Part Two: Precarious Life, Terrible Work
Classifying Accidents: 

The Meaning of Work Hazards, 1890s—1960s

We sad coal-cutters,  
Our hand, hard and calloused,  
Our insides dark with dust,  
Oh! This (is what) I think.

Once in the lift-cage,  
I shivered,  
What if the rope snaps?  
Oh! This I think;  
The cage goes down,  
My father, my mother-so far away  
Shall I ever see them again?  
Oh! This I think

If a chunk of coal falls,  
My head will be smashed,  
God knows what is due  
Oh! This I think

Ghuga Mahto tells you this story  
The warm Damodar flows on,  
Oh! The heat, the heat,  
Tortures me on and on. ¹

This chapter is concerned with aspects of workplace risks in the life of miners of Jharia coalfields. The industrialist in the Jharia coalfields usually advanced the argument
that work hazards found in Indian coalmines compared favorably with the countries where mining was long known. In contrast, the miners themselves pointed out the need to take workplace risks and occupational hazards seriously. I set out to investigate the meaning of these contending positions on the issue, that of the employer and that of the miner himself/herself. I will also discuss the consequences for the adoption of appropriate remedial measures.

The labour process, i.e., surplus generation through increased production, did not necessarily result in a consequent need to contain hazards though the creation of a healthy work environment. The question at issue is how that demand for a better work environment was thwarted, itself giving rise to the recognition of injustice and an ability to critique, (Ranajit Guha ‘Chandra’s Death’, Subaltern Studies, vol. IV, 1986), which inaugurated the practice of resistance. This chapter also engages with environmental theory, insofar as it explains hazards and the consequent social losses through recognising elite disregard for degradation, and their ability to transfer the cost of wasteful and inefficient business on to the rest of populace. This theory further argues that the imposition of optimal externality based on positive economics would help perfect the economic system (Martin, 1994; Gadgil and Guha, 1995/2004). I would instead suggest that the notion of social loss and the corresponding externality is a historical and hermeneutic variable. I wish to examine the ways in which capitalism develops an understanding of social loss and uses the tool of externality to reduce accidents and develop a restitution mechanism. The chapter has three sections: the identification and assessment of the size of workplace risks; the basis of identification and the emerging reconciliations between the recognition of workplace risk and the deployment of meager resources to make life more liveable in the colliery.

**Identifying the problem**

The owner of capital and the labouring people organised a new social and material life in the coalfields especially after the railways connected the coalfields with the wider coal consuming areas at the turn of the twentieth century. The unsafe workplace and the consequent afflictions faced by the working people, suggests Mukhopadhyay (2001),
could range from “actual accidents” and “near-miss accidents” to “occupational diseases”. The actual accident stands for the debilitating incident that takes a toll of life or limb, inflicting distressing injury on the muscle, nervous and mental systems of a person. It immediately impairs or ruins his/her ‘capability’ (ability of a person to express her/his creative and innovative capacity). However, for the public office (Mines Inspectorate), only the fatal accident (taking toll of life) was a notable event, hence an expression of unsafe mining, in the first two decades of the 20th century. However, the advent of popular politics, articulated by the new social forces, led the public office to take account of most injuries and occupational diseases in mid-1920s, the latter-1930s and the late-1950s. The question of compensation and restitution was taken up alongside.

The calculation of social loss meant taking account of three elements: the extent of occupational hazard, the magnitude of miners’ asset damage, and the methods applied in evaluating this loss. Before examining the advances registered in the realm of miners’ engagements with insured mining technique, it is worth looking into the efforts undertaken to assess miners’ asset damage (MAD) and the corresponding liability (MADL) involved, and the preparation of statistics related to the subject. The colliery owners opposed the idea of regulated mining techniques proposed by the state at the turn of the 20th century power to ensure safety of life and railway property in the mining areas. The capitalist argued: ‘It will be seen that India, in spite of its backwardness, compares well with Great Britain itself’ as far as the figures of mining accident were concerned (Dept. of Rev. and Agri., 1900: 07). They repeated the same views for both the three and half decades of his experience working in the Jharia fields and for the century old business in the Raniganj fields, before the Royal Commission on Labour (headed by J.H. Whitely) in response to the problem of mining hazards (Whitely Report, 1931, Vol. IV. pt. I: 245).2 Such statement rested on normative assumptions of miners’ asset damage liability (MADL). The assessment undertaken by the employer involved two characteristic hermeneutic and politico-discursive devices: statistics management and ontological re-figuration3. I explore these below.
Chart 1.

Decadal Fatality (death) Rate per Thousand Persons Employed in the Coalmines

Decadal Serious Injury Rate per Thousand Persons Employed
Sources: *Annual Reports of the Chief Inspector of Mines in India for the years 1900—1980*. There the need is for an inclusion of cases of minor injury and the injury afflicted as part of the fatal accident. The spectacular increase in the serious accident was particularly noted since 1936.

Table 1.
Minor Injury in All India Mines

<table>
<thead>
<tr>
<th>Years</th>
<th>Persons</th>
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<tbody>
<tr>
<td>1939</td>
<td>10584 (about 21 per thousand persons employed)</td>
</tr>
<tr>
<td>1940</td>
<td>12880</td>
</tr>
<tr>
<td>1944</td>
<td>8946</td>
</tr>
<tr>
<td>1948</td>
<td>8518</td>
</tr>
<tr>
<td>1950</td>
<td>15616</td>
</tr>
<tr>
<td>1961</td>
<td>33600 (77 per thousand Persons Employed)</td>
</tr>
</tbody>
</table>

("Minor Injury" necessitates the enforced absence from work for a period exceeding forty-eight hours. A "Serious Injury" is supposed to cause miners a permanent loss of or injury to the sight or hearing, or fracture of any limb, or the enforced absence of the injured person from work over a period exceeding twenty days.)

