invention of the Formal ..... 76
- The Worker Outside Indian Labour Law ..... 84
- The Dissolution of the Worker and the Employer ..... 93
- Conclusion ..... 99

Conclusion ..... 102

Bibliography ..... 107

# Table of Abbreviations

Employees’ State Insurance Corporation (ESIC)

International Labour Organization (ILO)

Mine Workers’ Union (MWU)

Mining Federation of Great Britain (MFGB)

Medical Research Council (MRC)

National Human Rights Commission (NHRC)

Non-Governmental Organization (NGO)

People’s Rights and Social Research Centre (PRASAR)

Public Interest Litigation (PIL)

Standard Employment Relationship (SER)

United States of America (USA)

## Table of Cases

Britain

Wragg v Samuel Fox & Co (1937) AC 442

India

*Bandhua Mukti Morcha* vs *Union of India* (1984) SCR (2) 67
*Consumer Education and Research Centre* v *Union of India* (1995) 3 SCC 42
*Hospital Employees Union* v *Union of India* (2002) 10 SCC 224
*M.C. Mehta vs Union of India* (Writ Petition (Civil) 4677 of 1985)
*M.C. Mehta vs Union of India* (Writ Petition (Civil) 3727 of 1985)
*M.C. Mehta v Union of India* (1996) 4 SCC 35
*Occupational Health and Safety Association* v *Union of India* (2005) 3 SCC 547
*People's Rights and Social Research Centre (PRASAR) vs Union of India and Others* (Writ Petition (Civil) 110 of 2006)
*People's Union for Democratic Rights* v *Union of India* (1982) AIR 1982 SC 1473
*Secretary, State of Karnataka & Ors* v. *Umadevi & Ors* (2006) 4 SCC 1
*SP Gupta* v *Union of India* (1982) AIR 1982 SC 149
*State of Uttaranchal* vs *Balwant Singh Chaufal and Ors* (2010) 3 SCC 402
*Steel Authority of India* v *National Union Water Front Workers* (2001) 7 SCC 1
*TK Rangarajan* v *Government of Tamil Nadu and Ors* (2003) 6 SCC 581
*Workmen of Slate-Pencil Industry vs State of Madhya Pradesh and Others* (Writ Petition (Civil) 5143 of 1980)

Pakistan

Human Rights Case No. 16143-P/2014 (Application by Usama Khan and Yahya Farid regarding hazardous emission of dust by stone/marble crushing and grinding)

# Table of Statutes

Britain

Factory Act (1833)
Master and Servant Act (1823)
Refractories Industries (Silicosis) Scheme (1919)
Various Industries (Silicosis) Scheme (1928)
Various Industries (Silicosis) Scheme (1931)
Workmen's Compensation Act (1897)
Workmen's Compensation (Silicosis) Act (1918)
Workmen's Compensation (Silicosis) Act (1924)
Workmen's Compensation Act (1943)

British India

Factories Act (Act XXV of 1934)
Indian Factories Act (1891)
Workmen's Breach of Contract Act (Act XIII of 1859)
Workmen's Compensation Act (1923)

India

Contract Labour (Regulation and Abolition) Act (1970)
Employees' Provident Funds and Miscellaneous Provisions Act (1952)
Employees' State Insurance Act (1948)
Factories Act (1948)
Industrial Disputes Act (1947)
Mines Act (1952)
M.P. State Pencil Karmkar Kalyan Nidhi Adhiniyam (1982)

South Africa

Mines and Works Act of 1911
Miners' Phthisis (Allowance Act) (No. 34 of 1911)
Miners' Phthisis Act (1912)
Miners' Phthisis Act (No 44 of 1916)
Miner's Phthisis Principle Act (No. 40 of 1919

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# Chapter One: Introduction

*Life comes to the miners out of their deaths, and death out of their lives.*
—Mother Jones (1925)

Everywhere we went, people were anticipating rain. It was a scorching summer in India, and we were travelling through Rajasthan, India's hottest state. My colleague Nandini and I were collecting qualitative data for a nation-wide survey run by the Right to Food campaign. We were working with grassroots organizations and collectives, and speaking with people in villages and cities, asking if the government's food ration met their needs and what problems they faced in accessing subsidized grain. In each district, women were preparing *daal baati churma*, the traditional meal for the first rains, but it seemed more an act of hope than of certainty.

One village, our companion told us as we drove there, was a 'village of widows'. Nearly all the men had died of silicosis, an incurable lung disease caused by inhaling free crystalline silica, which they had been exposed to while working in stone carving and crushing units in the area. Many men and women had been driven to work in the small factories as drought had rendered farming unsustainable, and there was simply no other work to be found: no government provisioned employment, no farming on another's land, and no market to work in.

When we arrived, a group of women had gathered under a large tree to speak with us. Several came holding documents, carefully tucked in their sari blouses, which they sometimes unfolded to show us. One woman, pointing to a government certificate, said she

had received money from the government when her husband had first been diagnosed with silicosis, but had received nothing since his death. Others spoke angrily of the 'private doctor' who dispensed medication that had done nothing for them, and their fathers continued to waste away. Many said that they had filled out forms, but had received no money from the government yet.

I tried to quell my confusion, but I could not reconcile what I was hearing with what my legal education had led me to believe. Everything I could remember from my classes in tort law—all those hours spent poring over cases on mesothelioma and asbestos exposure—returned to me in a flash. I couldn't understand why the government was compensating workers and their families. If the dust was from the factory, I asked repeatedly, why wasn't the factory paying out? Where were the principles of legal causation I had puzzled over? Our companion, who had taken us to the village, said, 'Well, labour laws simply don't 'apply' in these situations, you know. The workers have to prove that they have one employer, but each of them has a different contractor and no proof, and so there's nothing that can be done legally. Anyway, whatever money the government gives, it gives unwillingly, only after we make many visits and appeals.'

The question of how the government had come to be held responsible in what seemed to me at the time as a straightforward labour and tort law question stayed with me for many months. I dug on the Internet and found a similar appeal on silicosis made in a 2014 human rights case in Pakistan, where workers in small stone crushing units encountered difficulties in claiming compensation.[1] In China, at around the same time, workers were demanding that the government compensate construction workers for silicosis, meeting with arrest and

[1] Application by Usama Khan and Yahya Farid regarding hazardous emission of dust by stone/marble crushing and grinding, Human Rights Case No. 16143-P/2014

state repression (Chuang, 2019). These workers seemed to have the same problems Indian workers did in being unable to establish an employment relation, but Indian workers had been able to secure a meagre (and, in practice, often unavailable) form of state compensation, while the Hunan provincial government continued to insist that workers must take up their claims with their bosses.

What could explain this gap between the law that I was familiar with, and workers beginning to demand compensation from the government for silicosis? This thesis is an attempt to answer this question. I begin, in Chapter Two, by tracing the genesis of the legal principle that employers are responsible for silicosis compensation. This story begins in the gold mines of South Africa, where silicosis first emerged as a pressing concern, and in Britain, where Cornish miners returned from South Africa dying of the disease. South African and British laws of silicosis compensation were based on the earlier innovation of workmen's compensation, and this legacy lives on in Indian law. I demonstrate three key facts from this re-reading of history. The first is that employer responsibility was never conceived of as a moral obligation; in fact, drawing from the logic of worker's compensation, it was explicitly an amoral obligation based on the understanding that workplace injury was an inevitable 'risk' of production. The second, employer responsibility was by no means an inevitable outcome. Rather, it was the result of a shifting balance of power between capital, labour and the state in the early twentieth century, within which the state mediated between competing interests. The idea that employers were responsible was forced on the agenda by trade unions and the state, and was one employers resisted whenever they could. Finally, within the origins of employer responsibility for silicosis, we can find traces of those excluded from compensation as a result of law's

design. These exclusions demonstrate the limited nature of labour law from its very beginning.

Chapter Three considers the growth of state responsibility for silicosis in Indian law. Indian workers used the instrument of Public Interest Litigation (PIL) to advance their claims for compensation, as they are unable to establish the employment relationship that labour law requires. I find that the construction of state compensation developed slowly over several PIL cases, and I trace the discursive shifts in how workers have been perceived by the Supreme Court of India. I show that first, workers were seen as victims of unfair working conditions; then, they were seen as residents who were victims of pollution; and finally, they were understood to be victims of human rights violations. These changing judicial constructions have influenced how workers with silicosis have been compensated in different cases. The account that I provide emphasizes how cases were argued, relying on newspaper and non-governmental organization (NGO) reports to document what has occurred after a court judgment. These show the difficulties that courts have faced in holding employers responsible, and the ways in which human rights have been invoked to uphold workers' rights. In this, I demonstrate how the Supreme Court has been subject to varying pressures in its decision-making; much like the emergence of employer responsibility in Chapter Two, the development of state responsibility has been an outcome of mediating between different interests.

In Chapter Four, I offer an explanation that threads together the story of how employers came to be held responsible for silicosis compensation in South Africa and Britain in the early twentieth century, and how the state came to compensate workers for silicosis in India in the early twenty-first century. The fundamental insight I draw on is that the legal notion

of responsibility is intimately linked to political and economic shifts, within which some ways of thinking become possible and others do not. I argue that the figure that haunts Chapter Two, in Britain and South Africa, is the worker written out of labour law: the migrant worker or the worker with an atypical employment relationship. These workers have always been excluded from institutions of social insurance and labour laws designed primarily around (White)[2] industrial workers. I show that the worker excluded from labour law is central to understanding the development of state compensation in India. Labour law has, from its inception, created an 'ideal-type' worker to which it offered its protections; the rise of state compensation in India must be understood as a consequence of the exclusion of workers from labour law. This understanding also locates state compensation within the broader political economy of law's operation. The era of marketization that began in advanced capitalist nations in the 1970s has undermined protectionist labour laws globally, embedding 'precarious' work as the typical form of work.[3] To demonstrate this, I trace the postcolonial Indian state's relationship to labour law, showing that its attack on labour protections in the 1990s was concomitant with the rise of a new way of thinking about worker protections.[4]

The entrenchment of informality as the routine form of employment has led workers to respond in new ways. The account in Chapter Three shows how Indian workers have used mechanisms such as PIL to claim some measure of security against ill-health. These struggles do not contest the status of exclusion that informal workers face; instead, they

[2] I follow Appiah (2020) in capitalizing both Black and White to emphasize the socially constructed nature of both races.

[3] I tend to use 'advanced capitalist nations' in lieu of the 'West' or 'Global North' to avoid geographic confusion; and instead of 'developed' nations to avoid imposing the assumption of progressive development.

[4] I use lower-case 'state' to refer to the central government of a country, and upper-case 'State' to refer to individual States of a federal country.

leverage it to hold the state responsible for ameliorating their suffering. The outcome of this, I argue, has been to dissolve the worker and employer relationship, the linchpin of labour law, in favour of a citizen and state relation.

This thesis raises fundamental questions to do with the relationship between capital, labour and the state, and the proper locus of responsibility for worker welfare. The emergence of state responsibility in India is connected to global changes in political economy that have dismantled labour law protections, but it is equally a product of specific conditions in the Indian context that allowed for the question of risk and worker safety to be negotiated anew. This narrative is attentive to the changing balance of interests in determining who is responsible for silicosis compensation, and seeks to trace discursive shifts that made new forms of argumentation credible within this. It is by returning to the history of both silicosis compensation and labour law that we can understand what made state compensation possible today. Tracing these lineages also allows us to reflect on the long-term implications of compensation systems on communities. What effects might the shift to state responsibility mean for a 'village of widows' in Rajasthan, who fear that their husbands, sons and fathers will die while they petition the government? This thesis hopes to gesture towards a way of thinking about this question.

## Chapter Two: From Individual Responsibility to Industrial Risk

*There draws the Grinder his laborious breath,*
*There, coughing, at his deadly trade he bends,*
*Born to die young, he fears nor man nor death…*

—Ebenezer Elliott (1876)

*We call the miners of coal, gold and diamonds.*
*Let us speak of the dark shafts, and the cold compounds far from our families.*
*Let us speak of heavy labour and long hours, and of men sent home to die.*
*Let us speak of rich masters and poor wages.*
*Let us speak of freedom.*

—*Call to the Congress of the People*, National Action Council (1954)[5]

At different times in the twentieth century, silicosis represented a moment of crisis for governments and industries across the world. It was the first of a new kind of disease—one that was chronic, irreversible, and latent for significant periods, taking its toll on workers long after initial exposure to silica dust. For some, it became 'the paradigmatic disease of industrialism' (McCulloch, 2012, p. 5), prefiguring the discovery of other dangerous dusts like asbestos, coal and cotton later in the century. The rapid rise in cases at the turn of the twentieth century, with the introduction of mechanised processes, posed a serious financial risk to many industries of significant political and economic importance, such as the gold mines of South Africa, the coal mines of Britain, the foundries in the United States of America (USA), lead mines in Spain, and copper mines in Chile (McCulloch, 2012; McIvor and Johnston, 2007; Menéndez-Navarro, 2008; Rosner and Markowitz, 1991; Vergara, 2005). The response to silicosis in the first three decades of the twentieth century bears revisiting for what it tells us about how legal systems first recognized and dealt with industrial diseases. As will become clear, this story was one of struggle between several

[5] Mandela (1986).

competing perspectives—between industry, organized labour, the state and medical experts (Rosental, 2017a). A great range of questions remained unresolved and were the subject of intense contestation. Could a disease be caused by workplace conditions alone? How was this to be diagnosed? Should this be compensated? If so, who ought to pay, and how much?

This chapter will chart some of this history by focusing on the development of one idea: that employers ought to be held responsible for diseases contracted in the workplace. I argue that the modern basis for silicosis compensation was an outgrowth of the logic of workers' compensation law—seen by some as the grand bargain between capital and labour (Saxton and Stuesse, 2018)—that understood workplace injuries as inevitable risks of production to be insured against. This way of thinking influenced the compensation made available for silicosis and the idea that worker injury was industry's responsibility. It would later lay the foundation for the welfare state as we know it (Ewald, 2020). The story I tell also shows how employers attempted to discredit the link between dust and disease with the use of scientific 'expertise', which became a tool to determine the boundaries of responsibility.

The account in this chapter focuses on the development of employer responsibility in South Africa and Britain. This is partly because their histories so deeply influenced each other. The British law of workers' compensation served as a model for South African silicosis compensation, which in turn provided the epistemological and legal framework for British silicosis policy. The thread that connects these developments is a transformation in how legal systems understood occupational disease—first as the individual fault or predisposition of workers to illness, and then as a natural risk of production to be minimally compensated. I also focus on these two countries because the legacy of the common law

legal system continues to animate Indian workers' compensation legislation, which I discuss in later chapters.

I situate the development of compensation for silicosis in its larger political and economic context in both South Africa and Britain. In doing so, I draw on recent literature in the field (McCulloch, 2012; Rosental, 2017b) to show how the pioneering legislation around silicosis in South Africa was functionally dependent on the racial basis of the exploitation of migrant labour in its gold mines. The architecture of South African silicosis compensation—in many ways, more progressive than in any other part of the world—was largely restricted to White miners who made up a small minority of the workforce extracting gold. I argue that this was the case because the South African state had to mediate between the interests of organized White mining labour, which was approaching a new stage of militancy related to the hazardous nature of the occupation, and the interests of White mining capital, a major source of state revenue and employment. This compromise depended on the continuing erasure of Black workers in the mines, who made up 90 per cent of the workforce, but were not unionized and almost never received compensation. Some of these dynamics are picked up on in later chapters that consider the legacy of these laws in India.

The British case study marks a contrast, in that it sought to regulate dust-related disease across several industries, whereas the South African example was restricted to gold mining. Despite this, in Britain, the main industry that sought to limit the enlargement of occupational disease legislation was coal mining. Coal mine owners relied on the limits of medical knowledge at the time, arguing that coal dust was not harmful in the way that silica was, and introduced new forms of scientific 'expertise' to limit their responsibility

(Perchard and Gildart, 2015). Here too, the British state's determination of its policy on dust-related disease was the result of mediating between unionized coal miners in the anthracite coalfields of South Wales as well as the interests of mine owners. However, silicosis compensation was limited in industries where the mode of production was fragmented or artisanal, such as in cutlery-making. I contend that the emergence of silicosis compensation in South Africa and Britain needs to be read in light of the political and economic conditions that structured how compensation emerged and functioned in practice.

The twentieth century has been heralded for the emergence of centralised welfare states in advanced capitalist nations. Workers' compensation forms part of the beginning of that development in marking a 'compromise' between capital and labour on the question of working conditions and healthcare. In this sense, the history of silicosis is not only a history of disease or of capitalist exploitation, but is part of a larger history of ideas on where responsibility for workers ought to lie. In the sections that follow, I trace how the idea of employer responsibility was contingent on the material conditions of capital accumulation and the power of organized labour, as well on medical knowledge and state institutions at the time.

This chapter is attentive to the negotiations around compensation legislation and the different interests at stake, seeking to understand how groups sought to influence and benefit from law. I demonstrate that the emergence of employer responsibility for occupational disease was not inevitable, but the product of intense dispute on the extent and proper locus of responsibility for worker welfare. This reading provides a sociological account of law-making that is embedded within its larger political and economic context.

It aims to understand not only what the interests of capital, labour and the state were but how they were mediated, whose concerns tended to prevail, and at whose expense. With the expansion of Empire, these ideas and laws would gain new currency when exported to different contexts. I argue that by returning to this history, we can locate contemporary developments on the question of worker health and law, and understand how ideas come to change over time.

### Discovering gold dust | South Africa (1902—1930)

The South African mining industry was growing at an immense scale at the turn of the twentieth century and was the central motor of both the domestic and international economy. In 1930, South African gold mines produced more than 60 per cent of the gold that the global financial system's gold standard depended on (McCulloch, 2012). The rise and fall of market forces and the expansion of imperial interests in Africa led many European workers to emigrate to the southern African mines. These mines were irrevocably shaped by Cornish miners in particular, who migrated after the depression of tin and copper mining in Cornwall (Burke, 1985). European workers were typically an elite group of 'skilled' workers, comprising about 10 per cent of the total workforce, usually in supervisory positions. They worked alongside African workers, who were brought in as migrant labour from all over southern Africa. These workers all found extremely hazardous working conditions in the Transvaal's gold mines. Gold mining required deep drilling to access ore, and the Cornishmen found themselves assigned to tasks involving severe exposure to silica dust. Air samples taken in a mine in 1911 yielded dust concentrations that were between 200 to 700 times over current International Labour Organization (ILO) limits (Derickson, 1988).

In the early twentieth century, silicosis (or 'miners' phthisis') began to take a serious toll on mine workers. Many White workers returned to Cornwall with the savings they had hoped for, but also with fatal lung disease. These workers, who Derickson (1988) describes as 'industrial refugees', often returned near death. The demise of hundreds of Cornish miners in England created adverse publicity, raising questions in the House of Commons about their fate (McCulloch *et al.*, 2017). This prompted the High Commissioner for South Africa, Lord Milner, to appoint the Weldon Commission in 1902 to study the causes and extent of silicosis in South Africa. Within a week of this, the Home Office in Britain tasked the Haldane Commission with investigating silicosis in Cornwall. The Haldane Commission's findings were incontrovertible: they found that among miners who had worked only in the Transvaal, the average age of death was 36 (Derickson, 1988). The Weldon Commission diagnosed the problem correctly: the use of pneumatic drills and gelignite for blasting generated excessive silica dust (Katz, 1994). Rock drillers had an average working life of only seven years, but this was much closer to four in South Africa (McCulloch *et al.*, 2017). Ultimately, neither Commission's findings led to a major reduction in dust levels or a change in working patterns. Conditions only improved marginally after the passage of the South African Mines and Works Act of 1911 (Katz, 1994).

While Black workers made up 90 per cent of the gold mining workforce, they remained outside official study and intervention. Gold mining was South Africa's most important industry, and the state was wholly dependent on its revenue. As the price of gold was fixed (unlike diamonds), the industry had an incentive to maximise output; since it could not raise the price of gold, the only way to turn a profit was to control the costs of production (Glaser, 2001). Since gold mining was a technologically expensive enterprise, given the

depth and low grade of ore, the only way that mine owners saw fit to control production expenses was by cheapening the 'cost' of labour. But the rapid expansion of the mining industry in the early twentieth century caused demand for labour to outstrip all available supply (Packard, 1989). The South African gold mines, therefore, devised a system to ensure a continuous steady supply of migrant Black workers that met their need for cheap labour. Measures such as the 'hut tax' that imposed a levy on African communities for each hut in their village and the 'poll tax' imposed on every African male were passed so as to force African peasants to enter wage labour (Crush and James, 1991). The mines relied on elaborate systems of recruitment, utilizing agencies, touts and contractors to round up potential workers. Within twenty-four years of the discovery of gold on the Witswatersrand, the mining corporations had developed a labour system that delivered 200,000 Black workers to the mines each year (Jeeves, 1985). This labour was oscillating, with workers coming to mines on short-term contracts and returning home for other months in the year. In order to achieve this, the social fabric of African communities was irrevocably altered to suit the needs of the mining industry; indeed, scholars have argued that gold mining capitalists can be attributed with an authorial role in shaping the twentieth-century racial order in South Africa (Glaser, 2001).

This system had adverse effects on the health of Black workers. Restricted to manual work by the colour bar, they faced the heaviest exposure to dust, and worked without protection or unions (McCulloch, 2012). The gold mines provided accommodation for Black workers in 'compounds' where living conditions were appalling and unsanitary. New recruits ran a high risk of tuberculosis infection from working in close proximity underground and living in overcrowded barracks. Poor nutrition and lack of sanitation likely contributed to the epidemic of tuberculosis in the mines. Black workers were bound

by exploitative labour contracts, paying them approximately one-tenth of what White workers received (Derickson, 1988). Despite the probable high rates of silicosis among Black workers, the disease that most worried mine owners and colonial officials was tuberculosis; Packard (1989, p. 67) describes the Rand mines as a ‘major producer’ of tuberculosis in these years. The contract labour system ensured that Black workers who became too disabled from silicosis to continue working did not return to the mines, and so it was the spread of infectious disease among the workforce that necessitated developing systems of medical surveillance that included Black workers. The likely epidemic of silicosis among the same workers, a disease often synergistic with tuberculosis, was made invisible by the system of migratory labour (Marks, 2006).

The fact that most workers—White and Black— returned to their homes when afflicted with illness allowed the state and mining companies to escape serious consideration of what to do with ill miners. It was only after 1907, when White South African citizens entered mining in large numbers, that the state was forced to take serious measures to deal with silicosis (Donsky, 1993). Medical surveillance and compensation began in South Africa with the Miners’ Phthisis Acts of 1911 and 1912. These were introduced after five years of lobbying by White miners’ unions and in the wake of a damning report by the Transvaal Regulations Commission on working conditions (McCulloch, 2012). They established a medical board and provided for awards to White miners affected by respiratory disease and their dependents. As we will see, while Black workers were not excluded from this by the letter of the law, in practice they were only seen as afflicted by tuberculosis and not by silicosis.