The decoding of official statistics calls for an all-round need to be skeptical and even inflationary when grappling with its discrepancies. The major body of statistics is in *Annual Reports of the Mines Inspectorate* prepared since 1894 for Government of India, and the findings of various Courts of Enquiry concerning the disaster conducted by the Mining Board, under the Indian Mines Act. The documentation of accidents, the magnitude of the social loss, and the causation appear difficult to believe. The inadequate access to some of these documents in the archive further compounds the predicament we face when reconstructing the historical reality. The files containing findings of the court of inquiry related to the fatal accidents were classified as the category 'C', hence were likely to have been destroyed, and therefore permanently moved out of the sight of any investigator. To begin with, I examine the predicament of reporting on accidents and knowing about them.

There were flagrant irregularities in the reporting on mishaps in and about mines, an underestimation of the human losses, suffering and immiserisation, and in the attribution of mysterious causes to these accidents. A. Stonier (Chief Inspector of Mines, henceforth CIM), thus explained in 1900 the reason for the delayed preparation of his annual report:
...the time occupied in obtaining the annual returns relating to mines [is great]. As the Mining Rules are not in force, it has been impossible to insist on the prompt submission of returns. ...It is hoped that, as the Mining Bill received the assent of the Governor General in Council on 23rd March 1901 and gives definite powers to the Chief Inspector of Mines, the next report will be much fuller and will contain the information which falls legitimately within its scope (Stonier, 1901: 1, 12-17).

The government instituted the public office of the Inspectorate and set out the task of the inspection of mines from 1893-1894 in order to satisfy some of the critics of unsafe mining practices, especially those concerned with the health of woman and children employed in the “black holes”. Under instructions from the colonial [British] government, dated 26th December 1893, a public officer, Inspector of Mines was required to prepare an annual report by receiving returns from mine operators on the persons employed, the output and the trend of accident. The office could issue certain guidelines for the safety of “coolies” in the mines, and inspect some accident sites upon requests made by local/provincial government. Under the provisions of the Indian Mines Act, 1901 and the general mining regulations, 1904, the empowered CIM could insist on prompt and mandatory submission of returns from mine managers and, at the same time, could take initiatives to conduct an inquiry into a case of fatal accident. Despite this provision, the administrative context of the regulations and the concomitant punishment of persons responsible for accidents reveal a shoddy and irresponsible tendency on the part of colliery managements, who often hushed up the accident, the resultant social loss, and the causes in a variety of ways. J.R.R. Pickering (CIM) expressed his agony about the unreliable response of the colliery management on the explosion of firedamp at the Equitable Coal Company’s Dishergarh coalmine (in the Raniganj coalfields) in 1907:

The mine operator states that the officials examined the mine with safety lamps’, and it is always difficult to disprove a statement that any particular part of a mine was so examined. (CIMAR, 1908: 3-12.).

One can read a similar mendacity in certain depositions, such as one made by a mining sirdar on an accident at the Central Kirkend Coal Company’s Mine for which he held one miner responsible:
This man has left his proper working place, and, according to the sirdar in charge, had gone beyond a fence and was getting coal off another pillar. The sirdar says he ordered him to come to the proper side of the fence, as he noticed a slip in the roof running along the side of the gallery. ... he did not obey, and before the sirdar had gone many yards away, some roof coal...fell out up to the slip, injured the man, and unfortunately killed the woman (CIMAR, 1908: 3-12.).

Pickering rightly observed: ‘If the sirdar did know of the slip, and especially as the man was breaking the rules by being beyond a fence, he ought to have insisted upon the man at once withdrawing.’

The punishment-avoiding propensity of the colliery authority increasingly led to a phenomenon of the mysterious disappearance of some eyewitnesses, including the person afflicted him or herself. Pickering noted in the same report that an accident had occurred at the Jharia Colliery Company’s Bhaga mine:

The evidence in this case is most difficult to obtain. Of the three surviving men, one was not close at hand at the moment and immediately he knew of the accident he went out of the mine with the two women who assisted them. ... Another man disappeared, and the third, who either could not or would not give any clear explanation of the occurrence, died two days later from excessive drinking.  

The phenomenon of the ‘contrived disappearance’ of a collier, like this one in the Bhaga mine in the aftermath of fatal accident, soon became a commonplace in the black-villages, a feature that has been well captured by Ilyas Ahmed Gaddi, a realist novelist, in his book *Fire Area*.