As Donsky (1993) observes, the laws of compensation that South Africa enacted were modelled on the British law of workers' compensation, which had established the principle of employer responsibility for occupational injury. Laws of this kind had been introduced in many European nations in the late nineteenth century. They fundamentally reconfigured obligations between workers, employers and the state, arguably laying down the foundation for modern social security (Bartrip, 1987). In Britain, the doctrines of assumed risk (a worker voluntarily assumed risk by working), contributory negligence (if the worker is in any way responsible, the employer is not at fault) and the 'fellow servant rule' (limiting compensation available if injury is caused by a fellow worker's negligence) effectively ruled out the ability for workers to claim compensation from employers if the employer was not expressly negligent. In practice, workers insured themselves through membership in friendly societies. The poorest labourers could not afford contributions; often, the likelihood of compensation was low (Duncan, 2003; Witt, 2004). In the late nineteenth century, a sharp rise in the number of accidents as a result of new machinery caused the state to make its first radical intervention into the doctrine of freedom of contract (Bronstein, 2008; Moses, 2018). This was workers' compensation, which was an outgrowth of life insurance (Defert, 1991). The 'trade-off' it created was workers gave up the possibility of full compensation (that tort law may have entitled them to) in exchange for guaranteed 'no-fault' compensation for injuries suffered at work (Turner and McIvor, 2017). In exchange, employers gave up their full range of tort law defences, accepting limited statutory liability to avoid expensive lawsuits (Love, 1987). Importantly, workers' compensation is an 'exclusive remedy' in many jurisdictions—those covered by the system cannot sue employers subsequently under a civil claim.[6]

[6] This is not the case in Britain which combines both employers' liability and workmen's compensation (Parsons, 2002).

Workers' compensation inaugurated what Moses (2018) identifies as elements of the 'social' state—which aims to identify and socially share risks. Accidents were understood as inevitable and natural risks of production; as statistically consistent and predictable events that had to be sorted out and compensated. Statutory no-fault compensation construed employer responsibility as an impersonal and amoral obligation to injured workers as a natural risk of business (Duncan, 2003). This understanding entailed the replacement of workers' friendly societies with large commercial state insurance funds (Witt, 2004). At the same time, the legal question of fault was replaced with a medical question of determining whether the accident occurred at work and the degree of disability. Though this determination appeared apolitical and objective, the use of actuarial techniques to determine compensation concealed the power that determined how suffering and life were to be valued (Duncan, 2003). This model was gradually accepted across the Western world, and the first Workers' Compensation Act was passed in Britain in 1897 (Guyton, 1999).

By the time that silicosis was on the South African government's agenda, workers' compensation had become an established model that the administration could draw on to contain compensation costs. As the ideological basis of this model was injuries were inevitable, the Miners' Phthisis Acts of 1911 and 1912 also appeared to assume that the risk of silicosis could only be mitigated. The Acts placed the cost of compensation largely on White miners and on employers. Since workers tended to move mines regularly, the compensation was funded by a tax on the industry as a whole, part of which was to be paid by White miners themselves (McCulloch, 2012). Preventing disease was not yet a high priority, so compensation was the central issue of debate between unions, mining corporations and the government. It was a key economic concern for mine owners who

were reluctant to bear the full cost of compensating workers, which they claimed was a significant financial burden (McCulloch *et al.*, 2017). The Mine Workers' Union (MWU), a militant White miners' union, forced mine owners to provide medical monitoring services, access to tuberculosis sanatoria, and pensions; the MWU later also successfully fought against the levy on miners (McCulloch, 2012).

The South African state found itself in the position of having to mediate between the MWU, whose militancy would later lead to armed rebellion, and the gold mining capitalists, upon whose revenue they were extremely dependent. This led to lengthy political debate. Between 1911 to 1950, silicosis was the subject of six judicial commissions, ten Select Committees and 15 Acts of Parliament focused on identifying and compensating the disease (Breckenridge, 2015). McCulloch (2012) argues that the poverty endured by widows of White miners was a significant factor influencing debate on expanding employer responsibility for silicosis; this issue was raised repeatedly at committee hearings and by women writing to the Prime Minister. As there was no other social security provisioning, silicosis compensation filled an essential gap in allowing White disabled miners and destitute widows to access benefits. Indeed, the South African Chamber of Mines complained that the Miners' Phthisis Acts were used as 'a kind of poor laws for whites' in the absence of national insurance (McCulloch, 2012, p. 40).

The South African system was unique in several respects. As an early forerunner of silicosis compensation, it developed key legal and medical innovations, dealing with several aspects of the disease that would bedevil compensation systems in other countries. Silicosis was a very tricky disease to diagnose: it was often impossible to tell from an X-ray how much scarring was tuberculosis- and how much was dust-related. (Melling, 2010;

Rosental, 2017a). Moreover, as silicosis is a chronic and progressive disease, a miner could develop early-stage silicosis without symptoms, and thus be ineligible for compensation until 'partially' or 'totally' disabled. In addition, it was common for silicosis to manifest decades after a worker had left employment—and after the mine had wound down with no remaining assets. The South African model attempted to address these various concerns, and six successive silicosis Acts were passed between 1911 and 1918, each progressively expanding the scope of compensation (Donsky, 1993).

The MWU repeatedly petitioned the Commissions to award compensation to miners suffering from tuberculosis, which was eventually included in Act No 44 of 1916. This was pushed for by the MWU who believed White families were at risk; as an infection, tuberculosis 'knew no colour bar' (Marks, 2006, p. 576); White miners promoted controlling the spread of tuberculosis among Black workers in order to protect their own health. As a result, most tuberculosis compensation beneficiaries were Black workers who were diagnosed on the mines and received a lumpsum payment; while White miners with tuberculosis received a pension and had access to sanatoria to recover. McCulloch (2012) notes that in public inquiries, mining corporations challenged the listing of tuberculosis as an occupational disease, arguing that it was not specific to the profession of mining. In addition, miners could only be compensated for tuberculosis where there was proof they had contracted it while working on the mines or if they had worked in a registered mine for eight years in total (Marks, 2006). In practice, this ruled out most Black miners from compensation, since the mines did not maintain any records on Black workers. This exclusion remained the norm until 1979 (Braun, 2014).

In 1919, after pressure from the MWU, the government passed a law awarding compensation to miners where there was clinical evidence of the disease but no physical incapacity. This meant that miners no longer had to wait for their condition to worsen before becoming eligible for compensation (McCulloch, 2012). The third significant measure the government instituted was a 'Compensation Fund': a tax on industry so as to allow miners to be compensated if the mine in which they last worked had closed. The Chamber of Mines, representing mine owners, argued that the tax broke with the principle that employers are responsible only for diseases contracted in their service. Moreover, they found it financially untenable that each legal change produced 'thousands of retrospective claimants' (McCulloch, 2009a, p. 836). This opinion was rejected by the government, who saw it as proper that the cost of the disease be borne by the industry that had generated it (Donsky, 1993).

The South African state, in this way, was able to contain unionized miner militancy and uphold the interests of the mine-owners by developing a racially biased and segregated compensation system. Silicosis compensation in South Africa was explicitly 'designed to provide benefits for white miners and their families' (McCulloch *et al*., 2017, p. 69). The laws relating to silicosis made racial distinctions by using the nomenclature of 'miners' to refer to White workers in supervisory roles and 'native labourers' to refer to Black manual workers. These two groups worked under different laws, had access to differential healthcare, and were eligible for different amounts of compensation. Black workers only received lumpsum payments that did not account for long-term health deterioration, while White miners were eligible for pensions and medical care. The screening centre in Johannesburg for White miners had machines with high resolution, allowing the diagnosis of early-stage silicosis. Black workers were screened by mine doctors who had poor

radiography equipment—their X-ray machines could detect tuberculosis but not silicosis, (McCulloch, 2012). It is likely that the low quality of X-rays used by mine doctors caused the systemic under-registration of silicosis in Black miners, and so the legal innovations on silicosis were in practice restricted to White miners.

Even when Black workers could access compensation, largely for tuberculosis, this was the exception rather than the rule due to the measures mining corporations took to contain disease. Tuberculosis had become an endemic disease to the gold mines and the rapid spread of disease resulted in a vast proportion of African miners succumbing to lung infection in the first few months of work. The gold mining industry, facing the spectre of labour shortages, developed the practice of repatriating Black workers to their homes when they became sick to avoid mass infection. This rendered invisible the numbers of miners suffering from silicosis and tuberculosis, and resulted in huge outbreaks of tuberculosis in rural areas, where no health services were available (Marks, 2006; Packard, 1989). A 1924 study indicated that tuberculosis was rife in rural labour reserves—of one group of repatriated miners, over half died within the first year of return (McCulloch, 2012). For Black workers, illness resulted in repatriation and silicosis made it all the more likely that miners died at home (Katz, 1994).

Repatriation erased the relationship between dust and disease among Black workers on the gold mines, and it remains difficult to this day to say what the real toll of mining was. The high rate of tuberculosis among miners indicates a synergistic relationship with silicosis, but no statistical base existed from which it was possible to estimate the extent of silicosis suffered by the overwhelming majority of the workforce, Black workers. This was most likely a deliberate state of affairs. McCulloch (2009) pointed out that if the current

incidence of silicosis among miners (22 per cent) is applied, the cost of compensating Black workers would have been staggering.[7] If the gold mines had paid a tenth of this cost, they would have turned no profit at all. The entire economic model of South Africa's gold mines was dependent on shifting the financial and social costs of occupational disease onto African labouring communities. These costs were borne by ex-miners' households (Campbell and Williams, 1999). The toll that tuberculosis and silicosis took on southern African communities has been immense and underreported.

The development of silicosis compensation in South Africa warrants close attention for the role that the state played in mediating between the economic interests of mine owners and the discontent of White miners, whose organizing resulted in a 1922 uprising resembling civil war (Breckenridge, 2015). Marks (2006) notes that the militancy of White labour in South Africa must be understood in light of the hazardous nature of mining—of the 18 men who led the White miners' strike of 1907, 13 died of silicosis and another of an accident before the next strikes in 1913–14 (Simons and Simons, 1969). As a result of organized action to improve conditions, silicosis in South Africa became a disease defined and regulated by government. It was distinctively visible as a disease concentrated on the gold mines, a sector of great economic importance (Breckenridge, 2015). This culminated in the 1930 ILO conference in Johannesburg, convened to arrive at a consensus on silicosis, that explicitly drew on the wisdom of the Rand medical infrastructure in diagnosing and managing the illness. This resulted in transnational recognition of the hazards of silica dust, and defined silicosis as an occupational disease with discrete stages and a synergetic relationship to tuberculosis (Rosental, 2015).

[7] There is  no evidence of a change in production practices that would accelerated the incidence rate from 0.2 to 22 per cent.

The South African model appeared to be ahead of its time, progressive in its outlook and approach, and based on broad scientific knowledge. However, this perception obscured that the knowledge only pertained to White miners, and the compensation system reflected the underlying economic logic of racial capitalism.[8] The stability of the global financial order rested upon the exploitation and uncompensated deaths of Black miners from occupational disease. The histories of these workers went deliberately unrecorded, and the system of migratory labour allowed mine owners to evade responsibility. The racialization of compensation in South Africa persisted until the end of apartheid (Ehrlich, 2012). The history of silicosis thus bore a deep relationship to the economic and social order of South Africa, a connection visible also in Britain's handling of these issues in the twentieth century.

**Defining (and denying) disease | Britain (1918–1943)**

The South African model strongly influenced the development of British legislation on occupational disease in the twentieth century. Silicosis first became visible in Britain within specific industries in the early nineteenth century. For example, Johnstone (1799) wrote of an epidemic of pulmonary difficulty among needle-makers in Redditch, while 'grinders' lung' became a public issue in Sheffield among workers making blades and cutlery (Baldasseroni and Carnavale, 2017). Engels (1887) discussed the health issues faced by Sheffield grinders in *The Condition of the Working Class in England,* writing of how they suffered 'a sense of tightness across the chest; their voice is rough, and hoarse; they cough loud' (p. 144). Although these examples demonstrate that silicosis had been

[8] I follow Bhattacharyya's (2018) definition of racial capitalism as a concept that 'understands the role of racism in enabling key moments of capitalist development' (p. ix), based on Robinson's (2000) pathbreaking work.

documented early on, these were in small isolated industries and went ignored for a long time (Baldasseroni and Carnavale, 2017). The Industrial Revolution introduced the use of new techniques of mass production in workshops and mines, causing dust-related occupational disease to the attract the attention of medicine and unions. In Britain, as in South Africa, the industry that shaped legislation and discourse on silicosis was mining—a sector employing thousands extracting metal and coal. Steam powered drilling and blasting machinery caused finer particles of dust to be released, leading to increased rates of silicosis in the tin mines of Cornwall and the Black Country (Baldasseroni and Carnavale, 2017). Lung disease among British miners became a landmark public health and economic issue in the twentieth century.

As South Africa was a colony of the British Empire, the commercial links between its goldfields and Britain also created a channel by which knowledge of dust-induced disease in South Africa featured strongly in British discussions on the subject (McCulloch *et al.*, 2017; McIvor, 2015). Haldane's 1904 study of Cornish miners who returned from the Transvaal with accelerated silicosis marked a turning-point, decisively linking silica dust to lung fibrosis. Though 'Rand miners' phthisis' was recognized as a condition afflicting South African gold miners, there was little consensus on whether this was associated with all dusty industries or specific to metal mines (Bufton and Melling, 2005a; McIvor, 2015). There was a great deal of medical confusion differentiating between symptoms of tuberculosis and silicosis. British workers in dusty trades often perceived their physical suffering as linked to their conditions of work, referring to their breathing difficulties as 'miners' phthisis', 'potters' consumption' or 'grinders' rot', and developed a 'lay epidemiology' of the illness (Bloor, 2000). Under growing pressure to recognize and regulate the disease from medical experts in the Home Office, Britain became the first

European country to introduce legal provisions compensating workers suffering from silicosis (Bufton and Melling, 2005a).

The first compensation scheme for silicosis in Britain was introduced in 1919 (after its first recognition as an occupational disease in 1918). The immediate concern was controlling exposure to silica in specific sectors—ganister, fireclay and the production of 'refractories'. The Refractories Industries (Silicosis) Scheme, organized as compulsory industrial insurance, formed a compensation fund by imposing a levy on industry (Bufton and Melling, 2005a). The Scheme was regulated by the Home Office and Joint Committees, on which there were both workers and employers' representatives, reflecting a consensual vision. However, the legislation only covered materials containing 80 per cent or more free silica, and only specific industries were regulated.

It was hoped that pooling risks would minimize the incentive of employers to dismiss workers suffering from early-stage silicosis (Bufton and Melling, 2005b). The Home Office sought to balance the interests of employers and workers in what Bufton and Melling (2005a) characterize as 'practical, consensual solutions which could attract the support of trade unions as well as business leaders' (p. 157). The Scheme was the site of conflict and contestation between industry and workers, as we have already seen was the case in South Africa. Employers continued to argue that tuberculosis and other diseases were mistaken for occupational disease and that the illness was caused by prior employment in other industries (Bufton and Melling, 2005a). Several firms sought to prevent the extension of the Scheme to their industries: when it was expanded to cover iron foundries in 1919, employers issued strong protests, arguing that this was done in the absence of scientific

evidence and would be used as another bargaining chip in the hands of trade unions (Bufton and Melling, 2005a).

The Workmen's Compensation (Silicosis) Act of 1924 in Britain brought silicosis definitively within the ambit of workers' compensation. It constituted a Medical Board to examine claimants and grant certificates to those in the industries silicosis compensation covered. Workers' compensation statutes typically provide an entitlement to lost wages in the form of a pension or lumpsum award alongside the costs of medical care (Cane, 2017). In the absence of a legal determination of fault, they rely upon a medical determination of causation and location, asking whether the bodily injury occurred at work and the degree of disability as a result of the harm. In assessing this, it employs a complex and rigid system, linking the severity and type of all injuries to a 'percentage of disablement'. These tabulate a percentage accorded to the loss of each body part—each finger, eye and limb is assigned a percentage of bodily function that the worker is compensated for. The sum itself is linked to average earnings prior to disablement (Duncan, 2003).

Silicosis was a difficult disease to fit into this framework, until emerging medical evidence indicated identifiable 'stages' of disease progression—from ante-silicosis where there was fibrosis but no physical symptoms to third stage silicosis where breathing is extremely difficult and the patient is near death. This allowed silicosis to be classified like other injuries, with each stage corresponding to a percentage of disability. Given the progressive nature of the disease, it remained difficult to link silicosis to a moment of exposure or employer, particularly if a worker had laboured in different locations over the course of their career. The Home Office attempted to obtain the consent of employers and unions to develop a mechanism of examining, certifying and compensating workers with

symptoms of disease. This was extremely difficult in industries such as the cutlery makers of Sheffield, where subcontracting and small workshops made the administration of workers' compensation ineffective and where employers refused to establish a compulsory compensation fund (Bufton and Melling, 2005b). In Sheffield, the family was often indistinguishable from the firm, relying to a great extent on the productive capacities of women and children (Tweedale, 2013). Taylor (1988) writes that the introduction of factory legislation and health and safety regulations in cutlery making units placed higher burdens on smaller employers:

> [T]his was the way in which all legislation of this period would move: as the 'independence' of the small master gradually diminished, and the financial demands involved in compliance with new legislation increased, so the state forced the larger capitalist to assume more and more of the responsibilities which the small employer could no longer realistically attempt (p. 219).

Larger units also began to employ industrial outworkers to avoid the costs of legal compliance, and they argued that subcontractors ought to be held liable instead. Bufton and Melling (2005b) argue that the fragmented nature of these industries is enabled employers to limit compensation claims. The workers' compensation model depended on a structure of industry that had as its premise the large employer willing to purchase insurance against the risk of worker injury or disease. But the practical utility of these measures was limited in industries that relied heavily on small workshops and industrial outwork to cut wages and make profits. The tension of where to apportion responsibility in small industries plagued government attempts to impose legislation on the Sheffield grinders from the late nineteenth century on. Factory inspectors complained that subcontractors shifting from one workshop to another was 'exasperating', making enforcing health and safety impossible; worse, some enterprises simply decided to close (Taylor, 1988). The government's approach to dealing with silicosis was to not enforce the law actively, but to leave it up to

workers to present themselves to claim compensation (Bufton and Melling, 2005b). In effect, this favoured workers with predictable patterns of work and a stable employer.

Once the dangers of silica dust could no longer be denied, it became important to assess which materials contained the mineral in harmful quantities. This determination was tricky. Marble-cutters appeared to be free of pneumoconiosis, while granite-cutters seemed to be dying of it in large numbers (Baldasseroni and Carnavale, 2017). It was difficult to establish a link between the amount of silica in a material and disease. When the government proposed new legislation, the silica content in rock became a key point of contestation with the sandstone and coal industries. There had been attempts to understand how coal and other rock affected workers. Metal mining was understood to involve the release of fine particles causing lung irritation; coal was seen as a softer, porous material not harmful to health (Baldasseroni and Carnavale, 2017). In fact, as Derickson (1998) and Perchard and Gildart (2015) show, mining officials in Britain and the USA even maintained that inhaling coal dust was *beneficial* to miners' health. This served to hide the epidemic of coal workers' pneumoconiosis for several decades. The classic hazardous dust was taken to be silica, and coal miners were often only able to claim compensation where their symptoms mirrored those of silicosis (Derickson, 2013).

The coal miners' unions played a decisive role in expanding silicosis compensation in the British context. In the 1920s, workers' advocates, trade unions and new medical evidence sounded the alarm about the possibility of workers contracting silicosis in British anthracite coalfields. Coal mining was a key industry, employing well over a million people by the time of World War I (McIvor and Johnston, 2007), and the coal mines knew the scale of respiratory disease was one they could not foot the bill for. Sustained lobbying on

the part of unions and medical professionals led to changes. The British government appointed its first Medical Inspector of Mines in 1927, in acknowledgment of the fact that 90 per cent of all occupational disease compensation was paid to those in mines and quarries (McIvor, 2015). In 1928, the Home Office introduced the Various Industries (Silicosis) Scheme of 1928.

Bufton and Melling (2005b) argue that the Home Office was influenced by the close relationship the government shared with mine owners and engineers. As a result of this, the Scheme of 1928 was extremely restrictive. It limited compensation to death or total disablement. It only applied to workers employed for a minimum of three years and who developed the illness within a year of leaving employment. Diagnosis was typically contingent on an X-ray reading, which could be subjective given limits on medical knowledge at the time and continuing scepticism among British doctors about the utility of radiography (Melling, 2010). Most significantly, while the Home Office admitted they had no estimate of how much silica in rock strata was hazardous, at the insistence of employers, the 1928 Scheme placed the onerous condition that the worker must have worked on rock containing at least 50 per cent free silica in order to be eligible for compensation (Bufton and Melling, 2005a; McIvor and Johnston, 2007).

Despite its restrictive scope, the Scheme had the significant effect of opening the door to workers mining coal in rock-beds that contained free silica dust. The effects of this shaped how silicosis legislation developed. Coal mine owners repeatedly argued that coal dust had no deleterious effect on the lungs, seeking to distinguish it from silica with geological and medical expertise (Bloor, 2000; McIvor, 2015). In what McIvor and Johnston (2007, p. 63) characterize as a process of ‘discovery and denial’, the British

government and mining industry were forced to confront the reality of coal miners' illnesses but denied that the harmful dust could be anything other than silica. Doing so was critical to prevent the extension of compensation to coalfields where the rock beds had a lower silica content. The Chairman of the Monmouthshire and South Wales Coal Owners Association said in a meeting of mine owners:

> it is inevitable that there will be some extension of the regulations, and the owners must try to ensure these extensions are as small as possible […] resultant claims for compensation would be inevitable. It is not thought to be in the interests of the trade to apply a medical examination to men at present in the employ of the owners (quoted in Bloor, 2002, p. 96)

The South Wales Miners' Federation, the largest trade union in the United Kingdom by 1914, and the Mining Federation of Great Britain (MFGB) campaigned vigorously to improve silicosis compensation for coal miners and pressed for amendments to the 50 per cent silica rule (Bloor, 2002). Facing opposition from the employers' associations, the government refused (Bufton and Melling, 2005a). Melling (2010) argues that the idea that dusts behaved in predictable ways was an essential fiction for the coal mining industry to escape liability. Union leaders complained that it was scandalous that employers' associations 'bought brains' and worked to marshal their own evidence base, consulting with and employing geologists and engineers to go up against evidence employers introduced (Bufton and Melling, 2005b). Their instrumental use of expertise copied the tactics of coal mine owners in order to gain worker's compensation, and it has been argued that they sometimes went as far as tampering with geological evidence and duping witnesses their efforts (Bloor, 2000; Turner and McIvor, 2017). The position of the unions was that the onus ought not to be on the worker to prove proximity to silica or length of employment; the proof was the illness, and they contested the evidence of the employers' doctors by consulting doctors of their own. As far as they saw it, this was  a pressing

epidemic that had to be compensated and prevented, so workers could 'get out of the pit and so protect their health and their lives' (Bufton and Melling, 2005a, p. 165).