In 1931, the Royal Commission on Labour headed by J.H. Whitely (a British Labour Member) noted that ‘the rise in the figure of accidents and human losses in the 1920s could be ascribed to a better reporting and more accurate classification in the aftermath of the Indian Mines Act (Amendment), 1923-24, rather than to any real increase.’ In an apparent contrast, a tendency of hushing up the information appears likely to have become acute in the wake of the newly introduced punitive clauses of the Mines Department and the stipulation of the Workmen’s Compensation Act, 1923. The struggles organised after the mid 1920s by labour associations like Indian Colliery Employees Association (ICEA) in the Jharia fields over the question of compensation
and rehabilitation rights of the miner targeted this tendency of colliery owners. P.C. Bose (Vice President of the ICEA) pointed out that at times Mines Inspectors were appointed to conduct inquiries and fix responsibility for particular fatalities (Whitely, 1931, Vol. IV. Pt. II: 144). Indeed the Whitely Commission acknowledged the positive effect of such ‘activism’ of the labour associations on compelling colliery employers to publicly recognise casualties which otherwise went unrecorded, given the practice of statistical jugglery. The Coal Control Board under the Coal Commissioner, formed in 1942, dealt strongly with a few colliery owners by taking them to task for fabricating annual statistical returns and providing fictitious figures concerning accidents and resultant losses submitted to the Mines Department. Gaddi’s novel narrates one accident at a fictitious Dharampur colliery owned by Praful Joshi (a Gujarati merchant) in which the coal company managed to keep the dead body of a few loaders out of sight. The company tried to evade its responsibility by paying compensation to the bereaved family and thus avoided punishment. The management deployed lathaihis (private security guards) headed by Kapil Singh, a north Bihari labour contractor-cum-gangster, to muffle any kind of talk about the accident. ‘A sudden flight of miners from colliery work is very common’ was the standard response an inquisitive person who asked about a missing mate. The protagonist of the novel, Sahdev, a young loader, battles to institute an inquiry, which formally takes place. The employer nevertheless ensured that the rightful witnesses were kept away, by force if necessary: Madna Bawri altogether disappeared from the colliery area and Kala Chand Bunyan was found charred to death in a sewer. A similar state of affairs becomes the plot for Savdhan Niche Aag Hai, by Sanjeev, a realist novelist. Here, people, including Junior Mining Manager and Surveyor – Mukul Mukherjee, Vishtu Da, and Maninder Chaudhury – are treacherously drowned in the aftermath of a disaster in a colliery called Chandpur. The company wished to eliminate witnesses to ward off the punishments awarded by the key mining authority (mining agent Sengupta). In January 2004, Singhjee (one of the trammers cum raising contractors) told me about the continued prevalence of such practices, for instance in the Dubaree colliery, among private owners of collieries.

The law required the maintenance of statistics on fatal accidents leaving the mine owner free to merely report ‘Non-fatal accidents’, which included ‘Minor
accidents' and the serious injury afflicted upon a miner during the fatal accident, until the early 1930s. The labour publicist brought this to the notice of the Whitely Commission while talking of the question of compensation claims, which were hitherto available only in case of the fatalities and serious injuries that caused the absence of a person from the colliery for more than twenty days and the loss of a limb. Yet the other two varieties of incidents were equally distressing everyday affairs, and inflicted tortuous short or long-term disability on miners. The labour association argued, at the same time, that some other fatality either occurred directly or indirectly as a result of the colliery accident though it remained conspicuously unrepresented in the formal statistical account. One such variety was the demise of an injured person who succumbed a few days or a week after the accident. Only as late as the late 1930s did the Mines Department begin monitoring the state of health of injured miners, and begin recording cases of 'Delayed fatalities' or 'Post Accident' fatalities.

The 'Other fatal accident', a category devised in 1908 to represent some fatal accident which was presumed to be "non-mining" in character, was the finest instance of statistical jugglery. It depleted fatalities by ten or fifteen percent. Fatal accidents at Srikristopur coalmine (Balliram & Company Limited) were, for instance, classified in 1921 as the "Other fatal accidents": they included a case where a 'Deceased was found drowned in a sinking shaft, 42 feet deep.' The colliery reported that the deceased person was 'mentally defective' (Simpson, 1922:73). Similarly, the management reduced the deaths due to subsidence (1913), deaths in huts due to the explosion of gunpowder which was being prepared, deaths of persons knocked down by the railway wagon in the colliery siding, and the like, to the category of "Other fatal accident". The classification stripped the characteristic linkages of the fatality with the essential mining process in and about the mines. All child and infant collier deaths at work were ingeniously classified among "other fatal accidents". Thus, mine employers shirked their responsibilities. Notably, the IMA, 1901 categorized the child below the age of twelve as child labour, and prohibited their employment in dangerous occupations. Notwithstanding this, s/he got employment and/or assisted the parent in the mines as helping hands until the prohibitory stipulations of the Indian Mines Act, 1923-24. The latter prohibited the employment as well as the entry of persons the age of thirteen years and below, which
was extended to fourteen years in 1935. There were those children who accompanied their parents to the workplace and rendered assistance to complete tasks of loading coal, slack (coal piece below 50 mm) and coal-dust, tramming, and water bailing in order to meet the requisite number of coal tubs in a day. Some of them were toddlers who could not be entrusted to the care of somebody on the surface. Not a single year passed when the colliery did not witness a number of children crushed to death and afflicted from casualties either on the surface – for instance, knocked down by the moving or outturning coal tub, railway wagon at colliery siding – or underground – where they would be struck down by the falling roof and sides, explosions, or suffocating gases, or drowned in gallery-water.

The misleading representation of causalities at the workplace led to the maneuvering of casualty figures. The admission of casualties would compound the ‘vicious circle of hazards’ and defer monetary and physical punishment through the strategy of maneuvers. Miners rose to confront such classificatory strategies. The Muddih colliery compensation case of 1928 was one such case. The deceased Juman Khan, a trolleyman, was killed while inside his dhowrah on the colliery premise, owing to the subsidence in which several blocks of dhowrahs were wrecked, thereby resulting in six deaths and forty others injured. When the widow of Juman Khan filed a compensation claim under the WCA, 1923, she was denied any compensation. The management argued that the fatality did not occur “in the course of the deceased’s employment”, hence it was reducible to the status of “Other fatal accidents”. N.P. Thadani, Commissioner of Workmen’s Compensation, made suggestions to government that all accidents like those of Juman Khan should be regarded as hazards and the victim should qualify for the necessary compensation.9

The casualties that occurred at an abandoned quarry remained squarely discounted. Such occurrences took place in three ways: the person visiting a quarry for a bath would fall or drown, as did those who visited the quarry to get coal from an abandoned seam. The authority declared some of these mishaps, even as the late 1940s, as attempts at suicide by the persons under ‘mental depression’ (Barraclough, 1949: 162.). The disregard of such social losses was predicated on the inability of the Mines Department to fix responsibility for such occurrences. Hence, the person visiting the
abandoned colliery was by nature at fault. The Coal Mines Committee headed by L.B. Burrows, constituted to look into the spectacular surge in accidents in 1935-36, recommended a general stowing and fencing of the collieries, including the abandoned ones. The IMA (Amendment), 1939 instituted the Stowing Board and empowered it, under the Coal Mines Safety (Stowing) Act, 1939 either to financially support the owners of abandoned mines to undertake stowing and fencing or took initiatives of this kind on its own in order to reduce possible fatalities. Notwithstanding this, the abandoned black-hole continued to swallow a few individuals every year, and the incidents were merely classified under the head of “other fatal accidents”.