This demonstrates how the nature of illness and scientific expertise were contested and necessary tools in the battle of determining responsibility and compensation. These efforts on the part of unions and sympathetic medical professionals bore fruit in the mid-1930s. The government enacted new legislation in 1931 that covered all underground workers but, crucially, left the issue of silica content unresolved—and so the battle of interpreting statute moved to the courts. There were several conflicting cases—some held employers liable without reference to the 50 per cent silica standard, and others where courts found in favour of employers (Bufton and Melling, 2005b). In 1935, the Court of Appeal ruled in the favour of employers in *Wragg* v *Samuel Fox & Co,* when employers claimed that changes to the law were *ultra vires*. The MFGB continued to lobby the Home Office to explicitly remove the criteria on the type of rock, until the matter was resolved in favour of the workers in 1937 by the House of Lords.

Union activity in this era centred on lobbying civil servants, ministers and Members of Parliament, and deploying expert testimony in litigation. Bufton and Melling (2005b) point to a divide in this time between engineers and scientists aligned with the coal mining industry, and medical specialists sympathetic to sick workers and suspicious of mining experts who denied that coal dust could be harmful. These activities, alongside the rising number of claims from coal miners suffering from lung disease, led the Medical Research Council (MRC), a government research body, to conduct a new study on the rise of non-silicotic respiratory illnesses in coalfields (Bloor, 2000). It had become apparent that there was simply no way to tell how much silica caused lung damage, and in the meanwhile

thousands were succumbing to illness. The MRC study found that the disease that coal miners suffered from was distinct from silicosis (Ness *et al*., 2002). This research paved the way for the belated inclusion of coal-workers' pneumoconiosis as a distinct disease in workmens' compensation law in 1943 (McIvor and Johnston, 2007). The recognition of the disease caused claims to skyrocket—by 1948, more than one-tenth of the South Welsh workforce was on the disabled register (Braun, 2014).

The micro-politics of the Home Office, the South Wales Miners' Federation, and the MRC has been the focus of much writing on the development of compensation for industrial disease in Britain. These studies have sought to understand the Home Office's role in protecting industry, the ways in which it was pressured by unions, and the contested nature of medical expertise at this time (Bloor, 2000; Braun, 2014; Bufton and Melling, 2005b; McIvor and Johnston, 2007; Melling, 2010). Having developed an elaborate system to monitor and compensate silicosis, the government was reluctant to rebuild the system entirely to account for coal mining, particularly in the face of strong industry pressure against changes. The unions pushed for compensation, provided healthcare services of their own, enrolled as Workplace Inspectors, and pressured employers to make health and safety changes (Bloor, 2002). Bufton and Melling (2005a) also demonstrate how changes in attitudes to coal workers' pneumoconiosis were negotiated on the ground: individual miners brokered settlements with employers, union branches pressed compensation applications, and sympathetic doctors made diagnoses of silicosis for coal miners with respiratory disorders.

In this way, the question of ill health at the workplace became part of a larger political, economic and social battle on responsibility for worker welfare; and the use of scientific

knowledge and expertise were adversarial tools in this contestation (Bloor, 2000). Turner and McIvor (2017, p. 207) argue that the mining unions were 'shifting the discursive terrain towards ideas of social justice and state responsibility for occupational risk' as unions campaigned for the state provision of artificial limbs and a statutory right to alternative employment for those suffering from occupationally-induced disability. At the same time, these demands remained within the framework established by the early Workmen's Compensation Acts, which construed occupational injury as a necessary risk of production and mandated that employers bear the cost of compensating lost wages and medical care (Bufton and Melling, 2005b). In this period, the Home Office was determined not to either create or underwrite funds for compensating workers (Bufton and Melling, 2005a).

This pattern is also visible in how the British state treated the issues of byssinosis (caused by the inhalation of cotton dust) and asbestosis (caused by exposure to asbestos) in the 1930s. In both cases, medical uncertainty surrounding the aetiology of the disease as well as strong industry pressure against establishing statutory compensation led to a failure to recognize the disease until several decades too late (Bowden and Tweedale, 2002; Tweedale and Hansen, 1998). Like silicosis and coal workers' pneumoconiosis, these diseases were subject to an evolving regime of law that changed under the influence of organized workers, new medical evidence, and industry pressure.

These contestations illustrate what Dembe (1996) describes as the politics of occupational disease, in that the definition of a disease as occupationally caused is dependent on economic, cultural and social understandings. The miners' unions brought their experience of adversarial collective bargaining to bear in the arena of medicine and geology, arguing that both silicosis and coal workers' pneumoconiosis were not only

rampant, but indisputably occupational. The British example also demonstrates how the logic behind law can run up against real world practice and organization. The law remained unable, for a very long time, to effectively regulate and compensate the Sheffield cutlery makers despite the broad base of evidence of their suffering. This was primarily because the structure of cutlery manufacturers was inimical to regulations designed to target large industry. The modes of expertise and evidence the law relied on to determine injury differed over time, but its technique of determining responsibility was rarely adapted to industries where the line between the employer and employee was blurred.

## Conclusion

This chapter has sought to trace the emergence of employer responsibility for occupational health in South Africa and Britain and demonstrate how the consensus on employer responsibility was a fraught political process in both countries. The architecture of compensation schemes has been functionally dependent on the economic and political landscape within which the state mediates demands. While this took different forms in South Africa and Britain, their approaches solidified key features in occupational disease compensation that persist today. As Rosental (2017a), McCulloch *et al* .(2017) and Ehrlich (2015) point out, the reliance on medical expertise and classification, the idea of a standard of safe exposure (so detrimental in the case of asbestos), and the notion that occupational health can be clearly delineated from community health remain key elements of occupational disease law the world over today. The debates in this chapter had a direct influence on the Indian context, which I go on to discuss in following chapters, as labour laws that reflect this historic struggle on the locus of responsibility continue to operate in many ex-colonies of the British Empire.

There are two significant observations to bear in mind before turning to consider recent developments in India. The first is to note the centrality of organized labour in industries of national importance in the history of developing employer responsibility for occupational health. This is evident in the South African gold mines, where unionized White miners pressed for employers to bear the costs of compensating infectious disease, early-stage and advanced silicosis, and those who had contracted the disease in a mine that subsequently closed. Similarly, the expansion of silicosis compensation, and the recognition of coal workers' pneumoconiosis as a distinct disease, can be attributed in large part to the efforts of miners' unions in Britain. While it is important to not reduce these changes to efforts made by labour, as the impetus for this change also came from sympathetic medical professionals and civil servants (Breckenridge, 2015; Bufton and Melling, 2005b), there is no doubt that the power of organized labour in two industries of significant economic importance played a significant role in shaping government legislation. This history was influenced by different factors elsewhere—for example, in Spain, new silicosis legislation came from the Franco regime's desire to appease the Left after the Civil War (Menéndez-Navarro, 2008); in the USA, new regulation was a result of organizing activity by the International Union of Mine, Mill and Smelter Workers as well as a rush of silicosis cases during the Great Depression (Rosner and Markowitz, 1991)—but nearly everywhere, organized labour has played a significant role.

The second issue is that the labour laws that emerged from this period enshrined a particular conceptualization of the worker. In doing so, they created the conditions of possibility for exclusion from the ambit of labour law. In Britain, coal miners were unable to prove that they had silicosis and were long unable to benefit from silicosis schemes; while in South Africa, White miners had to repeatedly pressure the government to

acknowledge that silicosis ought to be compensated whether or not the worker displayed symptoms. In both cases, the focus of struggle was on expanding the conception of law, and of scientific and medical knowledge. Moreover, in Britain, workers' compensation could not be effectively implemented in the cutlery manufacturing and grinding trades of Sheffield. The structure of apprenticeships and the craft-trades meant that workers laboured in small workshops and under a high degree of sub-contracting; the imposition of health and safety regulation only exacerbated these problems. Similarly, in colonial South Africa, compensation did not reach the bulk of the mining workforce: Black migrant workers with no records of employment labouring on short-term contracts.

This chapter, therefore, complicates the commonly held assumption that the laws that colonized countries were 'left with' do not function as they do in the colonial metropole because they do not reflect the local conditions of the countries they were exported to. This understanding posits that colonial laws did not map onto the institutions, mechanisms of capital accumulation and political structures present in postcolonial states. This is, in many ways, true. However, the history of silicosis compensation allows us to observe a slightly more complex story. The laws that shaped labour law across the Empire were always limited even within their own contexts, and these same limitations have come to cast a long shadow over labour law today. It is to the contemporary ramifications of this that I now turn.

## Chapter Three: Configuring Labour's Interest as the Public Interest

*Poyha padya re apu jeeve hata kaurine,*
*Poyha kunin re, tharla kun re?*

*We earned some money by breaking body and soul,*
*Who gets the money, who gets nothing?*

—*Bhilala song*, Baviskar (2008)

The one time that silicosis in India made international news, it was when the Supreme Court issued a warrant against the Chief of the Central Pollution Board for contempt of court (Chandran, 2016). This order came a decade into an ongoing public interest case on the conditions of workers suffering from silicosis. The Court issued the warrant as pollution control authorities had repeatedly failed to appear in court to explain what they had done to prevent dust-related deaths of stone workers dying of silicosis in Gujarat, a western Indian State. This chapter traces how silicosis came to be framed in this way, in what seems a definitive break with the ideas of responsibility in workers' compensation legislation that Chapter Two detailed. What led to the Supreme Court's interest in silicosis as a matter of public interest? Why was a central state agency summoned before the Court, instead of a private corporation? And how was it that the Pollution Board was summoned, and not the Labour Department?

This chapter follows the story of how silicosis came to be framed as an object of judicial concern in India, and the ways in which the courts constructed the worker suffering from silicosis. While there are numerous Indian labour laws that provide for compensation for occupational disease—such as the Factories Act (1948) and the Mines Act (1952)—silicosis figured in several public interest cases before the Indian Supreme Court from the

1980s on. This development has created a parallel track of compensation, where one set of workers claim silicosis compensation from the state as an issue of the 'public interest', while others can reasonably be expected to claim compensation from employers under labour law. In Chapter Four, I discuss the colonial and post-colonial framing of Indian labour law which allowed for the emergence of state compensation. For the moment, it is enough to appreciate that the vast majority of Indian workers are unable to receive compensation under existing labour law statutes. Advocates for worker welfare have been forced to find another way to achieve this. This was attempted in the Public Interest Litigation cases beginning in the 1980s.

I begin by providing a short overview of the rise of 'Public Interest Litigation' (PIL) in India. The operation and ideological underpinnings of PIL is in many ways unique to Indian law (Cunningham, 1987). As Dembowski (2001) puts it,

> [E]ssentially, public interest litigation consists of writ petitions by people who are not immediately affected by the grievances cited. Social workers, journalists and other politically aware persons now file petitions if they feel that certain matters are of public relevance (p. 58).

This section outlines the main features of PIL petitions and the procedural innovations they have evolved, and reviews recent critical scholarship that argues that there has been a dramatic shift in the Court's priorities from defending the rights of the marginalized to mobilizing the 'public interest' to carry out a bourgeois mandate of urban planning and industrial development.

Following this background, this account examines moments when silicosis became an object of 'public interest' before the Indian Supreme Court. It does so by analysing three

different discourses about injury and dust that came to the fore in court cases, each of which saw the worker in a different light. First, in the 1980s, silicosis was framed as a question of unfair labour practices, linked to debt bondage and child labour, an issue requiring rehabilitation to be funded by both the state and employers. This interpretation remained in vogue until the 1990s, when activists and the Court reformulated silicosis as an issue of environmental pollution—here, residents inhaling dust were the primary concern; when workers figured in judicial discourse, it was as victims of pollution or those who had lost their livelihood, rather than victims of occupational disease. The spectre of court-ordered industrial closures to deal with pollution led several trade unions to file a petition to intervene in a case on water contamination, arguing that the Supreme Court's attitude ignored the question of worker health. This trajectory complicates existing scholarship on the Supreme Court's track record on environmental cases—the Court has, on at least one occasion, taken account of worker health, but only to order compensation to those suffering. This order has been neglected in academic work; therefore, the account in this chapter relies on the few existing newspaper and non-governmental organization (NGO) reports that followed up on the case to show how the Supreme Court's compensation order took much initiative on the part of workers' groups to be fulfilled.

I conclude with a discussion of the final case in the Indian Supreme Court's consideration of silicosis—the ongoing PIL of *PRASAR vs Union of India* filed in 2006. I show that this case inaugurated the shift we witness today—the National Human Rights Commission (NHRC) became a co-petitioner and issued recommendations that State governments compensate victims and their families. This marked a decisive discursive transformation in the way the law understood silicosis: It refashioned workers suffering from occupationally caused disease as citizens whose human rights were violated.

An outline of this history tells us several things of significance to the broader thesis: while PIL has been a useful tool for civil society groups to advance their claims, the role and function of PIL has altered with time. Despite its initial ambitions, PIL has not always delivered justice to those suffering. Rather, as Bhuwania (2016) observes, the Indian Supreme Court has become 'the self-proclaimed vanguard of the social revolution' (p. 25), and in this, its priorities have tended to shift over time. This chapter focuses on one way in which this occurred: the changing judicial discourse that alternately framed victims of silicosis as individuals facing socio-economic deprivation, as residents facing dust pollution, and as victims of human rights violations. The following chapter will explore why this has been the case.

## 'Cutting the Common Law Umbilical Cord': The Emergence of Public Interest Litigation

The use of Public Interest Litigation (hereafter, PIL) is unique to the Indian Supreme Court, and this procedural innovation of the Court has caused the most scholarly controversy. It is unlike other forms of public interest lawyering, in that it is not driven by lawyers but by the judiciary itself (D'Souza, 2005). This power derives from Articles 32 and 136 of the Indian Constitution, which empowers individuals to move the Supreme Court in defence of their fundamental rights. The Supreme Court can grant 'special leave to appeal' to any case, allowing it to hear appeals from any other court in the country, typically where issues of constitutional law arise. Bhuwania (2016) traces the antecedents of this power of the Indian Supreme Court to the colonial Privy Council of London that had the discretion to decide on all Indian cases as the court of final appeal. These powers, alongside the rise of PIL have given the Court a wide latitude of judicial review, causing many to describe the

Indian Supreme Court as the most powerful constitutional court in the world (De, 2018; Mate, 2015).

PIL arose as part of a larger struggle between Parliament and the courts in the 1970s. In this time, the Indira Gandhi-led government accused the Supreme Court of being an impediment to 'socialism' in its enforcement of fundamental individual rights and sought to restrict its powers of judicial review. The Indian Constitution guarantees rights that fall into two categories: 'negative rights' that citizens have of freedom from interference and discrimination by state authorities, and 'positive rights' termed as Directive Principles of State Policy. These latter rights are not justiciable but are framed as guiding principles for the state in the formulation of policy; in practice, they are better conceived of as rights that focus on social and economic justice (Corbridge and Harriss, 2001). In the tug-of-war of legitimacy between the executive and the judiciary in the 1970s, the Supreme Court responded to this charge by Indira Gandhi's regime by laying the ground for PIL. The Court argued that the Constitution had a 'distinct socioeconomic goal of ameliorating poverty and achieving an egalitarian distributive justice' (Dhavan, 1992) and rooted this mission in the Directive Principles. As Kaviraj (2011, 2010) observes, the vocabulary of Indian politics has been at odds with that of Western liberalism, in that it is essentially non-individualistic, and the language of socialism was used to denigrate the application of 'inflexible' rules. The activism of the Court in this time thus focused much more on the question of equality than of civil liberties (Mehta, 2002), which have been relatively neglected and rarely feature in PILs. It is this judicial activism that Baxi (1985, p. 111) refers to as the 'active assertion of judicial power to ameliorate the miseries of the masses.'

The Supreme Court invented the first procedural innovation of PIL in the *Judges' Transfer* case (*Gupta* v *Union of India*) of 1981, where it loosened rules on legal standing: 'public-minded persons and organisations [could now] move the court and act for a general or group interest, even though they may not be directly injured in their rights.' This provided a basis for law to drive social change by not limiting suits to those where specific individual or group rights had been violated (Cottrell, 1984). Cunningham (1987) described the idea of representative standing—one person wishing to represent those unable to represent themselves—as allowing for something similar to the class-action lawsuit, except with the petitioner as a non-class member. The Court's stated reasoning was to democratize access to the court by removing 'technical barriers' to justice in the form of rules on legal standing (Craig and Deshpande, 1989). The Supreme Court also mobilized the language of 'indigenization', arguing that rigid rules on standing simply could not work in the Indian context and had to be adapted to its realities. Commentators celebrated PIL as a form of 'decolonization' of legal procedure, heralding it as having 'cut the umbilical cord between the Indian legal system and its mentor systems in the "white" common law world' (Dhavan, 1994, p. 27).

There were further procedural relaxations in the name of the public interest. The Supreme Court received a petition on workers forced to labour under debt bondage, and initiated *Bandhua Mukti Morcha* vs *Union of India* (1984)—the first major PIL on a labour issue. The Court appointed two lawyers to visit the quarries where bonded workers were allegedly held, after which an academic conducted a 'socio-legal' investigation of the area. The defendants argued that this evidence was inadmissible as it was based on *ex parte* statements not tested by cross-examination (Craig and Deshpande, 1989). The Court rejected this argument, arguing that upholding these procedural safeguards would place

fundamental rights beyond the reach of common people; the Supreme Court then bestowed upon itself the power to issue ‘whatever direction, order or writ may be appropriate in a given case for enforcement of a fundamental right’. The Court argued that where there is a considerable power imbalance between parties, it was ‘inappropriate’ to expect or demand an adversarial trial— ‘it was readily apparent that the poor who were the real plaintiffs in this action could not produce the relevant material supporting their case before the Court of their own accord’ (Craig and Deshpande, 1989, p. 364). These two innovations were responsible for bringing the PIL into being, and were hailed by many as finally throwing open the doors of the court to the nation; Baxi (1985) would say that PIL represented the Supreme Court ‘taking suffering seriously’.

As a result of these procedural innovations, the way that PILs operate in India are unique and deserve explanation. Many PILs are initiated ‘suo moto’, that is, they are initiated by the Court itself on an issue of interest without a petitioner approaching it. Bhuwania (2016) describes the typical trajectory of the PIL as follows:

> a court takes up a policy issue, appoints its favourite lawyer as amicus curiae, suggests solutions based on half-baked evidence collected by its own random appointees, issues legislative guidelines binding as law and then, appoints personnel to monitor the implementation of these policies (p. 116)

The Indian Supreme Court can completely dispense with petitioners in a case and go on to issue remedies in PILs that result in large-scale public policy projects. It has gone so far as to propose and oversee projects to interlink all of India’s rivers (D’Souza, 2005; Suresh and Narrain, 2014), demolish ‘illegal’ housing in Delhi (Bhan, 2016), and order mass industrial closures (Menon, 2014). Once a case is taken up by the Supreme Court, it can stay in motion nearly indefinitely. As D’Souza (2005) observes, the court makes no

judgment that actually closes the case; instead, the case is 'monitored through a series of orders' (p. 507), and monitoring can go on for as long as the Court deems it necessary. Bhatia (2019a) remarks of one such drawn-out environmental case, '[e]very once in a while, the Supreme Court Registry unfreezes [PIL] from its cryostat, dusts it down and posts it for hearing'.

In *State of Uttaranchal* vs *Balwant Singh Chaufal and Ors* (2010), the Supreme Court provided its own account of the evolving history of PIL, which it saw as having three phases of development. In Phase I, the Court was primarily concerned with protecting the fundamental rights of the poor and marginalized unable to approach the Court; in Phase II, it dealt with cases to do with protecting and conserving the environment and cultural heritage; and in Phase III, it focused on what it calls 'governance' issues, from corruption to public transparency.[9] These shifts, between the 1980s and the 2010s, reflect an ongoing revision in what the judiciary believes is the 'public interest' and track on to ongoing economic changes in India, from a version of state-sponsored socialism to the entrenchment of neoliberalism and privatization (Baxi, 2006; D'Souza, 2005; Nigam, 2014; Ramanathan, 2014).

Scholars have noted a change in the Court's priorities, finding that it has repeatedly upheld economic liberalization, privatization and the displacement of the poor in the name of 'development' while ignoring economic redistribution in the era following 1998 (Baviskar, 2012; Baxi, 2006; Bhan, 2016; Bhushan, 2004). Nigam (2014, p. 29) has even called the second phase of PIL the 'brass band of neoliberalism'. Others (Bhuwania, 2016; D'Souza, 2005) emphasize that the very nature of PIL has always sacrificed procedural

[9] Bhatia (2019b) argues that there is now a fourth phase of the PIL—where the Supreme Court has increasingly attempted to curtail individual freedoms and/or achieve political goals through the use of PIL.

safeguards in a way that made regressive outcomes possible, and PIL has reflected an elite 'mobilizing from the top'. As Chatterjee (2017) puts it, the judicial populism of the Supreme Court reflects the bargain it has made, giving in to 'the popular clamor for good outcomes by dispensing with procedure'. This history, however, is less easy to delineate in individual cases, even if the broader trajectory is true. I show that even within cases of the second and third phases, there have been a confusing array of orders serving different ends. The picture that emerges is more complex than usually presented in existing literature, suggesting that the Supreme Court has found itself responding to a range of pressures in its policy-making activity.

## 'Dangerous Operations': Silicosis as an Unfair Labour Practice

The landmark PIL case of *Bandhua Mukti Morcha* v *Union of India* (1984) concerned forced labour (under compulsion of debt) in stone quarries across India. When a Supreme Court judge received a letter on the issue, they initiated the PIL on the basis of the letter's allegation that the state had failed in its obligation to protect the fundamental freedoms of its citizens. Chandrachud (2019) observes that several of the orders the Supreme Court pronounced in this case were of a policy or administrative nature—including ordering stone crushing units to spray water and install vacuuming equipment to prevent dust exposure. This marks an early and significant intervention that the Supreme Court made via PIL on dust-related illnesses, coming in the context of a case on bonded labour.

But the first significant case dealing with silicosis came four years earlier in *Workmen of Slate-Pencil Industry vs State of Madhya Pradesh and Others* (1980), also probably the first health-related PIL before the Indian Supreme Court. It concerned the working conditions of slate pencil manufacturers in the district of Mandsaur, in the central Indian

State of Madhya Pradesh. The case was prompted by local investigative reporting, sparking national frontpage coverage of shocking conditions of work. Newspapers reported that entire villages were losing a generation of male workers to silicosis (S. Dhara, 1990). By 1980, the conditions of work within Madhya Pradesh had been reported and surveyed extensively, to little avail. The media reported that 2,000 workers had died of silicosis in the last decade and focused on the horrors of child labour in the industry—so severe that doctors were quoted as saying that nearly all the child workers had developed the disease and would die of it soon (Rao, 1980). The situation of debt bondage among workers was also stressed in media reports at the time (Singh, 1986). According to Saiyed *et al.* (1985, p. 128), 'no [other] single occupation has been the focus of so much public and Government concern in India'.

This publicity led the Prime Minister, Indira Gandhi, to write a strongly worded letter to the State government on the issue, and lawyers and trade unionists moved the Supreme Court with a writ petition. They applied for the judicial enforcement of fundamental rights under the powers of the Supreme Court. The writ said:

> The workmen may have no right to be employed by the manufacturers but once they are employed, they have the right to work under just and humane conditions and cannot be forced by economic necessity to work under conditions hazardous to their lives in violation of their fundamental rights under Article 19(1) (g) of the Constitution. (quoted in Rao, 1980, p. 1883)

This construction of Article 19(1)(g) by the petitioner is worth pausing over, as the constitutional proviso is framed merely as a 'negative' right, guaranteeing the freedom of every individual to practice any lawful profession or trade. In this era, several fundamental rights against coercion were expanded to encompass 'positive rights' to social and

economic justice, marking the beginning of more creative interpretations of the Constitution to advance the cause of labour (Bhatia, 2017).