The fatality rate per million tons in Indian fields presented a far gloomier picture than rates tabulated in Britain and the USA. Any reference to the higher productivity obtained with machines in these countries would be premature, since the mechanization of labour in mines led to the generation of materials which aggravated hazards. In India, the combined rate of fatal and serious accidents per million ton of output was on the upsurge from 1918-19.

Chart: III.
The critical silence

There were many silences and discrepancies in the statistics on work hazards referred to above, which appear to have been purposeful. There was what Dipesh Chakrabarty (1989) has called in case of Calcutta Jute mills the ‘black spot in the employer’s vision of working class condition of life and work’. The disregard for any accounting of occupational diseases was one such area despite the contests till the late 1950s. The mining regime took almost six decades, as in the Jharia coalfields, to recognize the presence of occupational (industrial) diseases afflicting colliers. At first, the Mines Act, 1952 recognized the eruption of some diseases like pneumoconiosis and silicosis as emerging from certain mining occupations and causing lung disabilities. This led to the permanent inability of the person to perform any heavy, strenuous task at a certain stage of the career. The Workmen’s Compensation (Amendment) Act, 1959 declared such cases compensable. Meanwhile, the Mines Act, 1952 had laid down rules concerning the reporting by owner/managers and attending medical practitioners of the occurrence of any such disease to Chief Inspector of Mines. Additionally, the Central Government held the power to appoint competent persons to investigate and report on cases of occupational disease. Such a committee, headed by M.N. Gupta (Deputy Chief Advisor of Factories) and involving the Mines Department, was appointed in 1960-61 for one year. It reported that more than 18 percent of coal miners, in contrast to seven percent in the UK, were suffering from Coal Miner’s Pneumoconiosis (CMP) in the Jharia and Raniganj coalfields.

On hindsight, such discoveries appear as a revelation to the Mines Department and the employers who continued until then to claim the absence of any industrial disease. The majority of workers who were infected, pointed out J.H. Lang (the Provisional CIM), were diagnosed with ankylostomiasis, popularly known as hookworm. The latter was responsible for causing anemia and hence the loss of industrial efficiency, but that did not amount to any occupational disease because “This is... common to all classes of Indian labour” (Whitely, 1931, Vol. IV. Pt. I: 224; Deshpande Report, 1946). The preponderance of hookworm, besides the annual onrush of cholera and small pox
drew medical attention in the 1910s. Consequently, G.W. Thompson, the medical officer of the Jharia Health Board (JHB), exhorted colliery capital in 1920 to provide boots to all colliery persons to prevent the alarming growth of hookworm patients among the colliers – the prescription R.R. Simpson (CIM) again offered in 1924. Yet colliery managements refused to classify hookworm as industrial disease. They worked out a distinction between the general health problem and the particular ones associated with mining life. There was no consideration of why the general health problem like hookworm could become so pervasive and acute as to affect ninety percent of the mining population, especially underground working persons. It was strategic maneuvering and statistical juggling. ‘For boots, the hookworm has come. We don’t know what this means, but we suppose it means more expense’, responded one colliery owner, a leading member of the Indian Mines Federation, upon the proposed cess by JHB to provide boots for the miners. On the other hand, the employer presumed that the infection of Indian hookworm, in contrast to the conception of R.R. Simpson, was not harmful and, hence, an exceptional case of anemia that was serious enough to make the labourer unfit for work (Whitely, 1931, Vol. IV. Pt. I: 200.).

The failure or unwillingness to recognise industrial diseases led to discursive investments in explanations of health effects stemming from the mining environment. Indeed, colliery employers came out with a concept of “Natural Death” that allowed the mining authority to brush aside a number of fatalities whose causes were in the mining environment. The application of the technique of ‘finding the gaps and filling in the blanks’ while scanning official documents readily provides some clues in this regard (Barraclough, CIMAR, 1949: 164). One finds the mining authority preferring to discover causal concepts like “heart failure”, “loss of eye-sight and suicide”, “death in room after work due to ganja smoking” (CIMAR, 1908,1915), “lung diseases” (CIMAR, 1935), and “epileptic fits” (CIMAR, 1908,1949: 169) to explain many a death among the mining classes. Yet disease and death were caused by excessive exposure of colliers to coal dust, and nitrous fumes (nitrous oxide, nitric oxide, di-nitrogen trioxide, nitrogen oxide, and nitrogen dioxide), and carbon monoxide (Co), methane, arsenic, beryllium, cadmium, fluorine, lead, mercury, silica, noise, and the grueling heat. A regular and excessive exposure of colliers to these toxic and enervating effluents and influences appears to
have resulted in their physical degradation and the deterioration of pathological - mental orders thereby leading to what Amalendu Das has called (1988), their “silent, slow, and steady demise”.15