The second argument articulated in the writ petition was that the government failed in its responsibility to enforce the Factories Act (1948), which safeguarded the health and safety of workers and prohibited child labour. This vocabulary of claim-making is worth considering in greater depth. Rao (1980, p. 1883) wrote, ‘So powerful are these manufacturers that the government has not once enforced the Factory Act though it is fairly well known that the employers have been violating every one of the minimum requirements regarding health, safety and general welfare of the workers’. The writ argued that ‘the state has abdicated these powers and has endangered the lives of the workers by allowing the manufacturers to continue their operations without any safety measures’ (Rao, 1980). Here, we begin to witness how the language of constitutionalism has been used to articulate labour rights as ineluctably human rights that are the state’s responsibility to defend, rather than private rights flowing from the contract of employment to be enforced directly against employers by workers themselves.

While the case was being heard, the State government of Madhya Pradesh passed the *M.P. State Pencil Karmkar Kalyan Nidhi Adhiniyam* (1982), constituting a ‘Welfare Board’ to provide relief to disabled workers. The Welfare Board levied a tax on slate pencil manufacturers, creating a group insurance scheme for workers. It also allowed for the provision of cash transfers to those suffering from silicosis and families of deceased workers; for community necessities; educational facilities; primary healthcare; alternative occupations for women and unemployed workers dependent on the slate pencil industry; recreational activities and reading rooms for workers; and life insurance premiums. Four

years later, in 1984, the Supreme Court directed dust prevention technology to be installed, the government to deal with compensation cases filed, and the Chief Inspector of Factories to submit a report on the safety precautions (Singh, 1986). Subsequently, the Madhya Pradesh State government ordered slate pencil manufacturing to be included as a 'dangerous operation' within the scope of the Factories Act of the State. It also ordered that women and children must be barred from stone cutting and carving work.

Singh's (1986) investigative report two years on claimed that little progress on these measures had occurred. Factory owners slashed production immediately in response to the welfare tax, even as they continued to refuse to pay it, despite the commencement of prosecution. Cheap dust prevention technology had been installed that marginally increased a worker's lifespan but that did not prevent the development of silicosis. There has been little reporting on the issue since, apart from public health journals that have repeatedly found poor working conditions and high rates of exposure, affecting non-workers who live around processing zones as well as labourers themselves (Bhagia, 2008; Fulekar and Khan, 1995). There is some evidence that the Welfare Board is operational, and patients and their dependents remain eligible for benefits upon producing proof of employment and a certified diagnosis (Counterview, 2014). On the other hand, there are reports of widespread deaths in the area and little alternative employment. Public interest in the fate of slate pencil workers has died down in the last forty years.[10]

**'A Thick Layer of Dust': Silicosis as Environmental Hazard**

Though the workers in Mandsaur receded from the public eye, the issue of dust related illnesses did not disappear—it merely went through another reconfiguration. This time, the

[10] One newspaper article in 2009 alleged that slate pencils are no longer in use anywhere, and the real purpose of the industry is to act as a cover for opium production and distribution (Shastri, 2009).

question of worker health was framed by the discourse of environmentalism. The classic cases of 'Phase II' of PIL that focused on environmental issues were largely filed by one lawyer, M.C. Mehta, between 1984–85. The Supreme Court continues to hear some of these cases in what is called 'continuing mandamus' (Menon, 2014), and new orders are still issued. These cases exemplify the strange nature of PILs, which resemble court-monitored public policy projects more than court cases.

The issue of occupational health figured prominently in two petitions of this period. The first I consider is *Writ Petition (Civil) 4677 of 1985*. As Bhuwania (2018) describes it, this particular petition was a 'many-headed hydra'. The case began with a plea for the Court to intervene in pollution in Delhi, centring at first on stone-crushing units in the southern part of the city, Lal Kuan, that emitted heavy dust pollution. M.C. Mehta claimed that 'more than 2,000 tons of dust was being emitted' from the units; a worker later recalled, 'when mining and crushing activities were still going on, everything in Lal Kuan was covered by a thick layer of dust. Sometimes it was even hard to breathe' (Azad, 2007, p. 7; Baviskar et al., 2015, p. 197). The Court later extended the petition to cover water pollution in the river Yamuna flowing through the city of Delhi, the condition of the ridge forest to the north of the city, mining operations in a mountain range to the south-west, and, finally, to commercial establishments in residential areas. 'Pollution' was the problem that captured these diverse urban problems and, in order to tackle it, the judiciary targeted a range of offending behaviours it deemed 'anti-development'.

The Supreme Court responded to the complaint that the stone quarries were causing dust pollution by mandating the closure of 300 stone-crushing units in the Lal Kuan area. This caused a complete eviction of quarry workers from this area; this was followed, in *M.C.*

*Mehta v Union of India* (1996) by the Supreme Court order that all hazardous industries ought to be relocated and moved out of urban city limits. In this understanding, stone quarry workers were not workers at risk, but a 'risk community' whose health was in danger from industrial pollution spread by the quarries. In practice, the industries merely moved to another State. The shift in judicial discourse that Talib (2010) tracks here is one from a relationship where *workers* are owed specific responsibilities as a result of bondage or hazardous working conditions to one where workers are construed as *citizens* living amidst hazardous pollutants. Ramanathan (2004) argues that some of this is attributable to the Bhopal Gas Tragedy of 1984[11], after which the legal concept of industrial risk expanded to include communities living in proximity to industry and at risk of exposure to industrial toxins. It was partly in line with this thinking on risk that the Court ordered hazardous factories to relocate, and partly due to the desire to clean up, decongest and beautify the capital city for its middle-class denizens. As a result, industrial relocation meant urban exile—the workers who inevitably had to travel alongside industry were outside the scope of the court's imagination (Ramanathan, 2004).

In 1996, the Supreme Court ordered that the factories that shut down must pay six years' wages to workers laid off, and those that relocated would have to continue paying wages while building new establishments. A federation of trade unions and human rights groups banded together as the Delhi Janwadi Adhikar Manch to document the impact of the orders on working-class people and to attempt representing their concerns to the Court (Nigam, 1997). Baviskar et al. (2015) reported that when trade unions attempted to be heard in Court:

[11] This was a lethal gas leak that occurred in a Union Carbide pesticide plant, and one of the world's worst industrial disasters. It had a significant impact on the development of health and safety law in India, and has been extensively studied by socio-legal scholars. See Jasanoff (1994), Galanter (1986) and Das (1995a).

> the judges brushed them aside, merely remarking that the court would protect workers' interests and did not need the intercession of the unions. This verbal assurance was not recorded as a part of court proceedings, and thus trade unions were later unable to appeal the judgment, since they had not been recognized as affected parties (p. 199).

Unions and workers' organizations attempted to problematize the discourse framing these industries as illegal and polluting, arguing against the middle-class bias of a narrative that insisted on closing industries, highlighting that it would affect the livelihood of millions when they could target vehicular pollution and the consumerist practices of the wealthy instead (Delhi Janwadi Adhikar Manch, 1997; Routray, 2013). This framing pitted workers' jobs against the environment (Menon, 2014), but in the face of overwhelming concern about air pollution in the city, workers' organizations conceded that pollution certainly was an important issue but its primary victims were workers themselves (Navlakha, 2000). Nigam (2001) wrote:

> […] as the Delhi Janwadi Adhikar Manch has been arguing, the way the government and the courts are proceeding, it is clear that the intention is *not to fight pollution*. The intention is merely to 'get it out of my way'; it is a classic 'not in my backyard' attitude. Simply relocating industries means relocating pollution from the backyard of Delhi's elite to wherever human life can be found to be cheaper. Did it occur to the honourable court ever, to ask if whether the pollution that is choking the city is also affecting the workers employed in the concerned units? If the answer be yes, then how, may one ask of the enlightened judges, will they ever be free of the effects of pollution?

These pleas had little effect on a Court that had made up its mind: urban pollution was the 'public interest' that had to prevail over the lives of the informally employed working-class (Baviskar et al., 2015). Subsequently, in a 1999 order, the Supreme Court mandated the further relocation of 77,000 'non-conforming' and 'polluting' industries in Delhi.

The literature extensively remarks on the mass closure of industries in this era as a moment in the neoliberal turn of the Indian Supreme Court, where ‘environment trumps people’ and their livelihoods. 'Unauthorized’ homes of the poor were destroyed, small commercial businesses were ‘sealed’ and closed, and thousands of working-class jobs were lost to the judicial project of industrial risk management (Bhan, 2016; Bhuwania, 2018; Menon, 2014). This literature focuses on the fact that many factory owners and crushing units were quite happy to relocate—Indian labour law made the closure of a registered factory a difficult process, but owners could now easily shutter unprofitable factories and sell the land for a high profit thanks to the urban real estate boom (Delhi Janwadi Adhikar Manch, 1997). As a result, Baviskar (2011, p. 392) describes the environmental PILs of this era as initiatives of ‘bourgeois environmentalism’, where ‘middle-class activists mobilize the discourse of “public interest” and “citizenship” to articulate civic concerns in a manner that constitutes a public that excludes the city’s poorer sections.’

That was certainly the effect of this writ petition. Relocation is not a solution for workers, who are either rendered unemployed or relocate and continue working in hazardous conditions. The Court saw the health of the residents of Delhi as an environmental issue; it never raised the health of workers in hazardous industries as an occupational issue.

However, in 1996, the very same year as the first closures and relocations of factories in Delhi, the Court issued a contrasting order in a *different* M.C. Mehta petition. This PIL, *Writ Petition Civil 3727 of 1985*, was initially filed on the issue of water pollution in the Ganges, but the malleable and ever-shifting nature of PIL cases allowed trade unions to effectively intervene in this petition where they had been unable to in the other. The

intervention developed out of the work of a grassroots science centre working in an indigenous area in the eastern State of West Bengal, which had conducted medical examinations to prove the existence of silicosis among workers in quartz powder manufacturing. It then organized direct action efforts to close the factory (Mukul, 1997). By 1993, the case had come to the notice of other labour groups and the National Human Rights Commission (NHRC) had written to district authorities on the matter (Ghatak, 2001). Two years later, after continued inactivity, six trade unions alongside a labour support group, Nagarik Manch, in West Bengal wrote an appeal to the Supreme Court to intervene in the M.C. Mehta petition. They argued that:

> [e]nvironmental pollution outside the unit and occupational diseases inside the unit are perhaps two sides of the same coin. Whereas, the Supreme Court has already most justly and effectively passed a series of momentous verdicts regarding the "external" environmental pollution, we are keenly awaiting its verdicts and directives regarding the "internal" occupational hazards and diseases… (quoted in Dutta, 1995)

This strategy—to use a moment of judicial activism on pollution to establish employer responsibility to workers—appeared to pay off. The Court employed its 'epistolary jurisdiction', where it took notice of letters written to it, to widen the scope of the environmental pollution case (Dembowski, 2001). The use of this tactic by unions was deliberate, as a direct contestation of the Court's use of closure orders that disproportionately affected workers. A member of Nagarik Manch, who was advocating for workers said, 'we decided to evolve a new slogan, a new path, a new approach, to address the situation' (Mukul, 1997, p. 42). In some ways, this case represents a reversal of the general trend that Sellers (1997) traces, where modern environmentalism has grown out of the study of workplace hazard; in India, in the 1990s, occupational health inserted itself and grew out of concern for the effects of pollution on health.

A year after receiving the letter, the Supreme Court ordered the West Bengal Pollution Control Board to contact Nagarik Manch to identify workers suffering from occupational illnesses in West Bengal. Nagarik Manch submitted a report to the Supreme Court identifying a large range of occupational illnesses that plagued workers. The stone crushing unit, which manufactured quartz powder for glass manufacturers, was a specific target: it had no dust control measures in place, and the village at large had symptoms of silicosis. The Pollution Board made further inquiries and confirmed that ‘a number of workers have died due to environmental pollution […] and some labourers are still suffering from occupational diseases’ (quoted in Mukul, 1997, p. 38). It is here that we start to see a clear intermingling of two related issues in the state and judicial discourse—of dust pollution affecting residents and occupational disease affecting workers, where both are seen alternately as the cause of death from inhaling hazardous dust. The report also stated that workers feared losing their jobs for complaining about physical disability: ‘till date, there is not a single instance of compensation received by any worker through the normal course’ (quoted in Dutta, 1995).

Mukul’s (1997) and Ghatak’s (2001) accounts are among the only reports available of how the case developed and was argued. This documentation alleges that the West Bengal government played a role in obfuscating disease and shielding employers: the government claimed that the offending manufacturer was not registered, found it to be closed upon inspection, and, as no local hospital had any record of silicosis, declared that they were unable to do anything further. Local politicians, even those of the Communist Party of India–Marxist, claimed that the workers were ‘anti-development’ and that the deaths were caused by alcoholism and tuberculosis (Ghatak, 2001). In 1996, the Supreme Court ordered

the West Bengal government to provide 'all possible help' to the workmen in the quartz powder factory and ordered the industry to respond in court. The factory owners denied that the workers had silicosis, introducing evidence from a doctor of their own that stated that two victims were in good respiratory health and in no need of medication (Ghatak, 2001). However, the Labour Commissioner discovered that 16 deceased workers were found to have worked at the quartz factory (Mukul, 1997). All of surviving family members reported that they had suffered breathing difficulties before death that tuberculosis treatment had not cured, and a local doctor confirmed that he believed a woman in his care suffered of silicosis. Several workers currently employed in the factory were also found to have the same illness.

After this, the Supreme Court ordered the Labour Commissioner to assess compensation due. Here, the Workers' Compensation Act became a bone of contention, as it had in South Africa and in Britain in previous times, as it provided no method of calculating compensation for occupational diseases. Mukul (1997) writes that Nagarik Manch attempted to devise a calculus of compensation, with reference to the average age of the worker, their dependents, yearly income, and inflation. They arrived at a figure close to $4,000 per worker. The Government of West Bengal contested this, arguing that compensation should be capped at $700.[12] The Supreme Court eventually ordered that factory owners ought to pay $1,500 to each worker, with an interest rate of 12 per cent per annum if the amount were left unpaid.

This was a landmark judgment for labour rights in India—it was the first time that the Court had extended the 'polluter pays' principle (Bhullar, 2019) to include workers

[12] I am using the exchange rate at the time of writing for convenience. The amount suggested by Nagarik Manch was Rs 300,000 and the amount by the Government of West Bengal was Rs. 50,000.

suffering from occupational diseases, as well as the first time that compensation had been paid to workers in the informal sector, not on company payroll. But for years after the order, there was no indication that the owners would pay. A Labour Commissioner stated in an interview: ‘It is necessary to consider whether it is possible to implement such judgments. The employer’s capacity to pay should be taken care of. In the informal sector, it is difficult to pay Rs one lakh in one go.’ (quoted in Mukul, 1997, p. 41) The Labour Secretary said, bluntly: ‘it is better to work for twenty years and die afterwards from occupational diseases, than to die of hunger due to the closure of a factory in the name of pollution and hazards’ (quoted in Ghatak, 2001, p. 8).

Ghatak’s (2001) report details the actions of the factory owners after compensation was awarded: clearly, paying the compensation sum was not worth the profit margin the production process earned them. As soon as compensation was awarded, they were keen to sell the enterprise and they handed all assets to the Labour Commissioner. The owner’s legal counsel claimed that there was simply no money to pay compensation with; Nagarik Mancha were forced to conduct investigations on their own to ascertain what their personal assets might be. The petitioners presented in court that one identified owner had several personal and industrial properties that ought to be attached and sold to pay compensation. As a result of this pressure and consolidated activity, in 2001, ten years after the first death of a worker from silicosis in the quartz factory, the first instalment of compensation was paid.

### ‘The Missing Employer’: Silicosis as a Human Rights Violation

In 2003, the stone quarry workers of Lal Kuan featured prominently for the second time in an expansive PIL before the Supreme Court that is ongoing to this day. This time, however,

they figured as victims of a human rights violation and not as victims of pollution; and this time, the Supreme Court would find that the state was responsible for compensating them, and not their employers.

Aid workers in Lal Kuan in the 1990s discovered a high rate of tuberculosis among the quarrying community, and, through conversations with medical experts, began to suspect that the epidemic was instead one of silicosis (Azad, 2006). It was then that they formed an organization, the People's Rights and Social Research Centre (PRASAR), to work for the stone quarriers of Lal Kuan. Many in the area had symptoms of silicosis from past work in the mechanical stone crushing units that had now closed as a result of the Supreme Court order shuttering the industry. Several workers had relocated to a neighbouring State to continue crushing stone; others continued manual stone crushing (Krishna, 2004). Most were migrant workers, living and labouring in anonymity:

> They are being used as another raw material in all this process of the product making for Country's growth, development and prosperity. It is worth mentioning here that these crushers had been shifted here after the Supreme Court's judgment with the intention to save the environment of Country's Capital. Nowhere does the judgment mention the safety and health of the workers. Which environment we are supposed to be saving at the cost of these people? (Azad and Mittal, 2006, p. 14)

PRASAR, while recognizing that it was the Supreme Court's order in a PIL that relocated industries and caused the spread of disease, decided to use PIL in order to claim compensation for workers. They attempted to lodge petitions with the government on these issues, but when this made little headway, they 'followed the example of the activists in the mid-1980s and brought their case to the Indian Supreme Court' in 2006 (Azad, 2007). Initiating *People's Rights and Social Research Centre (PRASAR) vs Union of India and Others,* alongside other NGOs and legal aid groups, their first demand was that the National

Human Rights Commission (NHRC) should ensure that the Ministry of Labour compensate those affected by silicosis. This marked a discernible shift from 1996 in the locus of claim-making: from demanding compensation from employers to demanding compensation from the state. This was not a surprising strategy, seeing as many industries responsible were the same ones closed by the Supreme Court in 1992—it had become impossible to demand compensation from them. Other relocated quarries operated on short-term licences, with workers brought in on contract and excluded from official payrolls, complicating the question of establishing workmen's compensation further (PRASAR, 2015).

The NHRC is a statutory public body that monitors human rights violations and reports on them to the government. It can inquire, on its own or on the basis of a petition, into any complaint on the violation of a human right or a public institution's negligence in preventing a violation; it can also intervene in proceedings involving human rights pending before a court. While it can make recommendations to the government and the judiciary, it has no powers of enforcement. In its functions, as Sinha (1998) notes, the NHRC relies on and maintains close ties with NGOs and government agencies, and is often subject to their pressure. When NGOs continued to lobby the NHRC on the question of silicosis, it became a co-petitioner in the case. The Supreme Court directed the NHRC to take up specific cases of those suffering from silicosis to ensure that they received medical relief and to facilitate compensation 'through the concerned authorities' to families of deceased workers. The Supreme Court also made the Central Pollution Board a party in the case; this demonstrates that despite the decisive turn to human rights in this case, the question of dust in the workplace continued to be construed as a pollution issue and not a labour issue or a health concern. Following this, NGOs and individuals wrote in notifying the NHRC of silicosis

deaths; the Commission also took *suo moto* cognizance of silicosis deaths reported in the media. In a review of these cases, the NHRC (2016) stated that its position was:

> Once the worker or other person is afflicted by silicosis, it becomes a constitutional obligation on the part of the Government to take appropriate measures for providing the necessary health care and rehabilitating the victims. The welfare of workers, especially those in the unorganized sector, should be given priority. (p. 10)

The NHRC clearly articulates here an understanding that posits the welfare of labour as a human rights issue. More importantly, it also put forth an expansive vision of state responsibility for silicosis; there is no mention of enforcing relevant labour law legislation.

Perhaps the most significant complaint that they received and acted on had to do with the documented deaths of 238 migrant workers from Madhya Pradesh, who died of silicosis that they contracted from labouring in quartz factories in Gujarat. This raised complex issues of which State authority was responsible for providing compensation. The Commission recommended that the State of origin provision benefits and the State of migration pay compensation to the families of identified workers who had died of silicosis. The NHRC argued that the State of Gujarat had failed to discharge their constitutional obligations to workers, as individuals with the right to life and health. It also said:

> The strict principles of evidence as are applicable to criminal trials are not applicable in the case of human rights violations when the life of poor labourer [sic] is at stake and his health is in jeopardy (quoted in Supreme Court order dated 4 May, 2016).

There was no response from the States for four years, and no payment appeared to have been made. The Gujarat government claimed that the Employees' State Insurance Corporation (ESIC) ought to bear responsibility instead, as the workers *should* have been

insured. Nidhi and Gupta (2016) wrote that this was ‘a classic example of state governments being insensitive to realities [sic] of poor workers falling victim to the so-called unorganised sector and unregulated organised sector.’

In 2016, the Supreme Court appeared to lose patience. It ordered that the dispute as to determining responsibility ought not to delay things further; in the interests of the kin of those who had died and their ‘orphan children’, the Gujarat government would have to pay compensation immediately. If ESIC were later held responsible, they could reimburse the State government. At this stage, after repeated non-appearances by the Chief of the Central Pollution Control Board, the court issued a warrant to secure his presence.

The Central Pollution Control Board proceeded to conduct investigations into the named quartz factories, finding that half of them had closed and that the others were non-compliant with environmental regulations. They recommended that the State Pollution Boards should investigate further and submit reports on their findings. At the next hearing, the government of Madhya Pradesh claimed it had acted to provide benefits to 334 victims of silicosis in two of its districts; but the NHRC and NGOs on the ground argued that these were forgeries, and in fact no steps had been taken. Two workers’ collectives, the Khedut Mazdoor Chetna Sangathan and the Silicosis Peedit Sangh, submitted counter-affidavits from affected workers who claimed that they had received no government support.

The Supreme Court ordered the District Legal Services Authority to ensure that benefits were made available. The Court also ordered the State to submit reports on their actions at the next set of hearings, saying: ‘we make it clear that we are not concerned with any policy framework of the State. The report is on the benefits which have actually been made

available to the victims' (23 August 2018, court order). In this way, the Court found itself playing two roles at the same time: that of ordering the pollution regulators to control for dust prevention, and tasking State authorities to take *immediate* action to compensate those suffering. It explicitly took the position of safeguarding the interests of identified victims who had failed to receive state compensation, rather than taking an interest in how the state would compensate and provide for future victims. Like Veena Das (1995b, p. 138) argued in the case of the Bhopal Gas Tragedy, this can be understood as an attempt by the court to 'maintain and signal [its] legitimacy in the face of massive human suffering'. The compensation paid to workers was 'ex gratia'—a payment made out of a moral rather than a legal obligation. State Human Rights Commissions were also able to persuade their governments to set aside money for ex gratia compensation (Rajasthan State Human Rights Commission, 2014). The NHRC stated in a submission to Parliament:

> The most disturbing feature of this problem is that in all cases, it is the poor labourer working in the unorganized sector who is the victim. The authorities have been evading the issue to provide assistance to the affected persons [sic]. This is a highly erroneous view as it contradicts the very spirit of human rights […] ((quoted in Rajasthan State Human Rights Commission, 2014, p. 18)

Yet, the most recent order passed in this case, in March 2019, marked a puzzling return to the language of environmentalism. This order framed dust in a similar vein as earlier *M.C. Mehta* petitions on pollution; the petitioners as well as the Central Pollution Control Board agreed that action had to be taken to close 'polluting units.' The Court ordered that all functioning and non-functioning polluting units must be closed, as they had 'led to serious health problems among the habitants of these areas', and that the respondent State governments 'who allowed such units to operate should be made to pay adequate compensation to the victims' (5 March 2019, court order).