The official failure or unwillingness to recognise the deterioration in the pathological - mental conditions of miners and their consequent susceptibility to workplace risks was offset by such recognition at the existential level. As early as 1896, J. Grundy (the first Inspector of Mines) was taken aback to observe that miners in the Punjab Khost and Khewra were known to take visits to recover health and strength for about two months in every year. They used to live for that time on the high land at some distance from the mine:

I did not find that the miners were more subject to diseases than others of their fellows; even where special diseases prevailed such as guinea worm, goiter, etc., or where there was a prevalence of fever, pneumonia, enlargement of the spleen, the miners did not appear to be more subject to these than other people, or to suffer more or longer when they were the sufferers. But, at one part of the country I found there was a belief somewhat prevalent that working in the mines had a very bad effect on the workmen’s health; and some people went so far as to say that at Khewra it was common talk amongst the natives to the effect that men working in the coal mines could not work for more than a month at a time without having a long rest at home to recover their health and strength. Even at the large salt mine at Khewra, the miners entirely leave off work in the mine for about two months in every year, and to go to live on the high land…The ordinary remedies appeared to be used, that is, such as are used in other parts of India. For instance, Pachak as a digestive and stomachic. Some of the peculiar and extraordinary remedies, amongst others, were such practices as being bled by experts, at least as often as yearly to improve their health, and the burning of cattle with hot irons to cure them of sundry diseases (Dept. of Rev. and Agri. 1896: 13). (Emphasis mine)

We find Grundy’s astonishment as characteristic of all the subsequent observations shared by the Inspectorate and employers for several decades thereafter. Despite the findings of Grundy, they nevertheless argued that mining was not injurious to health of the worker in India. The work intermission and rural visits that miners undertook for rest and health recovery were interpreted by employers and mining staff as the expression of the migratory and temporary character of Indian miners, who were therefore undeserving of “western” social insurance programmes. (Dept. of Rev. and Agri., 1900: 07). At times, employers like W.C. Banerjee (a lord of a dozen collieries and a managing and selling
agent for a number of other collieries) favored the rural harvest visits of miners in the interest of health regeneration, rather than take responsibility for the degradation of workers’ health in the mines (Foley Report, 1920: 66).\(^{16}\)

Miners looked for a mix of remedies that came to terms with the exigencies of occupational health. Many explained the high proportion spent on drinking by the belief that liquor helped bring out the dust inhaled during mining, and aided their survival in this hazardous, dusty situation (Whitely, 1931, Vol. I; Prasad Report, 1941, Vol. II, Pt. I: 342). A collier’s ditty offers us insights on how they confronted mining accidents and the resultant casualty:

\[
\begin{align*}
\text{Our hand, hard and callused, Our insides dark with dust, \\
The warm Damodar flows on, Oh! the heat, the heat, Tortures me on and on.}
\end{align*}
\]

The workers’ recurrent reference to their existential struggles did little to move the long inured mining officials. ‘Coal dust appears to produce as little ill-effect here as in mines in England and elsewhere’, stated N.P. Thadani, who was one of Civil servants who headed the JHB, and was the Commissioner of Workmen’s Compensation in 1929. As late as 1946, the Bhore Health Enquiry Committee, the first comprehensive survey on the question of health on Indian subcontinent, did not find any sign of either pneumoconiosis, silicosis, cellulites, miner’s nystagmus (night-blindness), or ankylostomiasis among those huddled in the black villages. The Bhore Committee, though, noticed pervasive hookworm infection, the consequent anemia, and the respiratory problems of the underground colliers. In a remarkable contrast, Dr. V.R. Khanolkar presented, through his memorandum submitted to the S.R. Deshpande Labour Investigation Committee in 1944, the earliest exposition on the health problems produced by the occupation itself:

The health authorities ignore the existence of silicosis in their published reports and it is probable that many deaths resulting from it lie hidden in the unsorted block of respiratory diseases, which occupy an imposing place in Indian vital statistics. So far as silicosis is concerned, most of the mine doctors stated that they had not come across cases of this disease, although a few cases were reported from Giridih...Silicosis was not discovered in any of the other centres. Also, except in one or two mines medical opinion was that miner’s nystagmus did not exist in this country...Night blindness is fairly
common among miners in the large coal fields. In most of the hospitals visited in Bihar, cases of *Asthma* and those of *Pneumoconiosis* [respiratory diseases] were largely in evidence. It would appear that these two diseases have something to do with the nature of underground. *It is possible that these occupational diseases do not exist but it is equally possible that they are not diagnosed.* Considering that, there are very few dispensaries and hospitals in the coal areas, which have well qualified doctors with the necessary equipment, such as an X-ray apparatus, a microscope; it is not possible that the average dispensary doctor is in a position to diagnose these cases. This also applies to the incidence of *tuberculosis* (related to lung and bone problem). There is a strong prime facie case for arranging a periodical examination of miners by experts, and also for equipping hospitals with such medical and surgical equipment as would make the diagnosis of such cases easier (Deshpande, 1946: 189-192).

Dr. Khanolkar offered a meaningful critique of the Bhore Health Survey conducted by the wartime social development department. Additionally, he defined a novel social development agenda and imagined a new [working class] ‘public’, who had both a critical engagement with the development policy and recognition of remedial measures, while encouraging the mobilization of public opinion. A number of such Khanolkars emerged, including Dr. H.C. Mookherjee (a left-nationalist economist) who began to advocate the idea of the nationalization of the coal industry for resolving perilous mining issues. The actions of the National Ministry, after 1946, and labour reactions from the late 1940s inaugurated a new period. The Mines Act, 1952 and the Workmen’s Compensation (Amendment) Act, 1959 which notified some of the occupational diseases, made a reference to Khanolkar’s memorandum. To address the problem of equipment like X-ray machines required for examining the condition of afflicted labourers in the coalfields, the newly formed the Mines Labourer Welfare Fund Act (1947) set up well-equipped central and regional hospitals by 1950-51 (Chapter, ‘Humanising Space’). The hospitals received an overwhelming response from workers. However, the general statistics prepared by the Inspectorate continued with the column for other fatal accidents, which included the instances of ‘slow, silent death’.