And so, we find ourselves at the end of a rather strange journey: a petition that began as a result of Supreme Court-ordered industrial closures has ended in ordering more industrial closures. The *PRASAR* case has brought together the Supreme Court's strategies for dealing with occupational illness: ordering industrial closures to prevent pollution, and ordering individual compensation and welfare benefits to be paid to victims. And yet, despite the claims that PIL would decolonize law and make it more accessible, there remains little room for workers themselves in the legal process.

## Conclusion

This chapter has documented how the emergence of Public Interest Litigation in the 1980s offered an opportunity for Indian workers and their advocates to try a new route to obtain compensation for occupational disease and ill-health. I traced the shifting discourses by which silicosis was constructed as a 'public interest' issue before the Supreme Court of India. In the first case, workers suffering from silicosis were seen as citizens working in 'unfair' conditions that impinged on their freedoms; in the second, the identity of workers was collapsed with that of residents, understood to be victims of 'pollution' rather than workplace hazard; and in the final case, workers were constructed as victims of a human rights violation. This last understanding placed the responsibility of compensation on the state, as a moral and not a legal obligation.

The development of state responsibility has been influential in the shape that silicosis compensation has taken in India since. In 2013, the Rajasthan State government set aside a 'compensation fund' to allow workers with silicosis and their dependents to access benefits—also on an *ex gratia* basis. This system of compensating workers based on a government approved diagnosis is ongoing (Rajasthan State Human Rights Commission,

2014). The understanding that the state is responsible for the condition of those suffering from silicosis marks a significant shift from the story that Chapter Two outlined, where employers were held responsible by both the state and labour for compensating workers for industrial disease.

Veena Das (1995a), quoting Lyotard, writes:

> It is in the nature of a victim not to be able to prove that one has been done a wrong. A plaintiff is someone who has incurred damages and who disposes of the means to prove it. One becomes a victim if one loses these means (p. 174).

Following on from this, Bhuwania (2016, p. 154) argues that PIL has become a 'giant machine to turn plaintiffs into victims'. This account of PILs on silicosis has described how workers suffering from silicosis repeatedly figured as victims and not as plaintiffs; as people unable to prove that they had suffered legal harm, but whose suffering could simply not be ignored by the legal process. What were the specific dynamics—socially and economically—that allowed these workers to become victims rather than plaintiffs? How should we understand the development, from employer responsibility in labour law to state compensation in 'public interest' law? The next chapter will attempt to answer these questions by focusing on who is written out of labour law: the 'informal' worker.

# Chapter Four: Costing Compensation, Constructing the Informal

*There is a train that comes from Namibia and Malawi,*
*There is a train that comes from Zambia and Zimbabwe,*
*There is a train that comes from Angola and Mozambique,*
*From Lesotho, from Botswana, from Swaziland,*
*From all the hinterlands of Southern and Central Africa.*
*This train carries young and old, African men*
*Who are conscripted to come and work on contract*
*In the gold and mineral mines of Johannesburg*
*And its surrounding metropolis, sixteen hours or more a day*
*For almost no pay.*

—Hugh Masekala (1985)

In narrations known as *sefala* (plural *difela*), the Basotho people of southern Africa sing and speak of leaving their villages and going to the mines. These verses express the transformation of the Basotho from an agro-pastoralist community to one of migrant mine-workers: what drove them to leave, the journey on foot or on trains to the mines, what they find there, and what they hope for their return. Coplan's book, *In the Time of Cannibals* (1994) documents the life-world these songs communicate, offering us a rare glimpse of what gold mines in South Africa meant for the African men sent to labour in them.

In one song, the poet Malimatle speaks to his lover, saying that he is going to the Republic of South Africa, 'there where people live through unceasing work', to earn the money he needs to buy cattle for her bride-price. He narrates the journey he sees before him: the sun on the mountains in the morning, that he will be hired at 7 in the morning while the cows are milked at home. At 10 o' clock, he will be taken to the doctor who will put a metal stethoscope on his chest: he will breathe twice, and the doctor will praise his fitness, clearing him to labour in the mines (Coplan, 2006). The men leaving for the mines

know their health will be examined and boast of their prowess and ability to work at the same time as they express sadness at leaving, forced by economic compulsion. In other *difela*, poets sing of the cannibal as a metaphor for the mines: the earth that consumes miners in her belly, the 'boss boys' who are Black men recruited as team leaders, and the White miners who push them to exhaustion to secure higher pay (Coplan, 2006).

Peter Abraham's 1946 novel, *Mine Boy*, presents another account of the experiences of Black workers in the mines. Xuma, the protagonist, works as a team leader, and notices a man coughing. 'Xuma felt fear shooting through his body. The man in front of him was still a man. But the signs were there already' (1963, p. 151). Xuma asks if he has been to see the doctor, and the worker says no: 'I have worked it all out. We have a small farm and I owe a white man eight pounds. If I do not give it back to him, he will take the farm. And if he takes it, where will my wife and children go?' (p. 152). Paddy, his Irish supervisor is a sympathetic boss and asks the worker, 'Did not the man who hired you tell you that if you got the sickness of the chest money would be paid to you?' (p. 152). Xuma, too, cannot believe this but reassures the worker of Paddy's good intentions. Paddy encourages the worker to go to the doctor and speaks to the doctor prior to the examination. He takes the doctor's note and goes into the mine manager's office for what 'seemed like a long time' (p. 153), and comes out with the manager who 'grumbled about it being irregular but signed a piece of paper and gave it to Paddy' (p. 154). Xuma and Paddy collect the tuberculosis compensation—ten pounds and a month's wages—as well as a pass to prove that the worker is not deserting the mines.[13] They give it to the sick worker who smiles, happy to pay off his debt and go home.

[13] As Jackson (2007) notes, this compensation was forty pounds lower than what was legally mandated for tuberculosis.

These narrations provide a sense of the affective experience of Black subjugation in the mines: how Black workers understood the process of medical examination and of falling sick at the mines, the economic conditions that drove them to wage-labour, and their telling of their circumstances as stories of courage as well of despair. And through all this ‘ceaseless work’, ‘gold dust streamed upwards to make men wealthy and powerful’ (Abrahams, 1963, p. 151). The stories of the wealthy and powerful have endured, while the histories of Black mineworkers in the first half of the twentieth century is difficult to trace.[14]

What we know of their experience evokes the struggles of many Indian stone-carvers and miners today. The victims of silicosis from Madhya Pradesh, who claimed compensation in *PRASAR* vs *Union of India* (2006), were indigenous (*Adivasi*) workers, forced to labour in quartz-crushing factories as a result of drought. When there was no water in the wells and no rain, farming was impossible. People began to migrate to neighbouring States to work in mines and factories, returning with fatal lung disease. Several families have lost multiple members to the disease, and even when they have received compensation, the money received is spent on treating those alive but disabled by silicosis (Barnagarwala, 2019; Dutta, 2019). In the court cases of Chapter Three, we witnessed how compensation was negotiated for them much in the way Paddy negotiates it for the worker in *Mine Boy*: except in the place of a sympathetic White supervisor, there is a sympathetic non-governmental organization (NGO); and in the place of a disgruntled mine manager, there is a disgruntled state government.

[14] For contemporary work on the lives of Black mineworkers, see Ledwaba and Sadiki (2016) and Moodie (1994).

What might these historical parallels tell us about silicosis compensation today? The condition of legal exclusion that Black miners in South Africa endured might today be classified as 'informality'. By the informal, I mean the existence of work arrangements that do not map onto a stable employer and employee relationship (what is today called the Standard Employment Relationship). This relationship typically assumes that a worker labours full-time and indefinitely for a single employer, on the premises of that employer. Both Black workers in South Africa at the time that silicosis compensation was first developed, and many Indian workers in small mining and carving units today, are migrant labour dispossessed from their land, having almost no rights in law or in practice against their employers. Their informality is to be either outside the coverage of protective labour law or to have no ability to enforce labour law protections (Chang, 2009). As a result, Indian workers have utilized the instrument of Public Interest Litigation (PIL) to secure compensation, holding the state responsible as opposed to their employers. It is this fundamental shift that this account seeks to locate and explain.

This chapter develops two main arguments regarding informality that follow from Chapters Two and Three. The first is that silicosis compensation reflects an ongoing shifting relationship between capital, labour and the state on the question of reproducing the working class, within which the state mediates between diverse interests and claims. As silicosis benefits maintain sick workers and their families, the central question in developing compensation is: Who is responsible for compensating workers when they are dependent and ailing? This chapter traces how ideas of risk and responsibility were apportioned between employers and workers in advanced capitalist nations with the building of institutions of social insurance. While capital benefited from the welfare state's role in socially reproducing the working class (Ashiagbor et al., 2013), this compact was

always limited. It demonstrates that the welfare state generated its own forms of informality—whether that was of the migrant, the mother, the domestic worker or the Black worker.

The second argument focuses on how exclusion (or 'informality') is used in negotiations by the state and capital to selectively offer forms of security to workers depending on their ability to organize and leverage political power. Informality is thus produced by labour law and tacitly tolerated by both law and political institutions, rather than being a sector of work unwittingly 'left out' of or choosing to 'evade' law (Chen, 2012). This is demonstrated in Chapter Two, where the worker outside labour law haunted the compensation system: The Black worker denied silicosis compensation in South Africa, and workers in smaller industries in Britain (such as cutlery makers) unable to exert the pressure that coal miners could.

In the Indian context, there is an enduring link between the labour laws of the colonial and post-colonial period. The British colonial state developed two separate regimes of labour law. One aimed itself at plantation workers and indentured labourers, guaranteeing the absolute right of masters over workers and criminalizing breaches of employment contract. The other focused on ameliorating hazardous working conditions and long hours in large industrial establishments, particularly in textile mills. I trace the genesis of modern 'informality' in this colonial creation of 'dual' labour law regimes. I also show that in the post-colonial period, the Indian state had a vested interest in retaining this vision of labour law to promote state-controlled industrialization. It therefore continued to rely on colonial labour laws that remained of no use to most of its workforce. However, as the state reoriented itself towards marketization in the face of international and domestic capitalist

pressure, it facilitated the increasing informalization of its workforce in the 1980s and 1990s. It did this by largely attacking formal sector worker protections, entrenching informalization as a mode of capital accumulation (Agarwala, 2018).

The final section of this chapter considers the PILs of Chapter Three, asking how we can understand the turn to state compensation and the use of this legal device. I argue that informal workers have responded to their exclusion from labour law by petitioning the government for welfare, demanding that the state take responsibility for meeting their needs. I show that this shift must be grounded in broader political and economic transformations that have established informalization as a 'necessary' part of capitalist production. In this strategy, Indian informal workers do not contest the informality of their working conditions or demand inclusion in formal sector labour laws, but leveraged their power as voters and citizens to hold the state responsible. In these cases, we can discern the outlines of a discursive shift, from workers' compensation as an amoral risk of production that employers must bear to state compensation as a moral response to 'human rights' violations suffered by workers. The ultimate end-point of this, in India, has been to disappear the worker in favour of the citizen, and to replace the employer with the state.

## Law's Invention of the Formal

Many labour lawyers writing today believe the field to be in deep crisis. This is partly a result of profound social and economic changes since the 1970s that have condemned modern labour laws — both as inimical to economic growth by imposing high costs on employers, and for failing to cover new decentralized forms of work that are heterogenous and outside labour law's protection, particularly those driven by digitization (Fudge, 2012). This crisis is also partly due to the decline in collective bargaining power in this time,

which has resulted in scholars revisiting the core assumptions of labour law and the role of trade unions, examining whether the conceptual core of labour law still holds (Davidov and Langille, 2011; Freedland and Kountouris, 2011).

The foundational principles of labour law are in crisis simply because the institutions of social citizenship that they were founded on are also in deep crisis. Labour law as we know it is embedded in the institutions of social insurance and welfare that emerged in the late nineteenth and early twentieth centuries in advanced capitalist nations. Industrial accident insurance was among the first of these to emerge; Ewald (2020) credits it with laying the foundation for the welfare state that followed. Workmen's compensation drew on the technology of insurance, where the risk of injury had come to be seen as a calculable inevitability. Insurance had, until this point, been largely a tool of trade and commerce, but now became a technique used by the state to pool and distribute risks within the social body of the nation (Cooper, 2020; Defert, 1991). Part of its appeal was the desire by capital and the state to neutralize the threat of the left-wing; Defert (1991, p. 213) argues that insurance was promoted by employers to 'outsmart the emerging modes of working-class organization: strike funds, community chests, associative movements'. In any case, despite early union suspicion, it was wildly successful: by the end of the nineteenth century, insurance became 'the form, the instrument, and the stakes of political and social struggles' (Ewald, 2020, p. 222).

With this logic of risk and social insurance in place, a whole new body of law that Ewald (2020) calls 'social law' developed. The historic post-Second World War compromise between capital and labour, generating the welfare state in advanced capitalist nations, extended this dramatically. These laws encompassed everything from road safety to

occupational health, workers' compensation to social security, pensions to healthcare (Cooper, 2020). However, this was only achieved in advanced capitalist nations, primarily in western Europe and in North America, where these policies were designed to prevent the sort of economic collapse of the 1930s that had so threatened the capitalist order (Harvey, 2005). This 'new world order' inaugurated what many on the Left continue to see as capitalism's golden age: some income was redistributed downwards and the role of the state was massively expanded (Abramovitz, 2014).

The welfare state took different forms, but Harvey (2005) argues that the key uniting principles of these projects were a focus on full employment, economic growth, and the welfare of citizens. They represented an acceptance of the idea that the state was mandated to intervene in market processes to ensure these outcomes. The 1942 Beveridge Plan in Britain laid the roadmap for a universal welfare system, funded by taxes. In 1946, the French created a system of social insurance that was both contributory and universal (Cooper, 2020). In the United States of America (USA), following the New Deal, progressive and higher rates of tax on the wealthy allowed the state to finance public services, reducing poverty and creating greater income equality than ever before or since (Abramovitz, 2014). Japan, under USA oversight, built an extensive welfare system to oversee national reconstruction after the war (Harvey, 2005).

Modern labour law was the instrument by which this project guaranteed protections to the 'ideal-type' industrial worker (Defert, 1991). The linchpin of labour law was the Standard Employment Relationship (SER), upon which most social policy of the twentieth century was designed (Fudge, 2005). The SER assumed several things: that the employee worked full-time, that they typically only had one employer, that they worked in a

workplace provided by the employer, that there was an employment contract, and that they would continue to labour indefinitely and not for a predetermined duration of time or output. To Deakin *et al.*(2019), the SER was a social compromise much like workers' compensation: workers accepted subordination within the workplace in exchange for access to protection against labour market risks. The prevailing idea was that this was capitalism in its 'advanced' phase, or what would be known as 'development': high rates of economic growth accompanied by some redistribution and controls on capital. As Piketty (2014) observes, while many economists believed this was a general trend that would reproduce itself everywhere, the empirical reality was that these 'golden years' of economic growth were the exception and not the rule, and only a temporary response to the deep shocks of the Great Depression and the Second World War.

Moreover, these welfare measures were tied to a certain vision of the industrial worker: the white, male, full-time breadwinner, who 'contributed' to society and 'deserved' risk protection (Cooper, 2020). For most others, this social compact was limited and conditional. For one, it never integrated women into it as full citizens. In Britain, the law assumed that married women were dependents on their husbands; if they undertook paid work it was likely to be 'intermittent in nature' and therefore they had a reduced claim to unemployment or sickness benefits (Land, 1971). This clearly privileged workers in full-time, stable employment, and discriminated against women on the basis of marital status, assuming that married women were likelier to be economically secure.[15] Nelson (1990) argues that the USA welfare state was divided into two channels: one for industrial, white workers, and another for working-class widows and their children. The former drew from the tradition of welfare capitalism, while the latter was founded upon the structures of the

[15] As Land (1971) demonstrates, this completely ignored that the rates of married women in the British workforce rose year on year in the 1950s.

poor laws and charitable movements. Most welfare policy, she notes, assumes a 'lifetime of steady work for wages, which has neither been the practice nor the ideal for most women (of all races) nor the possibility for many men of color' (p. 127). The assumption that women tended not to work was clearly not true for most Black women who had high rates of employment in domestic work.

Further, the industrial workforce was overwhelmingly White, and Black workers were often denied industrial jobs; as we saw in South Africa, unions that controlled 'skilled' work frequently excluded Black workers. Domestic workers, industrial outworkers on piece-rate, and agricultural workers were also long excluded from labour laws in many countries—historically, all are occupations with a disproportionate number of Black, women, and immigrant workers (Harrison, 1993; Nelson, 1990). Self-employment and casual work have long been characteristic of dock-working, construction, and other seasonal trades not encompassed by labour law's focus on the full-time worker (Fredman, 1997). As much as the welfare state created a measure of distributional equality, it also served to stratify the working classes, creating inequality between Black and White communities, men and women, those in full-time employment and those outside it (Quadagno, 1994). The welfare state and its mechanisms of social insurance produced conditions that excluded these workers, creating what is now increasingly called the 'informal' sector. Foucault (2002), in an interview published posthumously, said:

> we can say that certain phenomena of marginalization are linked to factors of separation between an "insured" population and an "exposed" population. […] Our systems of social coverage impose a determined way of life that subjugates individuals. As a result, all persons or groups who, for one reason or another, cannot or do not want to accede to this way of life find themselves marginalized by the very game of the institutions. (p. 369)

Foucault (2002, 1988), and his doctoral student Ewald (2020), argue that the welfare state made individuals dependent on the state, forcing them to conform to specific family, work and residence structures to become legitimate recipients of its largesse. These tendencies of dependency and marginalization were intrinsic to the operation of the post-war welfare state.

This 'post-war' consensus that produced the welfare state rapidly unravelled in the 1970s. As is widely recognized, the neoliberal turn promoted state and corporate disinvestment from social welfare, the active recruitment of women into the workforce, and the deregulation of enterprise and privatization (Fraser, 2013; Harvey, 2005). This resulted in widening income inequality and the proliferation of 'informal' jobs that lie outside the SER. This precipitated the crises of the welfare state and of labour law that preoccupy many scholars today. Enterprises have vertically fragmented, resulting in long supply chains of production and distribution, making it difficult to determine accountability for risk within the scope of existing law. Capital's clarion call became 'labour flexibility', and international financial institutions began to push for the dismantling of labour law protections which were accused of inhibiting economic growth (Fudge, 2011). This has led to what Saxton and Stuesse (2018) term as 'workers' decompensation'. The labour fragmentation that occurred at nearly all levels has resulted in the rise of 'precarious' work in advanced capitalist nations: jobs without regular or fixed wages, benefits, or protections. The imperatives of capital accumulation has created a newly insecure workforce and the erosion of the benefits of a once-protected class of workers.

But the belief that informality is a new, rather than increasing, phenomenon misunderstands the history of capitalist production. Informal work is now configured in

new ways with the rise of the service economy, digitization, and the ‘two income household’, which have created an array of working arrangements that trouble the central assumptions of the SER. However, elements of informality have always been present in advanced capitalist societies. Indeed, scholars increasingly argue that modern capitalism has often built on pre-existing extra-capitalist relations to generate profit (Mollona, 2003; Tsing, 2009). Since the foundations of the welfare state were in accident and disease insurance, it is instructive to revisit its history to find traces of the informal. In Chapter Two, the history of silicosis compensation in both South Africa and Britain demonstrated how tenuous the compact of social insurance always was. In the South African context, silicosis compensation was essentially only made possible because it excluded Black workers, who made up over 90 per cent of the workers in gold mines. Their lives and work histories were unrecorded; when ill, they were sent back to the countryside and did not return. When Black workers were compensated for poor health, it was for an infectious disease (tuberculosis) that White miners feared contracting. If capital had been made to bear the full costs of disease, it would have been unlikely to survive without a dramatic rise in the price of gold. In Britain, what we know of silicosis compensation remains largely focused on big, vertically integrated industries, like mining. We know little of what became of the workers in potteries or in the cutlery or sandstone industries—all industries with a high rate of subcontracting, artisanal forms of production, differentiated between workers who owned their tools and others who only owned their labour and worked for the former. Marx (1887) wrote of the potteries of Staffordshire as an industry upon which there was ‘no legal limit to exploitation’, referring to the pulmonary diseases the workers faced. But even after legal limits were devised, worker’s compensation was difficult to enforce in these industries: where small employers found the costs of regulation too high to bear, they closed down, made layoffs, or claimed they were not responsible (Taylor, 1988). In many

industries, workers whom we would today call ‘precarious’, ‘vulnerable’, or ‘atypical’ have always served as a labour pool that capital has drawn on to cut costs. Informal workers have always existed and are a structural feature of capital accumulation (Agarwala, 2013). Or, as Sanyal (2007) put it:

> The informal sector is the product of capitalist development, of its primitive accumulation, the modern sector in the course of its own arising creates the space of the dispossessed, the space in which the informal activities take place. In this representation, underdevelopment is the product of development rather than its initial condition. (p. 206)

The informal was, therefore, not a condition that would ‘disappear’ with capitalist development.

As a result, the ‘Fordist’ social compact never emerged in the rest of the world. To begin with, welfare state regimes in advanced capitalist nations were partly financed by the continuing expropriation of the ‘Global South’ through predatory regimes of trade and financing (Bhambra and Holmwood, 2018; Fraser, 2014). The Global South never experienced the post-war compact that entrenched formalization of labour or access to protections, and ‘informal’ work has therefore been the norm in these countries rather than the exception (Ashiagbor, 2019). The ‘informal’ was first conceptualized in order to describe labour markets that did not map onto the experience of advanced capitalist nations; Keith Hart (1990) wrote that it indicated ‘the gap between my experience in [Accra, Ghana] and anything my English education had taught me before’ (p. 158). This dissonance is also visible in the legal systems of the Global South. How ought we to understand the continuing existence of labour laws that were ‘transplanted’ to these countries from the Global North, when they often do not reflect the conditions of workers in these countries?

## The Worker Outside Indian Labour Law

British colonial labour law developed two contradictory regimes of regulation dealing with employment. On the one hand, workers in tea plantations laboured under conditions of duress and could be imprisoned for breach of contract (Mohapatra, 2004); many workers like artisans, cash croppers and domestic workers, could also be punished for breach of contract (Kerr, 2004); indentured labour was legal in India well into the twentieth century; and the state had no interest in rural labour, where slavery and debt bondage were rife (Roy and Swamy, 2016). On the other hand, the colonial regime was particularly concerned with reforming working conditions within factories, and passed a raft of legislation in the late nineteenth century focusing on working conditions in large industrial establishments.

Mohapatra (2005) sees in this divided regulation the beginnings of modern 'informality' in labour law. Act XIII of 1859 was one of the first laws in colonial India explicitly dealing with employment disputes (Kerr, 2004). Akin to the English Master and Servant Acts, it criminalized breach of employment contracts, particularly after advance payment. Mohapatra (2005) argues that when employers petitioned the colonial state to criminalize breach of contract, this was not to bring the state in to regulate private contract; rather 'the appeal to public authority was precisely to very clearly acknowledge the private nature of the contract and the absolute power the masters held in determining its terms' (p. 15). This created a system where private employers had unfettered power to discipline workers; planters could even arrest workers for desertion without a warrant (Mohapatra, 2004). The law created an employment relationship that depended on the ultimate authority of the state to prosecute labour, but privatized labour welfare and regulation. In this way, informality is less of a sphere without law, but more an outcome of state action dating back to nineteenth-century colonial labour law.

The informal gains its meaning in opposition to the ‘formal’. Colonial law bifurcated the economy into one sector where capitalists had complete control, and another where the state played a regulatory role (Joshi, 2008). Labour law was first introduced in India to regulate urban factories, particularly textile mills. It came into being as a result of diverse pressures. Reformists voiced concerns repeatedly in Britain on working conditions in the colonies. Mary Carpenter, an English social reformer, campaigned vigorously in Britain for the introduction of a Factory Act in India to ameliorate working conditions in Bombay’s mills (Sarkar, 2018). A question was then posed in the House of Commons in 1875, asking if the Secretary of State was aware that women and children worked sixteen hours a day in India and whether India would enact legislation (as Britain by that time had) to prevent it (quoted in Roy and Swamy, 2016). Strike action in Indian textile mills had become frequent, and the growing strength of communist parties posed a concern to mill owners, liberal parties and the colonial state (Anderson, 1993). There were also economic factors: pressure mounted from the Lancashire cotton lobby, threatened by the low price of labour in India, who demanded that worker protections in India be increased to raise production costs (Sarkar, 2018).

The first Factory Act was therefore passed in 1891 by the British Indian government, and was amended eight successive times by 1934. These changes progressively increased the scope of the Act (which initially defined a factory as an establishment employing over 100 workers, whittled down to ten by 1934), placed limits on working hours, and provided for holidays. The Factory Acts in this period were narrow, only regulating mills large enough to compete on the international market (Anderson, 1993). Further attempts were made to improve conditions—in 1923, a Workmen’s Compensation Act in the mould of the British law was passed. The member introducing the Bill stated: ‘we do not regard this

measure a philanthropic measure; on the contrary, we regard it a sound investment […] A sense of security always makes a man do better work' (quoted in DeSousa, 2010, p. 7). Under the 1934 Factories Act, employers had to take 'effective measures' to prevent the accumulation and inhalation of 'injurious' dusts and fumes.

The International Labour Organization (ILO) had been set up in the early twentieth century, and British India was a founding member. The emphasis on health and safety in Indian labour law came after the establishment of ILO principles; as discussed previously, the ILO hosted a conference in Johannesburg in 1930 that developed consensus on silica dust and its effects on workers. Scholars argue that India ratified conventions on health and safety largely to benefit British industry (Kaul, 1956; Rodgers, 2011). Sarkar (2018) observes that early legislation was preoccupied with women and children: 'its destined subjects were always those who were deemed unable to protect themselves' (p. 14–15). Similar concerns motivated the laws prohibiting women from underground mining (Khaitan, 2020). Factory workers and miners were discursively constituted as distinct labouring populations with protective legislation accorded them. However, enforcement was limited: most factories and mines were never inspected, fines were low, and measures dealing with worker health focused on infectious epidemics rather than chronic health issues (Lahiri-Dutt and MacIntyre, 2006; Roy and Swamy, 2016).

In the introduction of these policies, we witness the colonial state responding to competing pressures and interests: the Lancashire and Dundee manufacturers, who wanted to increase labour costs in India; other manufacturers dependent on cheap Indian labour; and reformists, international organizations and trade unions who believed working conditions had to be ameliorated. The result was a haphazard and fragmented labour policy that created lower labour standards in the colonies than in the metropole, but also only

developed standards in specific industries of interest within colonized territories. These dynamics are largely unchanged in modern Indian labour law.

At the end of British rule in 1947, the number of formal workers in India was at less than 6 per cent of the workforce (Ornati, 1955). Little has changed since: nearly 93 per cent of India's workers remain informally employed today (Agarwala, 2013). If labour law does 'take its purpose, form and content from the larger political economy from which it originates and operates' (Arthurs, 2011, p. 26), what accounts for the Indian state and economy retaining labour laws that do not apply to most of its workforce?

Hensman (2011) argues that there is a continuity between Indian labour law of the colonial and postcolonial period. Labour law of the postcolonial period has continued to strongly distinguish between workers in 'formal sector' employment, entitled to safe working conditions, higher wages, compensation for injury, and the ability to collectivize, and those unable to benefit from this. Independence from British rule did not result in fundamental changes in class structure or in law (Hensman, 2011). This is partly explained by the uneasy relationship that the post-colonial state had with the labour movement. As Chibber (2003) persuasively documents, while it had depended on the support of labour in anti-colonial agitations, it could not allow industrial conflict when attempting to build a nascent economy. It therefore took steps to demobilize the labour movement.

One way of doing this was by entrenching the division between 'formal' workers and 'informal' workers outside labour law. The state retained the colonial fragmentation of labour in drafting new legislation, limiting labour laws with reference to factors like the establishment's size (usually over 10–20 workers), the type of production, the employment relationship, the days worked in a year, etc (Cooney et al., 2014). For example, the

Factories Act continued to apply only to establishments more than ten or twenty workers, leaving a vast range of enterprises in the informal sector. New labour laws, such as the Employees' State Insurance Act (1948) and the Employees' Provident Fund Act (1952), placed similar restrictions on the enterprise's size. This cemented the division between a small protected class of workers, and those who could not access its benefits.

The other strategy of the postcolonial Indian state was to carve out a large role for itself in arbitrating capital-labour conflict. This was dramatically at odds with Western labour law of this period, which had moved from focusing on vulnerable workers (women and children) to promoting collective action in union-management conflict (Arthurs, 2011; Bogg et al., 2015; Kahn-Freund, 1983). While state intervention was always part of the constituting narrative of labour law (Langille, 2006) which saw itself as remedying the unequal bargaining power between workers and bosses, Indian labour law of this period was unique in its rejection of 'collective laissez-faire' between employers and labour, as well as a stealthy undermining of collective bargaining. While Indian labour law did recognize trade unions, what 'the new government gave to the labor movement with one hand, it took away with the other' (Chibber, 2003, p. 120). Unions could compel bargaining in limited circumstances, were required to give notice before strikes, and had little protection against employer coercion.

The government, by contrast, had extensive power in industrial relations. It could compel arbitration in public utilities and could declare any industry a public utility for six months, giving itself the power to compel any industry to arbitrate. This naturally benefited employers who could drag out negotiations (Chibber, 2003). The state could also restrict 'essential services' from strike action; decide if contractually employed workers could be

hired or fired; decide if large employers could lay off workers; and had to give permission before disputes could be adjudicated (Gopalakrishnan and Tortell, 2006). As Kennedy (1966, p. 48) observes, the laws reflected the idea that 'it was government's job to protect the interests of workers'.

Unions shared this conviction; Agarwala (2018) argues that organized labour acquiesced to this role of the state as labour believed that the government would have a democratic incentive to protect job security. Organized labour believed that with the progress of industrialization, informal work would disappear and formal sector employment would rapidly expand. This imagination of Indian labour law was built on the same 'English education' as Hart (1990) presumably received—if 'development' wasn't here now, it would be here soon. Arguably, Indian labour law of this period aimed itself at what it expected labour to become and not labour as it was.

The expected trajectory failed to materialize. As elsewhere, capital had a strong incentive to avoid state regulation and labour laws; in India, the state, which saw industrial growth as the national interest, sometimes tolerated this. While several leading Indian industrialists had proclaimed their commitment to state-led planning after the end of British rule, outlining their support for a planned economy in the famous Bombay Plan of 1944–45, Chibber (2003) demonstrates that Indian capitalist support for planning was limited. Capitalists wanted state subsidies for national industry, but fought the Indian state bitterly when it attempted to control investment flows. Harriss-White and Gooptu (2001) also argue that, as state fetters were placed on Indian capital during industrialization and not after, there were stronger incentives for capital to evade labour laws. Where organized

labour sought to enforce law, the state used its powers to side with industry. Vastly expanding the informal sector made these evasions of labour law and regulation possible.

'Informalization' took several forms. One was sub-contraction out into smaller enterprises outside labour law's scope, paralleling the 'vertical disintegration' of employers advanced capitalist countries are now witnessing (Collins, 1990; Prassl, 2015) . These workers have no large employer to bargain with and immediate contractors are often unable to meet the costs of labour regulation. This allows the end-buyer to cut costs across the supply chain, in an increasingly global strategy called supply chain capitalism (Tsing, 2009). Another common strategy is hiring workers on casual or short-term contracts, often called 'the informal within the formal', as contract and casual labour have become ubiquitous in formal sector firms (Harriss-White and Gooptu, 2001). Sometimes employers hire a 'labour contractor' to bring casual workers for a task. The last tactic employers use is a direct side-stepping of the law—fragmenting enterprises and hiring workers so workplaces fall just below thresholds of labour law applicability. The Report of the first National Commission on Labour (1969) found that small workshops regularly evaded the Factories Act by 'split[ting] a single workshop—sometimes by a sign in the middle of the shed—into two fictitious firms, each employing not more than ten workers' (Holmstrom, 1976, p. 13).

As a result, Sankaran (2010) characterizes Indian labour law as generating a 'multiplicity of statuses', within which permanently employed workers form the aristocracy of the workforce, while daily-wage and home-based workers are at the very bottom. In this way, the Indian state has maintained the colonial differentiation of labour law in the interests of capitalist gain. And, as we saw with the welfare state in advanced capitalist nations, informality is deeply conditioned by non-economic features. Supply

chains mobilize labour through the institutions of caste, gender and kinship, using these structures to circumvent union pressure and extract profits (Tsing, 2009)..

In the 1980s, with the global neoliberal turn, the Indian state reoriented its attitude to capital-labour relations. It utilized its privileged position in industrial relations to wage an attack on formal sector workers in general. Deakin *et al.* (2019) note that 'public enforcement of labour standards was scaled back, leaving unions which had become dependent on the state in an increasingly vulnerable position' (p. 248). There was a decline in worker bargaining power, with a sharp fall in the number of strikes and workers involved in them, alongside wage stagnation in the 1990s (Das et al., 2015). With state sanction and approval, capitalists aggressively pursued informalization as a strategy. The Supreme Court issued a series of decisions hollowing out labour law protections, at first without parliamentary changes to the law. It held there was no obligation on employers to hire contract workers on a permanent basis in *Steel Authority of India* v *National Union Water Front Workers* (2001), and that treating casual workers as workers with the right to permanent employment was to treat 'unequals as equals' in *Secretary, State of Karnataka & Ors* v. *Umadevi & Ors* (2006). It then held that there is no fundamental right to strike (*TK Rangarajan* v *Government of Tamil Nadu and Ors* [2003]). The judicial interpretation of labour law in this period was in favour of employers, allowing them to access 'a set of workers who can be terminated at will' (Das et al., 2015, p. 15).

The Supreme Court therefore inaugurated the 'informalization' of the Indian workforce. Following this, state governments used their powers to amend labour law. Thresholds of applicability were raised in many states—for example, Rajasthan allowed more workers to be laid off without state consultation; Maharashtra allowed more employers to employ

contract workers; and Gujarat disapplied most labour law in Special Economic Zones (Deakin and Halder, 2015; Jha, 2014; Majumder, 2017). Deakin *et al.* (2019) found frequent collusion between employers and labour inspectors, who frequently authorized lay-offs and allowed employers to relocate industries to cheaper areas. This explains why there was little resistance from employers when the Supreme Court ordered the industrial closures of Chapter Three—they could turn a much higher profit by relocating to areas where labour laws were less protectionist or to Special Economic Zones. Now, 58 per cent of all labour in the formal sector is informalised (Institute for Human Development, 2014).

And so, while informality has long incubated in labour law and the political economy, its contemporary transformations must be situated within shifting dynamics of capital accumulation and prevailing political ideologies. Informality proved a convenient tool in India to facilitate capital accumulation; labour law never addressed itself to the informal worker and is narrowing in its utility for formal sector workers.

Yet, this trajectory is complicated by the cases of Chapter Three. Singh (2008), after a review of anti-labour judgments made by the Supreme Court between 1990-2008, concluded despairingly, saying ‘The judiciary has abandoned the working class’ (p. 33). But if this was unilaterally the case, how can we explain the rising number of Public Interest Litigation (PIL) cases in the same period delivering ‘pro-labour’ judgments? To apply a Polanyian analysis, if the reigning logic was of the condoned dismantling of labour law, where might we find the counter-movements to this logic?

### The Dissolution of the Worker and the Employer

Ewald (2017), who wrote a landmark text on accident insurance and the welfare state, said:

> I have the feeling that we are living through a much more radical transformation at the moment than in May 1968 or even after the collapse of communism and the fall of the Berlin Wall. For 70 years we have commented and critiqued the order established after World War II. But this page is about to be turned, and a new world is opening up that we don't yet understand. We are confronted with the social question anew. The question of responsibility will be negotiated once more […]

The transformations in Chapter Three are, I argue, part of this new negotiation. The use of PIL by informal workers, within which occupational disease is framed as a human rights concern to be compensated by the state, is a recalibration of the locus of responsibility in our times. But these demands are not restricted to the courtroom—informal workers have begun to organize in many ways to offset the risks of marketization and a lack of workplace protection. Agarwala (2018, 2013) uses her empirical research on informal workers in India to argue that their struggles have decommodified their labour through the state, by claiming their rights as citizens instead of as workers: 'Indian informal workers are using their power as voters to demand state responsibility for their social consumption or reproductive needs (such as education, housing and healthcare)'. (2013, p. 15). In doing so, they are targeting claims away employers—who they may not know and have little power against—and towards the state. As informal workers do not work for consistent periods with one employer and cannot benefit from shop-floor unionism, she argues that they find state responsibility more viable.

Informal workers in India have made these demands in several ways. One has been to demand and institutionalize tripartite structures called 'Welfare Boards' in several sectors. The Welfare Boards guarantee healthcare and maternity benefits, and provide cash

transfers for accident-induced death or disability, expenses such as funerals, weddings and education for workers within specific industries. These have been set up in different States: for construction workers; for *beedi* makers (a rolled Indian cigarette); for manual workers in Tamil Nadu (a southern State); and head-loaders in Maharashtra (a western State). This strategy was employed by the Madhya Pradesh government in Chapter Three in setting up a Slate Pencil Workers' Welfare Board providing benefits not strictly related to silicosis.

Welfare Boards typically levy a tax on the industry in question, supplemented by worker contributions and government budgetary allocations (Karunakaran, 2019). It allows unions to certify a worker's informal status to allow access. The laws typically require that a worker has worked a certain number of days in the year within one industry to be eligible; this means that an informal worker must demonstrate that they are *primarily* a construction or manual worker, even if they sometimes undertake other work. Marshall (2019) argues that for head-loaders in Maharashtra, the Welfare Board has functioned as a route to formalization by bypassing the labour law system. This is what makes the operation of Welfare Boards unique, as they straddle the welfare functions of social security as well as the selective focus of labour law. They are not universal social security schemes and by relying on trade union certification, they draw trade unions into a new relationship with the state. Karunakaran (2019) finds that trade unions have found Welfare Boards to be a useful way to engage with informal workers, but more militant and organized unions have been obstructed by the establishment, which prefers dealing with NGOs that do not collectivize workers. This heavily state-mediated model, therefore, retains the power of the Indian state in industrial relations.

In this way, the state has become the target of bargaining action rather than employers; the capital-labour relation has been recast as a citizen-state relation. What explains the extraordinary uptick in these demands made by informal workers, and the state's acquiescence to them? Simply put, the state has an interest in provisioning for informal workers. For one, they are often dependent on them for electoral success. But more importantly, as Partha Chatterjee's work (2008, 2004) has shown, the postcolonial Indian state has developed a new orientation to these citizens. It cannot accept legal responsibility for them or their welfare, as this would be financially unfeasible and accord to the 'illegal' a legal status; doing so would necessarily entail heightened employer responsibility, which the state also cannot afford. But it cannot ignore their predicament either, as the developmentalist Indian state grounds its legitimacy in its 'public obligation to look after the poor and underprivileged' (Chatterjee, 2004, p. 40). The state, therefore, bolsters its legitimacy with workers and with capital by providing welfare to workers without ever accepting a legal responsibility to *always* do so, and without invoking employer responsibility in labour law. This is the sense in which silicosis compensation has been provisioned by the state: always *ex-gratia*. The Indian informal worker is thus not in a mutual relationship of rights with the state, but a population to whom benefits and services are provided (Chatterjee, 2008).

The use of the judiciary by informal workers has received inadequate attention from scholars of labour relations. This is surprising, seeing as construction workers' unions have used PIL to demand improvements in Welfare Board functioning (The Wire, 2017).This inattention is perhaps because PIL has largely been the instrument of civil society representing informal workers, rather than a tool of workers and unions themselves. But it is a route within which the general trend towards state responsibility has been developed.

As we saw by the end of Chapter Three, the new locus of responsibility for silicosis in India is the state, tasked with providing compensation, and the new plaintiff is not the worker, but the victim of a human rights violation.

This reconfiguring of responsibility is part of a more general development within labour law. Scholars are increasingly arguing that the normative core of labour rights are human rights, as worker rights ultimately are rooted in advancing dignity and freedom. In India, as elsewhere, in the face of neoliberal market reforms and globalization, social rights have become 'beacons of resistance' to this logic (Hepple, 2002). The assault on and weakened position of trade unions has caused a shift away from faith in collective; workers' advocates have called on human rights to do the job instead. Courts are now, therefore, relied upon to enforce labour protections in the name of individual dignity (Fudge, 2011; Routh, 2019). This partly explains how the Supreme Court of India could undertake to demolish many labour law protections at the same time as it upheld the limited rights of workers to state compensation.

In some respects, the use of rights is a strategy uniquely suited to informal workers who do not have a distinct employer and who face significant obstacles to workplace organizing. A vast range of PILs have been filed on labour issues in India: on minimum wages and equal pay (*People's Union for Democratic Rights* v *Union of India* [1982]), preventing asbestosis (*Consumer Education and Research Centre* v *Union of India* [1995]), the health and safety of thermal power plant workers (*Occupational Health and Safety Association* v *Union of India* [2005]), industrial dispute resolution (*Hospital Employees Union* v *Union of India* [2002]), and many more. In these cases, the Supreme Court has relied on human rights to defend labour rights (Gopalakrishnan, 2010). It has regularly used its power to

expand the scope of the case to far beyond the initial issue before it: a case can start, as we saw, with the condition of those suffering from silicosis in Delhi and quickly morph to consider silicosis everywhere.

It is important not to divorce this progressive jurisprudence from the Court's role in dismantling formal labour law protections at the same time. The reliance on human rights is a symptom of the broader paradigm shift towards capital deregulation. These progressive judgments should, therefore, be understood as a counter-movement on the part of both the Indian state and informal workers to blunt the excesses of market-driven capitalism on the most disadvantaged and retain legitimacy without instituting direct accountability from capital for worker welfare. In this sense, they are similar to the nineteenth-century labour laws that focused on ameliorating the worst working conditions but did not enable collective worker action. The workers suffering from silicosis represented in Chapter Three are excluded from formal sector labour law; this is the reason why their concerns could only be represented via PIL. The solution of holding the state accountable thus reconstitutes worker rights as welfare provisioning, and this context best explains the shift to human rights and state compensation for silicosis in the Indian context.

While PIL has been able to address some needs of informal workers and fill the lacuna of labour law, it is co-constitutive of the transformation that does not attempt to revive labour law but to do away with it. While Rittich (2019) warns that scholars risk fetishizing the formal in a way that produces adverse outcomes, it is unclear that we have fully comprehended the risks of normalizing the informal. For one, the reigning discourse that 'flexibility' is freedom has no room for labour protections. But more importantly, the Indian case offers us reason to be sceptical of the promise of human rights for informal

workers. The use of the public interest in these cases led to wildly different outcomes based on who was petitioning and whose interests the Court sought to defend. As Douzinas (2016) wrote, a rights claim 'is the beginning rather than the end of a dispute about the meaning of a right or its relative standing vis-à-vis conflicting rights'. Since rights are prescriptions about what ought to happen, one set of rights frequently has to be traded against another. In the case of *M.C. Mehta* vs *Union of India* (1996), was the right of residents to live in a pollution-free environment more important than the right of workers in polluting industries to their livelihood? Did workers have a right to be gainfully employed more important than their right to a safe workplace?

In these determinations, it is impossible to arrive at a solution without involving capital's responsibility to the environment and workers, and yet this was not attempted. Douzinas (2000) argues that what is tantalising about a rights-claim is its 'ideological ambiguity', but this very ambiguity can as easily allow for it to be used to undermine workers' claims just as easily as it can bolster them. In the silicosis cases, we found one discourse rapidly supplanted by another—first workers are bonded and working in unfair conditions; then they are victims of pollution; then they are victims of silicosis (Talib, 2010). These fickle understandings perhaps also led to the outcome in *PRASAR*, where advocacy for workers affected by silicosis and unable to claim compensation as a result of the Supreme Court-ordered industrial closures has now resulted in the Court ordering *more* closures.

The erasure of the worker, who is afforded little room to represent themselves, in PIL proceedings is worrying. This is the case in almost all cases to do with the urban and working poor (Bhan, 2016; Bhuwania, 2016). Even sympathetic scholars cannot help but

note that PIL has the overtones of an elite project (Dasgupta, 2008) and its critics charge it with being a 'mobilisation from the top' reminiscent of colonial law (D'Souza, 2005). What is valuable about labour law, that perhaps scholars have been too willing to dismiss, is its opportunity to allow workers to have their 'day in court'. This is arguably a worthy aim in and of itself, and might have prevented the unjust outcome where factories are closed and shut on a whim of the Court, leaving thousands sick and destitute. PIL has allowed the Court to construct itself as the defender of the vulnerable, rather than defending the right of workers as a class to collective agitation. The loose interpretations and judgments emerging from PIL might, now, serve as warning to social movements seeking to use the Supreme Court to advance their cause.

## Conclusion

In an era where we are negotiating anew the boundaries of responsibility for workers, these findings ought to make us consider the worth of formal labour law and what we stand to lose when we give up on it as a project. This thesis demonstrates the foundational relationship between state, capital and labour that underlies labour law, and does so through the lens of worker health and safety. It traces an evolution in responsibility for worker welfare. At one time, capital was able to limit its liability by arguing that worker injury was a regular inevitability; in colonial territories, where it extracted resources, it displaced even this liability. The era of heightened workers' protection in the post-war years supplemented this notion of employer responsibility with social security schemes in advanced capitalist nations.