The particular methods of recruitment and the geophysical aspect of the colliery work ensured that those working underground bore the brunt of roughly ninety percent of hazards. Similarly, most sufferers (roughly 85 to 90 percent) were the men, including the adolescents and adults, especially since the woman and children faced withdrawals from
underground mining in the late 1920s. Male miners constituted more than 55 to 60 percent of the underground workforce, and bore the brunt of a continually changing scenario. Nearly all the victims of hazards were direct producers employed for cutting, loading and tramming coal, and preparing the propping system, and produced other supporting and safety arrangements in fragile zones. Very occasionally, one or two persons of supervisory [staff] ranks like overman, junior manager, and inspecting officer were trapped. Such cases occurred particularly at the moment when they went for special inspection visits. A significant number of women colliers were the chief victims when employed as carriers in quarries. There the narrow and sharply sloped-pathway, formed for up and down movement, frequently led them to lethal afflictions and demise. Carriers fell from that narrow pathway, and dropped coal-pieces, causing damages. Children and infants were among the most vulnerable in the mining areas.

Illustrative cases of Pneumoconiosis as reported by the Pneumoconiosis Committee (1960-61)
Case No. 86. M. A. Minor No. 7. Married age 32 years married 21 years
of which 7 years as Munchi and 17 years as Overseas, married with 1 child-
dren.

History. Complained of productive, frequent and distressing cough as-
sociated with effort, worst in the morning, attended with paroxysms and
giving rise to exhaustion after coughing, with coal-stained sputum and tenac-
cious sputum and breathlessness on exertion which came on gradually.
chest pain, fatigue, asthama, complained of inability of an advanced degree
with cough, weight 173 lbs, height 172 lbs. 

Chest examination revealed chronic bronchitis and emphysema with mottled all over
both sides. Hb. 142 gms. Radiological category 1 with increased linear
markings mostly on the left and punctiform opacities mostly confined to the
left lung in the mid and the lower zones hilar shadows enlarged with pro-
minent a uric knuckle.

Case No. 46L.—B. J., Male No. 7, Rajput, age 41 years, service 13 years as
Stone Cutter married with one child, exposed to 14 nipper.

History.—No complaints. Height 164.5 cm, weight 100 lbs., V. C. 2.5 litres,
Hb. 13.5 gms., chest examination revealed bronchial spasm alone, radiological
category 2 with punctiform opacities over both lung fields.
Case No. 144. B. K. F. Male. Age 45 years, at present working as coal miner for 14 years, and has worked as leader for 4 years. Thrombi for 14 years and in the left kidney for 3 years married with one child exposed to tubercle.

History. He complained of an intermittent and moderate cough with purulent sputum and breathlessness on exertion which started suddenly about 150 cm., weight 92 lbs., V.C. 1.5 liters, R.B.C. 4,000,000. The chest examination revealed increased bronchial sounds and few chest rales. Chilling of left arm. Mediastinal angle 3 cm., uniform area punctiform opacities over both lung fields with impressions on the left side.
So far, we have noted four elements in the discourse on occupational hazards and health. There was persistent underestimation of the scale of workplace hazards and the consequent social losses, there was widespread statistical jugglery on the part of mine owners, there was reliance on the innate capacities of Indian workers' to withstand disease, and there were distorted representations of the causes of accidents and disease. The growth of public concern – which arose from an ethics of republicanism, paternalism and industrial democracy – led to intellectual and political engagements with the possibility of offering workers some relief. As a corrective measure, the association of colliery workers, ICEA, insisted, after the 1920s, on the necessity of involving labour unions in the preparation of statistics and in investigating bodies like Courts of Enquiry, Mining Boards and the Mines Department – besides demanding representation in all the legislative bodies in the interest of fairness, justice and equity. While their demands were recognized, by both the Mines Department and the Whitely commission, it took two decades, and the independent nation state, to institute some measures. Labour representatives were now included in the decision-making committees and mining boards, such as the Stowing Board, Mines Labour Welfare Board, and Industrial Committee on Mines. Furthermore, the Mines Act, 1952 laid out provisions for the mandatory display of an accident list to allow for scrutiny by the labour associations and allowed corrective interventions on their part. The consideration of the human element in accident causation and the importance of safety education for mineworkers to promote industrial safety, mooted through the Safety Conference, 1958 turned out to be the final front of accident control efforts (Chapter, 'Negotiating the Mines').

In sum, the mining regime functioned, to use the words of Gadgil and Guha (2004), in a manner characteristic of despotic, bureaucratic regimes.

**Modes of assessing social loss**

Statistics never stands as a box of abstract figures. Moreover, the panoply of accident control measures would depend, not on aggregated statistics of loss and suffering by workers, but on the appreciation of the value of a single unit of such social loss and its impact on other decisions concerning wealth formation. Moreover, the working person
continually came to terms with threat of physical ruin or sudden affliction. No simple accounting of the number of accidents and casualties could possibly indicate the existential challenges of each worker. The individual and social suffering of affected workers far exceeded the monetized terms in which accidents were discussed or compensated. The assessment of the affliction and the recuperative measures offered by the mining authorities fell short of such exigencies. Mining hazards resulted not only in individual human loss or bodily harm and damage, but also public or social loss, the wastage of national resources, and environmental degradation. In this section, I primarily focus on the safety concern and its relationship with the first two varieties of [human] forfeiture; for convenience in the language of economics, I call it Miners’ Asset Damage Liability (MADL).

The industrialist-class tended to resolve the problems of workplace risks in two ways, i.e., by talking of ‘avoidable’ fatalities and stressing the individuality of human loss. Workplace risks could be reduced to safety measures. The industry registered an increase in output between 1899 and 1900 (by twenty percent), but ‘it is gratifying’, wrote Stonier (CIM) at the beginning of the 20th century (1901), ‘to note that there is a decrease in the number of fatal accidents and deaths’ (CIMAR, 1901: 4). Yet the ingratiating optimism of Stonier turned out to be ill founded. Alongside increases in the output particularly between 1906-08 and 1915-19, was the surge in the number of fatal-accidents (fifteen/ five percent) and the number of serious injuries (fifteen/ five percent) between 1900 and 1921. However, when there as a slump in output, there was no concomitant fall in the rate of fatalities and serious injuries, until the late-1940s when the fatality rate showed definite signs of being reversed. Again, in the 1960s there was a serious rise in proportion of injuries. The combined figures of the fatality and serious injury rates constituted one fourth to one-half of the mortality rate in the mining settlements in this period. Not only did this combined figure swell, along with the horizontal and vertical expansion of the mining activity until the early years of the 1960s, it did not match the drop in fatality rates. It was, hence, an embarrassment to the self-congratulatory talk about the enhanced safety measures peddled by both the colliery management and the public office.
Chart: IV.

Decadal Fatality & Serious Injury Rate per Thousand Persons Employed in the Coalmines in India.

- Fatality
- S. Inj. 0.1 = 01

Chart: V.

Trend of Accidents & Casualties in the Jharia Coalfields

- F. Accidents
- Fatalities
- S. Accidents
- S. Injuries
- FA+SA
- Prod MT
- W Force
- years

Years

Frequencies
Not only did the self-congratulatory tone underestimate the problem of serious and minor injuries, it also overlooked the complications brought about by these incidents in the life of the person at the receiving end. A noticeable number of the afflicted persons succumbed to their injuries beyond the actual sites of occurrences, in hospitals and village homes losing limbs, sight, mental and sensory abilities, or developing conditions such as anemia. (2) Disabled individuals were doomed to live out a handicapped existence, usually as an unwelcome dependant; in the sheer absence of proper rehabilitation measures and social insurance. Most such colliers fell back on their rural bases, while a few others were reduced to vagrancy and beggary. The pathos of the disabled individual, Asumania Santhal (a woman ex-loader in Loyabad colliery) was revealed before the Whitely Commission:

My husband, who is now dead, was a coal cutter in this mine, and I used to work with him. I had a son who died a few years ago. I have nobody to look after me. I am disabled and cannot work now. I am in this mine ever since it was started. When Mr. Letch was the manager of this mine, I used to get an allowance of Rs. 5 a month, a blanket, and a pair of sarees a year. After the departure of Mr. Letch I am not getting anything. I do not know why my allowance has been stopped. The children of my daughter feed me (Whitely, 1931, vol. IV. Pt. II: 126).

The accident took its toll of her husband, left her disabled and dependent for the rest of her life. The plaintive experience of the loss of independence besides the resultant material suffering in a context of little or no social support prolonged her agony despite her extraordinary fortitude.

The public outcry: the demand for reform

The irredeemable mismatch between the MAD acknowledged by the Industrialist-class, on the one hand, and the ‘popular’ experience or recognition of distress is revealing. The former refused to consider the gravity of the structural causes of such afflictions among workers, and reduced it as individual human losses that took place at work. In contrast, there were critiques from the turn of the 20th century, which recognized public loss in the coalfields. The Berlin International Labour (Mining) Conventions (1890) was an early
effort that led colonial governments to initiate recognition of the problem of health and safety of miners, especially among women and the children. It effectively resonated in the 1890s to culminate in the first public [legal] counteraction known as IMA, 1901.24

The annual report prepared by Inspector of Mines, focused on the number of fatalities and serious injuries, which now occupied centre stage as an expression of gravity; the pattern of development guided the public office responsible for offering prescriptions on how to contain hazards and protect the miner. This is what Reeder, officiating Inspector of Mines (Britain trained mining expert), reported in 1900 to Viceroy Curzon who put through the first IMA, 1901. Reeder highlighted the problem of the inhuman disregard of working conditions in the mines despite the public nature of the human losses:

In his inspections, he had repeatedly found an utter disregard for human life and the many mines were conducted on such inhuman lines that some remedial action ought to be taken. In many of the mines, the headgear and winding apparatus were unsafe. Elsewhere there was no attempt at proper ventilation. In one case, two hundred and fifty people (men, women, children, and infants) at work, where the ventilation is nil, the air as foul in the extreme with smoke and gases, and the conditions as unfit for human existence. In two other gaseous mines, huge fires kindled in the working galleries, and naked lights suspended from the roof where the cutting was going on. Infants are allowed to be carried and put to sleep in foul places incompatible with health or safety. In another case, three deaths had been caused by a fall of overhanging sand stone due to incompetent management, and the lives of sixty-five other people were in danger from the same cause of this proving that so little concern was felt for the safety of the miner that no steps had been taken to ensure it even after the accident referred to previously (Dept. of Rev. and Agri., 1900: 07).

In a similar vein, Prof. V.G. Kale, while addressing the Indian Industrial Conference at Lahore in 1909, suggested an Indianisation of the mining industry in the interest of progress and safety. Our discussion will suggest that this modern aspiration notwithstanding, the industry suffered from significant gaps.25

The measures to ameliorate the risks faced by workers took two forms. (a) Introducing a regime of advanced safety measures, with the necessary punitive provisions for infringement, and (b) introducing a rehabilitation programme. *The concerns about the conservation of metallurgical coal in the interest of industrialization project, although, attained dominance in the official public views (including the*
nationalist) since the late 1910s; hence, the government instituted a number of enquiry committees and formulated legal provisions, including the IMA, 1923 and Indian Mines (Conservation) Stowing Act, 1939.