This chapter emphasized that this era of protection was extremely limited—informality always posed a problem for labour law and always provided a source of profit extraction

for capital. The unravelling of the post-war compact made this clear in advanced capitalist nations. In India, where informality has always made up the bulk of the workforce, labour law allowed for the segmentation of the workforce into a very small protected section and a large unprotected one. The state allowed this state of affairs to continue, and, starting in the 1990s, began to dismantle the regime of protective labour law for formal workers, too. This account has been attentive to the competing interests between these different ways of thinking about the formal and the informal: capital has argued that it cannot be held responsible in the interests of unrestricted growth, and the state, reliant on capital's revenue and support, has come to agree with it.

And what of the worker? Informal workers have mobilized in new ways, demanding that their needs be taken care of in an increasingly harsh economic environment. In making these claims, the 'moral' has definitively re-entered the realm of labour jurisprudence. In some ways, this is a welcome shift from seeing worker injury as a regular, statistical problem. But the re-emergence of morality arguably places responsibility at the wrong doorstep, or at least at the doorstep of one who can choose indifference. The state has frequently chosen to be unresponsive to informal workers' demands (Agarwala, 2013) and as the ideological content of human rights are not fundamentally grounded in working-class welfare over other rights-claims, they can cut as easily against workers as they can in their favour. Moreover, in articulating state responsibility, informal workers and their advocates arguably give up on collective trade union action against employers. Rights claims do not demand redistribution or an end to income inequality; but realizing 'social rights' necessarily involves an interest in redistributive equality. And yet, state responsibility may well be a pragmatic 'solution': action against employers puts informal workers in extreme precarity and places unions in uphill battles against tiny, fragmented

employers. It remains to be seen whether the strategy of state accountability can do more for workers than the traditional alternatives.

# Conclusion

> *So, if someone says to us: 'Yes, but given the present conditions, what are we to do now?', we can only reply 'Do something about the "present conditions".' Oscar Wilde once said that it is an outrage for reformers to spend time asking what can be done to ease the lot of the poor, or to make the poor bear their conditions with greater dignity, when the only remedy is to abolish the condition of poverty itself.*
>
> —Stuart Hall et al.(1978)

This thesis has explored the ongoing negotiations between capital, labour and the state on the question of worker health, foregrounding law's role in apportioning responsibility for workers who lose their lives in processes of production. These issues have gained renewed urgency in the past months. India was subject to one of the world's harshest coronavirus lockdowns, what Barbara Harriss-White (2020) called a 'declaration of war on informal labour'. Millions of migrant workers were stranded in cities, unable to survive without work and temporarily prohibited from returning home. The media coverage documenting workers undertaking exhausting journeys, often on foot, to return home made the conditions informal labour endure more visible to the Indian public than ever before. Indeed, one outcome of COVID-19 is that it has arguably thrown inequality into sharper relief, making more visible the social disparities embedded within ill-health.

Soon after, several Indian states passed sweeping changes to labour laws. Some of these allowed for the working day to be lengthened; dismantled guaranteed health and safety measures; did away with equal pay for equal work; halted social security benefits; and froze the entire machinery of industrial disputes, factory inspections and collective bargaining (Ram, 2020). The justification was that the pandemic had interrupted productivity, and

these were necessary measures to get industry 'back on its feet'. As this thesis chronicled, worker lives are, as ever, collateral damage.

This broader assault on formal and informal workers and the increasing irrelevance of Indian labour law are phenomena this thesis has explored, by focusing on the specific case study of silicosis compensation. The history of silicosis compensation demonstrates the long roots of formality and informality in capitalist production and its legal systems, as well as how compensation for workplace disease developed in response to contestations between state, capital and labour. The fragmentation of protective labour law into the 'formal' and the 'informal' has been a mechanism limiting the costs of capital at the heart of labour law regimes from their very origin.

The dynamics present in the colonial formation of silicosis compensation allowed for the contemporary reconfiguration of responsibility from the employer to the state in India. As Rittich (2005, p. 527) argues, analysing colonial practices allows us to 'uncover continuities between older and newer forms of work', and indeed, between older and newer legal systems. In Chapter Two, I traced the beginnings of silicosis compensation in the gold mines of South Africa. I followed how employers' compensation was the outcome of intense struggle, emphasizing that the architecture of silicosis compensation always depended upon exclusion and the construction of an 'ideal type' worker. In South Africa, silicosis compensation for White workers built on the systemic exclusion of Black workers; and in Britain, several industries were outside the scope of regulation as a result of the mode of production. Industries such as potteries and cutlery making were fragmented and unable to leverage political power; they were 'informal'. In both cases, we see how 'compensation' was a limited project.

In Chapter Three, I turned to the development of state compensation for silicosis in India. I examined several key cases before the Supreme Court of India, all of which are Public Interest Litigation (PIL) cases. Several cases that feature in this chapter have never been analysed in prior academic literature; in them, I trace how worker health and safety was subject to a series of shifting discourses before the Court. The victim of silicosis was variably constructed as a victim of unfair working conditions, of air pollution, and finally of a human rights violation for which the state bore responsibility. As a result of these changes, silicosis compensation was finally constructed as a moral obligation as opposed to a labour law violation.

In Chapter Four, I excavated the parallels between the systems of state and employer-led compensation described in Chapters Two and Three, through the concept of informality. This thesis showed how informality has been at the centre of labour law, and a tool that has been variably used by the state and capital to fragment the workforce, limit liability, and promote capital accumulation. In this sense, informality is not a new phenomenon or that of the colonized 'Other', but a structural feature of capitalist production. I situated the contemporary appearance of informality and the crisis of labour law within its broader political economy. In India, the prevailing political ideology since the 1990s has claimed that labour laws are costly, ineffective and promote unemployment, and this has facilitated the dismantling of labour law regimes. In this, as Mollona (2005, p. 527) notes, the informal economy has remained 'an ideological space for the cheap reproduction of labour in the interests of capital.'

The emergence, therefore, of two parallel systems of compensation in India—one of labour law, and the other of state compensation—tracks alongside changes in political economy. Informal workers in India have leveraged their power as citizens and voters to demand that the state compensate them, and have used PIL to do so. The effect of this, I argue, has been to dissolve the social contract between labour, state and capital in labour law by absenting employers of accountability for workplace safety. This serves as an example of a new negotiation on the boundaries of responsibility for worker health, and the turn to human rights in labour law scholarship may anticipate similar developments elsewhere.

This thesis in many ways raises more questions than it answers. The trajectory to state compensation is the path less well-trodden; by contrast, in South Africa, the country's most far-reaching class-action lawsuit was launched in 2016 against 33 gold mining companies, with an estimated 15,000 claimants. These workers and their dependents claimed compensation for silicosis, tuberculosis, and the costs of care from the corporations that had profited off their lives and labour (Ledwaba and Sadiki, 2016). The emergence of class-action litigation in South Africa marks a sharp distinction from the Indian experience, giving rise to new comparative research questions. What might the differences be in workers' experiences of employer and state compensation? Does a class-action settlement offer a type of legitimacy that state compensation does not? What are the differing ways in which workers narrativize and represent their suffering to secure either employer or state compensation? What structural dynamics allow for one route to be more available to workers than another? Which form acts as a check on industry, and which delivers more effective outcomes for workers?

More importantly, the voices of workers themselves has remained outside the scope of this study. It is important to understand how workers experience the state compensation process. How are workers diagnosed with silicosis, and how do communities live with disease? How do workers understand compensation, and what does it mean to them and their families? Simultaneously, how has silicosis as a disease become legible to the state? How do communities respond to and leverage this? Do workers and their dependents, when engaging with state authority, feel the need to make their suffering visible to obtain relief? What might this tell us about how workers perceive the state? Does the government's conception of silicosis interact with the complex social realities—poverty, landlessness, drought, indigeneity, malnutrition—that give rise to it? These are questions I hope to go on to explore in the course of a DPhil, where I plan to conduct engaged ethnographic research alongside stone-carving and mining communities in India negotiating the state compensation system.

The recent attack on worker rights in India has made it all the more essential to deepen our understanding of informal work and contemporary class relations beyond how marginalized workers are constructed by the state and represented in the courtroom. What is necessary is a textured understanding of how communities facing exploitation resist subjugation and articulate demands for justice in their everyday lives.

# Bibliography

Abrahams, P., 1963. *Mine Boy*. Heinemann Educational Books Ltd, London.
Abramovitz, M., 2014. Economic crises, neoliberalism, and the US welfare state: trends, outcomes and political struggle, in: Noble, C., Strauss, H., Littlechild, B. (Eds.), *Global Social Work: Crossing Borders, Blurring Boundaries*. Sydney University Press, Sydney, pp. 225–240.
Agarwala, R., 2018. The Development of Labor under Contemporary Capitalism. *Sociol. Dev*. 4, 239–260.
Agarwala, R., 2013. *Informal Labor, Formal Politics, and Dignified Discontent in India.* Cambridge University Press, Delhi.
Anderson, M., 1993. Work Construed: The Ideological Origins of Labour Law in British India to 1918, in: Robb, P. (Ed.), *Dalit Movements and the Meanings of Labour in India.* Oxford University Press, Delhi, pp. 87–120.
Appiah, K.A., 2020. The Case for Capitalizing the B in Black. *The Atlantic*. URL https://www.theatlantic.com/ideas/archive/2020/06/time-to-capitalize-blackand-white/613159/ (accessed 9.9.20).
Arthurs, H., 2011. Labour Law after Labour. *Comp. Res. Law Polit. Econ. Research* Report No 15/2011.
Ashiagbor, D., 2019. Introduction: Narratives of Informality and Development, in: Ashiagbor, D. (Ed.), *Re-Imagining Labour Law for Development: Informal Work in the Global North and South.* Hart Publishing, Oxford, pp. 1–18.
Ashiagbor, D., Kotiswaran, P., Perry-Kessaris, A., 2013. Introduction: Moving Towards an Economic Sociology of Law. *J. Law Soc*. 40, 1–6.
Azad, S.A., 2007. PRASAR's Fight for Rights of Delhi's Silicosis Sufferers: Grassroot organization improves lives of former stone-crushers (No. Case Study No 9), *Artisanal and Small-Scale Mining in Asia-Pacific Case Study Series*. Artisanal and Small-Scale Mining in Asia-Pacific.
Azad, S.A., 2006. Silicosis Amongst the Quarry Workers of Lal Kuan. *Revolut. Democr.* 12.
Azad, S.A., Mittal, A., 2006. *The Stone Quarrying Industry around Delhi — Impact on Workers and the Environment.* People's Rights and Social Resource Centre, New Delhi.
Baldasseroni, A., Carnavale, F., 2017. The Genesis and Development of the Scientific Concept of Pulmonary Silicosis during the Nineteenth Century, in*: Silicosis: A World History.* Johns Hopkins University Press, Baltimore, Maryland.
Barnagarwala, T., 2019. Battling silicosis, Ratlam's tribals say "no one comes here for votes." *Indian Express.*
Bartrip, P.W.J., 1987. *Workmen's Compensation in Twentieth Century Britain: Law, History and Social Policy.* Aldershot, Avebury.
Baviskar, A., 2012. Public interest and private compromises: The politics of environmental negotiation in Delhi, India, in: Eckert, J., Donahue, B., Strümpell, C., Biner, Z.O. (Eds.), *Law Against the State: Ethnographic Forays into Law's Transformations.* Cambridge University Press, Cambridge, pp. 171–201.
Baviskar, A., 2011. Cows, cars and cycle-rickshaws: Bourgeois environmentalism and hte battle for Delhi's streets, in: Baviskar, A., Ray, R. (Eds.), *Elite and Everyman: The Cultural Politics of the Indian Middle Classes.* Routledge Books, New Delhi, pp. 391–418.

Baviskar, A., 2008. Contract Killings: Silicosis among Adivasi Migrant Workers. *Econ. Polit. Wkly*. 43, 8–10.
Baviskar, A., Sinha, S., Philip, K., 2015. Rethinking Indian Environmentalism, in: Bauer, J.R. (Ed.), *Forging Environmentalism: Justice, Livelihood and Contested Environments.* Routledge Books, London, pp. 189–256.
Baxi, U., 2006. Access to Justice in a Globalized Economy. *Combat Law* 6, 57–64.
Baxi, U., 1985. Taking Suffering Seriously: Social Action Litigation in the Supreme Court of India. *Third World Leg. Stud.* 4, 107–132.
Bhagia, L.J., 2008. Non-occupational exposure to silica dust in vicinity of slate pencil industry, India. *Environ. Monit. Assess*. 151, 477. https://doi.org/10.1007/s10661-008-0290-x
Bhambra, G.K., Holmwood, J., 2018. Colonialism, postcolonialism and the liberal welfare state. *New Polit. Econ*. 23, 574–87.
Bhan, G., 2016. *In the Public's Interest: Evictions, Citizenship and Inequality in Contemporary Delhi.* Orient Blackswan, New Delhi.
Bhatia, G., 2019a. Natural Justice at the Bar of the Supreme Court. *Indian Const. Law Philos.* URL https://indconlawphil.wordpress.com/2019/11/05/natural-justice-at-the-bar-of-the-supreme-court/
Bhatia, G., 2019b. The Lawyers' Collective Order and the Rise of the Fourth-Phase PIL. *Indian Const. Law Philos.* URL https://indconlawphil.wordpress.com/2019/05/08/the-lawyers-collective-order-and-the-rise-of-fourth-phase-pil/
Bhatia, G., 2017. *The Freedom to Work: PUDR vs. Union of India and the Meaning of "Forced Labour" Under the Indian Constitution.*
Bhattacharyya, G., 2018. *Rethinking Racial Capitalism: Questions of Reproduction and Survival.* Rowman and Littlefield, London.
Bhullar, L., 2019. The Polluter Pays Principle: Scope and Limits of Judicial Decisions, in: Ghosh, S. (Ed.), *Indian Environmental Law: Key Concepts and Principles.* Orient Blackswan, New Delhi.
Bhushan, P., 2004. Supreme Court and PIL: Changing Perspectives under Liberalisation. *Econ. Polit. Wkly.* 39, 1770–74.
Bhuwania, A., 2018. The Case that Felled a City: Examining the Politics of Indian Public Interest Litigation through One Case. *South Asia Multidiscip. Acad. J.* https://doi.org/10.4000/samaj.4469
Bhuwania, A., 2016. *Courting the People: Public Interest Litigation in Post-Emergency India*. Cambridge University Press, Cambridge.
Bloor, M., 2002. No Longer Dying for a Living: Collective Responses to Injury Risks in South Wales Mining Communities, 1900–47. *Sociology* 36, 89–105.
Bloor, M., 2000. The South Wales Miners Federation, Miners' Lung and the Instrumental Use of Expertise, 1900–1950. *Soc. Stud. Sci*. 30, 125–140.
Bogg, A., Costello, C., Davies, A., Prassl, J., 2015. Introduction: Exploring Autonomy, in: Bogg, A., Costello, C., Davies, A., Prassl, J. (Eds.), *The Autonomy of Labour Law.* Hart Publishing, London, pp. 1–26.
Bowden, S., Tweedale, G., 2002. Poisoned by the Fluff: Compensation and Litigation for Byssinosis in the Lancashire Cotton Industry. *J. Law Soc*. 29, 560–579.
Braun, L., 2014. *Breathing Race Into the Machine: The Surprising Career of the Spirometer from Plantation to Genetics.* University of Minnesota Press, Minneapolis.
Breckenridge, K.D., 2015. Conspicuous disease: The surveillance of silicosis in South Africa, 1910–1970. *Am. J. Ind. Med.* 58, 15–22. https://doi.org/10.1002/ajim.22505
Bronstein, J.L., 2008. *Caught in the Machinery: Workplace Accidents and Injured Workers in Nineteenth-century Britain.* Stanford University Press.

Bufton, M.W., Melling, J., 2005a. “A Mere Matter of Rock”: Organised Labour, Scientific Evidence and British Government Schemes for Compensation of Silicosis and Pneumoconiosis among Coalminers, 1926–1940’. *Med. Hist.* 49, 155–178.
Bufton, M.W., Melling, J., 2005b. Coming Up for Air: Experts, Employers, and Workers in Campaigns to Compensate Silicosis Sufferers in Britain, 1918–1939. *Soc. Hist. Med.* 18, 63–86. https://doi.org/10.1093/sochis/hki007
Burke, G., 1985. Disease, Labour Migration and Technological Change: The Case of the Cornish Miners, in: Weindling, P. (Ed.), *The Social History of Occupational Health*. Croom Helm, London, pp. 78–88.
Campbell, C., Williams, B., 1999. Responses to HIV/AIDS in the mining industry: past experiences and future challenges, in: Williams, B., Campbell, C., MacPhail, C. (Eds.), *Managing HIV/AIDS in South Africa: Lessons from Industrial Settings*. CSIR, Johannesburg, pp. 13–29.
Cane, P., 2017. *Key Ideas in Tort Law*. Hart Publishing, Oxford.
Chandrachud, C., 2019. Structural Injunctions and Public Interest Litigation in India, in: Yap, P.J. (Ed.), *Constitutional Remedies in Asia*. Routledge Books, London.
Chandran, R., 2016. India’s top court issues rare warrant in Gujarat silicosis deaths case. *Reuters.*
Chang, D.-O., 2009. Informalising Labour in China’s Global Factory. *J. Contempirary Asia* 39, 161–179.
Chatterjee, P., 2017. Response to Vishnupad and Hansen. *Soc. Cult. Anthropol*. URL https://culanth.org/fieldsights/response-to-vishnupad-and-hansen (accessed 5.10.20).
Chatterjee, P., 2008. *Lineages of Political Society: Studies in Postcolonial Democracy.* Columbia University Press, New York.
Chatterjee, P., 2004. *The Politics of the Governed: Reflections on Popular Politics in Most of the World.* Columbia University Press, New York, NY.
Chen, M.A., 2012. *The Informal Economy: Definitions, Theories and Policies*. WIEGO, Manchester.
Chibber, V., 2003. *Locked in Place: State-Building and Late Industrialization in India.* Princeton University Press, Princeton, NJ.
Chuang, 2019. Silicosis and the Cold Hand of the State: “To Live” by X$core. *Chuang CN.* URL http://chuangcn.org/2019/08/silicosis-song/ (accessed 8.26.19).
Collins, H., 1990. Independent Contractors and the Challenge of Vertical Disintegration to Employment Protection Law. *Oxf. J. Leg. Stud.* 10, 353–80.
Cooney, S., Mahy, P., Mitchell, R., Gahan, P., 2014. The Evolution of Labor Law in Three Asian Nations: An Introductory Comparative Study. *Comp. Labor Law Policy J.* 36, 23–68.
Cooper, M., 2020. Risk, Insurance, Security: Ewald’s History of the Welfare State, in: *The Birth of Solidarity: The History of the French Welfare State.* Duke University Press, Durham, NC, pp. xxiii–xxvii.
Coplan, D.B., 2006. ‘I’ve Worked Longer Than I’ve Lived’: Lesotho Migrants’ Songs as Maps of Experience. *J. Ethn. Migr. Stud.* 32, 223–241. https://doi.org/10.1080/13691830500487324
Coplan, D.B., 1994. *In the Time of Cannibals: The Word Music of South Africa’s Basotho Migrants.* University of Chicago Press, Chicago, IL.
Corbridge, S., Harriss, J., 2001. *Reinventing India: Liberalization, Hindu Nationalism and Popular Democracy*, 2nd ed. Oxford University Press, New Delhi.
Cottrell, J., 1984. The Indian Judges’ Transfer Case. *Int. Comp. Law Q.* 33, 1032–1045. https://doi.org/10.1093/iclqaj/33.4.1032

Counterview, 2014. Gujarat govt “solution” for workers suffering from deadly silicosis: Go in for alternative job sources. *Counterview*. URL https://www.counterview.net/2014/06/gujarat-govt-solution-for-workers.html (accessed 4.1.20).
Craig, P.P., Deshpande, S.L., 1989. Rights, Autonomy and Process; Public Interest Litigation in India. *Oxf. J. Leg. Stud*. 9, 356–373.
Crush, J., James, W., 1991. Depopulating the compounds: Migrant labor and mine housing in South Africa. *World Dev*. 19, 301–316. https://doi.org/10.1016/0305-750X(91)90178-K
Cunningham, C.D., 1987. Public Interest Litigation in Indian Supreme Court: A Study in the Light of American Experience. *J. Indian Law Inst*. 29.
Das, D.K., Choudhury, H., Singh, J., 2015. *Contract Labour (Regulation and Abolition) Act 1970 and Labour Market Flexibility: An Exploratory Assessment of Contract Labour use in India’s Formal Manufacturing (No. Working Paper 300).* Indian Council for Research on International Economic Relations, New Delhi.
Das, V., 1995a. Suffering, Legitimacy and Healing: The Bhopal Case, in: *Critical Events: An Anthropological Perspective on Contemporary India.* Oxford University Press, Delhi, pp. 137–174.
Das, V., 1995b. *Critical Events: An Anthropological Perspective on Contemporary India*. Oxford University Press, Delhi.
Dasgupta, M., 2008. Public interest litigation for labour: how the Indian Supreme Court protects the rights of India’s most disadvantaged workers. *Contemp. South Asia* 16, 159–170.
Davidov, G., Langille, B., 2011. *The Idea of Labour Law.* Oxford University Press, Oxford.
De, R., 2018. *A People’s Constitution: The Everyday Life of Law in the Indian Republic*. Princeton University Press, Princeton, NJ.
Deakin, S., Halder, A., 2015. How Should India Reform Its Labour Law? *Univ. Camb. Fac. Law Res*. Pap. No 252015 1–29.
Deakin, S., Marshall, S., Pinto, S., 2019. Labour Laws, Informality and Development: Comparing India and China, in: Ashiagbor, D. (Ed.), *Re-Imagining Labour Law for Development: Informal Work in the Global North and South*. Hart Publishing, Oxford, pp. 235–266.
Defert, D., 1991. “Popular Life” and Insurance Technology, in: Burchell, G., Gordon, C., Miller, P. (Eds.), *The Foucault Effect: Studies in Governmentality*. University of Chicago Press, Chicago, IL, pp. 211–234.
Delhi Janwadi Adhikar Manch, 1997. The Order that Felled a City. *Econ. Polit. Wkly*. 32, 1524–1527.
Dembe, A.E., 1996. *Occupation and disease: how social factors affect the conception of work-related disorders.* Yale University Press, New Haven, CT.
Dembowski, H., 2001. *Taking the State to Court: Public Interest Litigation and the Public Sphere in Metropolitan India*. Oxford University Press, USA.
Derickson, A., 2013. “Nuisance Dust”: Unprotective Limits for Exposure to Coal Mine Dust in the United States, 1934–1969. *Am. J. Public Health* 103, 238–249. https://doi.org/10.2105/AJPH.2012.300932
Derickson, A., 1998. *Black Lung: Anatomy of a Public Health Disaster*. Cornell University Press, Ithaca, NY.
Derickson, A., 1988. Industrial refugees: The migration of silicotics from the mines of North America and South Africa in the early 20th century. *Labor Hist*. 29, 66–89. https://doi.org/10.1080/00236568800890041

DeSousa, V., 2010. Modernizing the Colonial Labor Subject in India. *CLCWeb Comp. Lit. Cult.* 12. https://doi.org/10.7771/1481-4374.1593
Dhavan, R., 1994. Ambedkar's Prophecy: Poverty of Human Rights in India. *J. Indian Law Inst.* 36, 8–36.
Dhavan, R., 1992. The Constitution as the Situs of Struggle: India's Constitution Forty Years On, in: Beer, L.W. (Ed.), *Constitutional Systems in Late Twentieth Century Asia.* University of Washington Press, Seattle, pp. 373–461.
Donsky, J.I., 1993. *A History of Silicosis on the Witwatersrand Gold Mines, 1910–1946* (Unpublished PhD Thesis). Rand Afrikaans University, Johannesburg, South Africa.
Douzinas, C., 2016. Human Rights for Martians. *Crit. Leg. Think*. URL https://criticallegalthinking.com/2016/05/03/human-rights-for-martians/#:~:text=In%20most%20cases%2C%20a%20human,considerations%20unavoidably%20enter%20legal%20argumentation. (accessed 6.11.20).
Douzinas, C., 2000. *The End of Human Rights: Critical Thought at the Turn of the Century.* Hart Publishing, Oxford.
D'Souza, R., 2005. The "Third World" and Socio-Legal Studies: Neo-Liberalism and Lessons from India's Legal Innovations. *Soc. Leg. Stud*. 14, 487–513. https://doi.org/10.1177/0964663905057592
Duncan, G., 2003. Workers' compensation and the governance of pain. *Econ. Soc.* 32, 449–477. https://doi.org/10.1080/03085140303134
Dutta, A., 2019. From Drought to Deadly Disease - No Respite for Migrant Tribal Farmers. *The Wire*.
Dutta, N., 1995. The inside story: A Calcutta NGO adds a new dimension to the Ganga pollution case. *Sunday* 22, 88.
Ehrlich, R., 2015. History and medicine—The case of silicosis. *Am. J. Ind. Med*. 58, 1–2. https://doi.org/10.1002/ajim.22528
Ehrlich, R., 2012. A century of miners' compensation in South Africa. *Am. J. Ind. Med.* 55, 560–569. https://doi.org/10.1002/ajim.22030
Elliott, E., 1876. *The Poetical Works of Ebenezer Elliott*. H.S. King, London.
Engels, F., 1887. *Conditions of the Working Class in England*. Panther Edition, New York.
Ewald, F., 2020. *The Birth of Solidarity: The History of the French Welfare State*. Duke University Press, Durham, NC.
Ewald, F., 2017. "What Do You Want Me to Regret?": An Interview with Francois Ewald. *Los Angeles Review of Books*. URL https://lareviewofbooks.org/article/what-do-you-want-me-to-regret-an-interview-with-francois-ewald/ (accessed 04.09.20)
Foucault, M., 2002. *Power, Essential Works of Foucault 1954–1984.* Penguin, London.
Foucault, M., 1988. *Politics, Philosophy, Culture: Interviews and Other Writings 1977–1984.* Routledge Books, London.
Fraser, N., 2014. Behind Marx's Hidden Abode: For an Expanded Conception of Capitalism. *New Left Rev*. 55–72.
Fraser, N., 2013. A Triple Movement? *New Left Rev*. 81, 119–32.
Fredman, S., 1997. Labour Law in Flux: The Changing Composition of the Workforce. *Ind. Law J.* 26, 337–52.
Freedland, M., Kountouris, N., 2011. *The Legal Construction of Personal Work Relations*. Oxford University Press, Oxford.
Fudge, J., 2012. Blurring Legal Boundaries: Regulating for Decent Work, in: *Challenging the Legal Boundaries of Work Regulation.* Hart Publishing, Oxford, pp. 1–26.

Fudge, J., 2011. Constitutionalizing Labour Rights in Europe, in: Campbell, T., Ewing, K.D., Tomkins, A. (Eds.), *The Legal Protection of Human Rights: Sceptical Essays.* Oxford University Press, Oxford.
Fudge, J., 2005. Beyond Vulnerable Workers: Towards a New Standard Employment Relationship. *Can. Labour Employ.* J. 12, 151–176.
Fulekar, M.H., Khan, M.M.A., 1995. Occupational exposure to dust in slate pencil manufacture. *Ann. Occup. Hyg*. 39, 107–114. https://doi.org/10.1016/0003-4878(94)00090-N
Galanter, M., 1986. When Legal Worlds Collide: Reflections on Bhopal, and Good Lawyer, and the American Law School. *J. Leg. Educ*. 36, 292.
Ghatak, A.R., 2001. Chinchurgheria Silicosis Victims Win Compensation Case.
Glaser, D., 2001. Politics and Society in *South Africa: A Critical Introduction*. Sage Publications, London.
Gopalakrishnan, R., 2010. Enforcing Labour Rights through Human Rights Norms: The Approach of the Supreme Court of India, in: Fenwick, C., Novitz, T. (Eds.), *Human Rights at Work: Perspectives on Law.* Hart Publishing, London, pp. 195–228.
Gopalakrishnan, R., Tortell, L., 2006. Access to Justice, Trade Union Rights and the Indian Industrial Disputes Act, 1947. *Int. J. Comp. Labour Industrial Relat*. 22, 529–562.
Guyton, G.P., 1999. A Brief History of Workers' Compensation. *Iowa Orthop. J.* 19, 106–110.
Hall, S., Critcher, C., Jefferson, T., Clarke, J., Roberts, B., 1978. *Policing the Crisis: Mugging, the State and Law and Order.* Macmillan, London.
Harrison, B., 1993. Are Accidents Gender Neutral? The Case of Women's Industrial Work in Britain, 1880–1914. *Womens Hist. Rev.* 2, 253–75.
Harriss-White, B., 2020. The Modi Sarkar's Project for India's Informal Economy. *The Wire.*
Harriss-White, B., Gooptu, N., 2001. Mapping India's World of Unorganized Labour. *Social. Regist*. 37, 89–118.
Hart, K., 1990. The idea of the economy: six modern dissenters, in: Friedland, Robertson (Eds.), *Beyond the Marketplace: Rethinking Economy and Society.* Aldine de Gruyter, New York, pp. 137–160.
Harvey, D., 2005. *A Brief History of Neoliberalism.* Oxford University Press, Oxford.
Hensman, R., 2011. Informal Labor: The Struggle for Legal Recognition, in: *Workers, Unions, and Global Capitalism: Lessons from India.* Columbia University Press.
Hepple, B., 2002. Introduction, in: Hepple, B. (Ed.), *Social and Labour Rights in a Global Context: International and Comparative Perspectives*. Cambridge University Press, Cambridge.
Holmstrom, M., 1976. *South Indian factory workers: Their life and their world.* Cambridge University Press, Cambridge.
Institute for Human Development, 2014. *India Labour and Employment Report 2014*. Academic Foundation, New Delhi.
Jackson, S.-A., 2007. Peter Abraham's "Mine Boy": A Study of Colonial Diseases in *South Africa. Res. Afr. Lit*. 38, 153–169.
Jasanoff, S. (Ed.), 1994. *Learning from Disaster: Risk Management after Bhopal.* University of Pennsylvania Press, Philadelphia, PA.
Jeeves, A., 1985. *Migrant Labour in South Africa's Mining Economy: The Struggle for the Gold Mines' Labour Supply, 1890–1920.* McGill-Queen's University Press, Kingston.
Jha, S., 2014. Rajasthan Assembly passes labour law changes. *Bus. Stand.*

Johnstone, J., 1799. Some Account of a Species of Phthisis Pulmonalis, Peculiar to Persons Employed in Pointing Needles in the Needle Manufacture, in: *Memoirs of the Medical Society of London.* Darton and Harvey, London, pp. 234–249.
Jones, M., 1925. *The Autobiography of Mother Jones*. Charles H. Kerr Publishing Company, Chicago, IL.
Joshi, C., 2008. Histories of Indian Labour: Predicaments and Possibilities. *Hist. Compass* 6, 439–454. https://doi.org/10.1111/j.1478-0542.2007.00503.x
Kahn-Freund, O., 1983. *Labour and the Law*, 3rd ed. Stevens & Sons, London.
Karunakaran, K., 2019. Defending Informal Workers' Welfare Rights: Trade Union Struggles in Tamil Nadu. *Glob. Labour J.* 10, 209–23.
Katz, E., 1994. *The White Death: Silicosis on the Witswatersrand Gold Mines, 1886–1910.* University of Witswatersrand Press, Johannesburg.
Kaul, N., 1956. *India and the International Labour Organization.* Metropolitan Book Co, New Delhi.
Kaviraj, S., 2011. *The Enchantment of Democracy and India*. Permanent Black, New Delhi.
Kaviraj, S., 2010. *The Trajectories of the Indian State.* Permanent Black, New Delhi.
Kennedy, V.D., 1966. *Unions, employers and government: Essays on Indian labour questions.* Manaktalas Books, Bombay.
Kerr, I.J., 2004. Labour control and labour legislation in colonial India: a tale of two mid-nineteenth century acts. *South Asia J. South Asian Stud*. 27, 7–25. https://doi.org/10.1080/1479027042000186405
Khaitan, U., 2020. Women beneath the Surface: Coal and the Colonial State in India during the Second World War. *War Soc.* 39, 171–188. https://doi.org/10.1080/07292473.2020.1790473
Krishna, G., 2004. Succumbing to stone-cutting*. India Together*.
Lahiri-Dutt, K., MacIntyre, M., 2006. *Women Miners in Developing Countries: Pit Women and Others.* Ashgate, Aldershot.
Land, H., 1971. Women, Work and Social Security. *Soc. Policy Adm.* 5, 183–192.
Langille, B., 2006. Labour Law's Back Pages, in: Davidov, G., Langille, B. (Eds.), *Boundaries and Frontiers of Labour Law*. Hart Publishing, Oxford, pp. 13–37.
Ledwaba, L., Sadiki, L., 2016. *Broke and Broken: The Shameful Legacy of Gold Mining in South Africa.* Blackbird Books, Auckland Park.
Love, J.C., 1987. Retaliatory Discharge for Filing a Workers' Compensation Claim: The Development of a Modern Tort Action. *Work. Compens. Law Rev*. 10, 1.
Majumder, A., 2017. Maharashtra eases up on contract labour norm, unions upset. Rediff.
Mandela, N., 1986. *The Struggle is My Life*. Pathfinder, New York.
Marks, S., 2006. The Silent Scourge? Silicosis, Respiratory Disease and Gold-Mining in South Africa. *J. Ethn. Migr. Stud*. 32, 569–589. https://doi.org/10.1080/13691830600609975
Marshall, S., 2019. *Living wage: regulatory solutions to informal and precarious work in global supply chains*. Oxford University Press, Oxford.
Marx, K., 1887. *Capital: A Critique of Political Economy.* URL https://www.marxists.org/archive/marx/works/1867-c1/ch10.htm (accessed 01.03.20)
Masekala, H., 1985. Coal Train (Stimela), *Waiting for the Rain*. Jiva Afrika.
Mate, M., 2015. The Rise of Judicial Governance in the Supreme Court of India. *Boston Univ. Int. Law J*. 33, 169–224.
McCulloch, J., 2012. *South Africa's Gold Mines and the Politics of Silicosis.* James Currey, Suffolk.

McCulloch, J., 2009a. Hiding a Pandemic: Dr G.W.H. Schepers and the Politics of Silicosis in South Africa. *J. South. Afr. Stud.* 35, 835–848.
McCulloch, J., 2009b. Counting the Cost: Gold Mining and Occupational Disease in *Contemporary South Africa.* Afr. Aff. 108, 221–240. https://doi.org/10.1093/afraf/adn085
McCulloch, J., Rosental, P.-A., Melling, J., 2017. Johannesburg and Beyond: Silicosis as a Transnational and Imperial Disease, 1900–1940, in*: Silicosis: A World History*. Johns Hopkins University Press, Baltimore, Maryland.
McIvor, A., 2015. Miners, silica and disability: The bi-national interplay between South Africa and the United Kingdom, c1900–1930s. *Am. J. Ind. Med*. 58, 23–30. https://doi.org/10.1002/ajim.22509
McIvor, A., Johnston, R., 2007. *Miners' Lung: A History of Dust Disease in British Coal Mining*. Routledge Books, London.
Mehta, P.B., 2002. The Inner Conflict of Constitutionalism: Judicial Review and the "Basic Structure," in: Hasan, Z., Sridharan, E., Sudarshan, R. (Eds.), *India's Living Constitution: Ideas, Practices, Controversies.* Permanent Black, New Delhi.
Melling, J., 2010. Beyond a Shadow of a Doubt? Experts, Lay Knowledge, and the Role of Radiography in the Diagnosis of Silicosis in Britain, c. 1919–1945. *Bull. Hist. Med.* 84, 424–466.
Menéndez-Navarro, A., 2008. The politics of silicosis in interwar Spain: Republican and Francoist approaches to occupational health. *Dynamis* 28, 77–102.
Menon, N., 2014. Environment and the Will to Rule: Supreme Court and Public Interest Litigation in the 1990s, in: Suresh, M., Narrain, S. (Eds.), *The Shifting Scales of Justice: The Supreme Court in Neo-Liberal India.* Orient Blackswan, Hyderabad, pp. 59–78.
Mohapatra, P.P., 2005. Regulated Informality: Legal Constructions of Labour Relations in Colonial India 1814–1926, in: Lucassen, J., Bhattacharya, S. (Eds.), *Workers in the Informal Sector: Studies in Labour History 1800–2000.* Macmillan India Limited, New Delhi.
Mohapatra, P.P., 2004. Assam and the West Indies, 1860–1920, in: Hay, D., Craven, P. (Eds.), *Masters, Servants, and Magistrates in Britain and the Empire, 1562–1955.* University of North Carolina Press, Chapel Hill, NC.
Mollona, M., 2005. Factory, Family and Neighbourhood: The Political Economy of Informal Labour in Sheffield. J. *R. Anthropol. Inst.* 11, 527–548. https://doi.org/10.1111/j.1467-9655.2005.00249.x
Mollona, M., 2003. *Steel lives: An ethnography of labour in contemporary Sheffield.* London School of Economics and Political Science, London.
Moodie, T.D., Ndatshe, V., 1994. *Going for Gold: Men, Mines, and Migration.* University of California Press.
Moses, J., 2018. *The First Modern Risk: Workplace Accidents and the Origins of European Social States*. Cambridge University Press, Cambridge.
Mukul, 1997. Polluting Industries, Environment and Workers' Health: A Case for Intervention. *Econ. Polit. Wkly*. 32, L37–L44.
National Human Rights Commission, 2016. *NHRC Interventions on Silicosis*.
Navlakha, G., 2000. Urban Pollution: Driving Workers to Desperation. *Econ. Polit. Wkly*. 35, 4469–71.
Nelson, B., 1990. The Origins of the Two-Channel Welfare State: Workmen's Compensation and Mothers' Aid, in: Gordon, L. (Ed.), *Women, the State, and Welfare.* University of Wisconsin Press, Madison, WA, pp. 123–52.
Ness, A.R., Reynolds, L.A., Tansey, E.M., 2002. Population-based Research in South Wales: The MRC Pneumoconiosis Research Unit and the MRC Epidemiology Unit (No.

13), *Wellcome Witnesses to Twentieth Century Medicine*. Wellcome Trust Centre for the History of Medicine at UCL, London.
Nidhi, A., Gupta, A., 2016. Silicosis Victims and the Importance of the Supreme Court Judgment. *The Wire.*
Nigam, A., 2014. Embedded Judiciary: Or the Judicial State of Exception?, in: Suresh, M., Narrain, S. (Eds.), *The Shifting Scales of Justice: The Supreme Court in Neoliberal India.* Orient Blackswan, Hyderabad, pp. 22–38.
Nigam, A., 2001. Industrial Closures in Delhi. *Revolut. Democr.* 7.
Nigam, A., 1997. Whose Delhi Is It Anyway? The Struggle Against A Black Judgement. *Revolut. Democr*. 3.
Ornati, O., 1955. *Jobs and Workers in India*. Cornell University Press, Ithaca, NY.
Packard, R.M., 1989. *White Plague, Black Labor: Tuberculosis and the Political Economy of Health and Disease in South Africa*. University of California Press, Berkeley, CA.
Parsons, C., 2002. Liability Rules, Compensation Systems and Safety at Work in Europe. *Geneva Pap. Risk Insur*. 27, 358–382.
Perchard, A., Gildart, K., 2015. "Buying brains and experts": British coal owners, regulatory capture and miners' health, 1918 – 1946. *Labor Hist*. 56, 459–480. https://doi.org/10.1080/0023656X.2016.1086555
Piketty, T., 2014. *Capital in the Twenty-First Century*. Harvard University Press, Cambridge, MA.
PRASAR, 2015. The Silicosis Struggle Marches On. *Revolut. Democr*. 21.
Prassl, J., 2015. *The Concept of the Employer*. Oxford University Press, Oxford.
Quadagno, J., 1994. *The Color of Welfare: How Racism Undermined the War on Poverty.* Oxford University Press, Oxford.
Rajasthan State Human Rights Commission, 2014. *Special Report on Silicosis*. Rajasthan State Human Rights Commission, Jaipur, Rajasthan.
Ram, A.B., 2020. Relaxation of labour laws across states. *PRS Legis. Res*. URL https://www.prsindia.org/theprsblog/relaxation-labour-laws-across-states (accessed 5.31.20).
Ramanathan, U., 2014. In the Name of the People: The Expansion of Judicial Power, in: Suresh, M., Narrain, S. (Eds.), *The Shifting Scales of Justice: The Supreme Court in Neo-Liberal India.* Orient Blackswan, Hyderabad, pp. 39–58.
Ramanathan, U., 2004. Communities at Risk: Industrial Risk in Indian Law. *Econ. Polit. Wkly.* 39, 4521–4527.
Rao, A., 1980. Silicosis Deaths of Slate Workers. *Econ. Polit. Wkly*. 15, 1883.
Rittich, K., 2019. Historicising Labour in Development: Labour Market Formalisation through the Lens of British Colonial Administration, in: Ashiagbor, D. (Ed.), *Re-Imagining Labour Law for Development: Informal Work in the Global North and South.* Oxford University Press, Oxford.
Robinson, C.J., 2000. *Black Marxism: The Making of the Black Radical Tradition*, 2nd ed. Zed Books, London.
Rodgers, G., 2011. India, the ILO and the Quest for Social Justice since 1919. *Econ. Polit. Wkly.* 46, 45–52.
Rosental, P.-A., 2017a. Silicosis and Global Public Health, in: Rosental, P.-A. (Ed.), *Silicosis: A World History*. Johns Hopkins University Press, Baltimore.
Rosental, P.-A., 2017b. *Silicosis: A World History*. JHU Press.
Rosental, P.A., 2015. Truncating a disease. The reduction of silica hazards to silicosis at the 1930 international labor office conference on silicosis in Johannesburg. *Am. J. Ind. Med.* 58, 6–14. https://doi.org/10.1002/ajim.22517

Rosner, D., Markowitz, G., 1991. *Deadly Dust: Silicosis and the Politics of Occupational Disease in Twentieth-Century America.* Princeton University Press, Princeton, NJ.
Routh, S., 2019. Do Human Rights Work for Informal Workers?, in: Ashiagbor, D. (Ed.), *Re-Imagining Labour Law for Development: Informal Work in the Global North and South*. Hart Publishing, Oxford, pp. 101–122.
Routray, S.K., 2013. Two Kinds of Activism: Reflections on Citizenship in Globalizing Delhi. *eSocialSciences.*
Roy, T., Swamy, A.V., 2016. *Law and the Economy in Colonial India*. University of Chicago Press, Chicago, IL.
S. Dhara, 1990. Shop-Floor Safety in India: Report of Public Interest Action. *Econ. Polit. Wkly.* 25, M195–M199.
Saiyed, H.N., Parikh, D.J., Ghodasara, N.B., Sharma, Y.K., Patel, G.C., Chatterjee, S.K., Chatterjee, B.B., 1985. Silicosis in slate pencil workers: I. An environmental and medical study. *Am. J. Ind. Med*. 8, 127–133. https://doi.org/10.1002/ajim.4700080207
Sankaran, K., 2010. Labour Law in South Asia: The need for an inclusive approach, in: *Labour Law and Worker Protection in Developing Countries*. International Labour Organization, Geneva, pp. 225–260.
Sanyal, K., 2007. *Rethinking Capitalist Development: Primitive Accumulation, Governmentality and Post-colonial Capitalism.* Routledge Books, New Delhi.
Sarkar, A., 2018. *Trouble at the Mill: Factory Law and the Emergence of the Labour Question in Late Nineteenth-Century Bombay*. Oxford University Press, New Delhi.
Saxton, D.I., Stuesse, A., 2018. Workers' Decompensation: Engaged Research with Injured Im/migrant Workers. *Anthropol. Work Rev*. 39, 65–78. https://doi.org/10.1111/awr.12147
Sellers, C., 1997. *Hazards of the Job: From Industrial Disease to Environmental Health Science.* University of North Carolina Press, Chapel Hill, NC.
Shastri, P., 2009. A breathtaking waste. *Hindustan Times.*
Simons, H.J., Simons, R.E., 1969. *Class and Colour in South Africa, 1850–1950.* Penguin, Harmondsworth.
Singh, G., 2008. Judiciary Jettisons Working Class. *Combat Law* 24.
Singh, N., 1986. Silicosis cases: Death continues to stalk slate-pencil industry workers in Madhya Pradesh. *India Today.*
Sinha, M.K., 1998. Appendix I: The Role of the National Human Rights Commission of India in the Implementation of Human Rights. *Neth. Q. Hum. Rights* 16, 101–106. https://doi.org/10.1177/092405199801600110
Suresh, M., Narrain, S., 2014. Introduction, in: Suresh, M., Narrain, S. (Eds.), *The Shifting Scales of Justice: The Supreme Court in Neo-Liberal India.* Orient Blackswan, Hyderabad, pp. 1–21.
Talib, M., 2010. *Writing Labour: Stone Quarry Workers in Delhi*. Oxford University Press, Oxford.
Taylor, S.-A., 1988. *Tradition and Change: The Sheffield Cutlery Trades 1870–1914* (2 vols). Sheffield University, Sheffield.
The Wire, 2017. Construction Worker Welfare Cess "Being Frittered and Defalcated", Says Supreme Court. *The Wire.*
Tsing, A., 2009. Supply Chains and the Human Condition. *Rethink. Marx*. 21, 148–176.
Turner, A., McIvor, A., 2017. "Bottom dog men": Disability, Social Welfare and Advocacy in the Scottish Coalfields in the Interwar Years, 1918–1939. *Scott. Hist. Rev*. 96, 187–213.

Tweedale, G., 2013. Backstreet capitalism: An analysis of the family firm in the nineteenth-century Sheffield cutlery industry. *Bus. Hist*. 55, 875–891. https://doi.org/10.1080/00076791.2012.744592
Tweedale, G., Hansen, P., 1998. Protecting the workers: the medical board and the asbestos industry, 1930s-1960s. *Med. Hist.* 42, 439–457.
Vergara, A., 2005. The Recognition of Silicosis: Labor Unions and Physicians in the Chilean Copper Industry, 1930s–1960s. *Bull. Hist. Med*. 79, 723–748.
Witt, J.F., 2004. *The Accidental Republic: Crippled Workingmen, Destitute Widows, and the Remaking of American Law*. Harvard University Press, Cambridge, MA.