The concern for restitution of victims was expressed in the Workmen's Compensation Act, 1923-24. The Act adopted a simple compensation principle, whereby the amount payable was determined by the difference between employee's wage earning capacity before and after accident, if the person was not responsible for his/her the accident. 26 The contentious provisions of such 'economic difference' apart, the compensation provision at best covered the financial losses incurred by worker's household, but did not compensate the worker for physical disability, the emotional or social disruptions. 27 Indisputably, the compensation scheme was an expression of an effort to revive the impaired or afflicted human person. We have already seen how the widow of ex-trammer Jamun Mia, killed due to Mudidih subsidence in 1928, was denied any compensation claim on frivolous grounds. Although, the WCA categorically laid out restitution claims in favour of a person who was injured "in the course of and out of employment", the skewed emphasis on only the first half of this statute -- in course of employment -- defeated the second half in the law court. Others experienced a similar problem in staking a claim: as Thadani pointed out:

...my experience of the administration of the Act shows that the limitation is extremely harsh and undesirable in the case of fatal accidents and accidents resulting in serious permanent disablements. In my opinion, this limitation should be subject to an exception, compensation should be admissible in all fatal accidents, and accidents involving serious permanent disablements proceed always that the accident arises out of and in the course of employment. The more and more the consequences of this limitation are witnessed in the actual administration of the Act, the more and more obvious becomes the hardship of this limitation, till it becomes doubtful if the legislature could really have intended to put such fatal and serious accidents outside the protection of the Act. It is certainly against all ideas of justice and equity and somewhat even against common sense to deprive a dependant of compensation in fatal accidents. In my humble opinion the limitation nullifies the essential object of the Act which is to alleviate distress out of industrial accidents...We cannot punish the dependants for they are in no way guilty or responsible for breach of discipline or rule. We cannot punish the worker as he has already paid the highest penalty; a penalty which is altogether out of all proportion to what could have been inflicted for disobedience of an order. I have had to inform widows with two children in arms...
and four minor children that they cannot be granted compensation because the husband and father had disobeyed some rule, which she is incapable of understanding. ... Even if the employer is successful I suspect that he is not altogether happy in having asserted his legal right (in England it is the worker’s legal right) with the consciousness of having defeated a moral right, which he must feel to be on the side of the widow and minor children of the deceased worker. Such a feeling is inevitable for both parties, as consciousness of moral rights and obligations is not “geographical”... Besides such legislation is inevitable now, or in the hereafter. It is a part of social ethics, and good business also.28

This good-business paradigm would ethically take care of ‘unemployed’, workless and marooned humanity, but appears to have been elusive to the existing capitalist order of things. Hence, his recommendation for compensating all afflicted households would become a reality only after three more decades (WC(A)A, 1959.).

Very soon, the economic [compensation] scheme of things seized the imaginations of both the public office and the miners’ association. It preoccupied them, despite memorandums dealing with ways of preventing perilous mining. The labour associations undertook everyday struggles for improved and easy access to compensation benefits. The latter included the provision of adequate medical aid, compensation to all, less litigation and full salary against the practice of half-salary of a worker as compensation money. Such struggles decidedly helped workers mitigate their suffering, and earn significant benefits; hence the Jharia legislative constituency sent P.C. Bose, one of the long-standing fighters for such labour rights from mid 1920s and activist of the communist movement, to the Bihar Legislative Assembly in November 1945. Responding to the question about why the colliery safety-movement was timid and in a state of entropy, Bakshi Da, a communist labour activist and a science teacher in colliery school before that, emphatically stated in 1966:

... the acute concerns of those colliery struggles were security of Pet and Izzat (dignified social standing) which were regarded tantamount to the graduation to the status of Aadmi (politicso-social humanness embodied being) and improvement over the afflicted status of Bandhua Mazdoor (bonded/forced labour) akin to cattle in the contemporary fields. ... Somewhere, in such colliery movements, the issue of security from workplace risk failed to receive due attention and political energy.29
The miners’ experience of frequent hazards had no parallel— in terms of form, scale, frequency and the effect—in their previous life worlds. The miners’ situation also stood apart from workplace risks that the factories and workshops in Calcutta, Jamalpur, Jamshedpur, Kanpur, Ahmedabad, Bombay, Madras, and the several other docks and ports faced.\textsuperscript{30} Joseph Bhore (1946), Chairman of the Committee for Health Survey and Development, said that miners were far from compensated by the “earning difference” they were awarded since the challenges they faced included personal and collective grief, mutilated limbs, loss of sight or hearing, requiring adequate and sustained medical relief and rehabilitation programmes. The latter should include, he suggested, supplies of artificial limbs and artificial eyes, and the retraining of the afflicted to enable people to lead dignified life.\textsuperscript{31} His argument for a fuller rehabilitation agenda was much superior to of the social insurance grounded in economic contents articulated by the labour publicists from the mid 1920s (Dept. of Ind. and Lab., 1935: 3019 (5)). Bhore’s assessment of the costs of such a programme was much in excess of the “earning difference”. In a similar vein, H.C. Mookherjee (1945-46), attempted to generate public opinion in favour of sincere efforts to transform the precarious mining life, which he believed, was only possible through the nationalization project, which alone would ensure that the safety regulations would be followed.\textsuperscript{32}

The normalization of the colliery order

The general views discussed above shared one common development principle with three elements: that modern industrialization was inevitable; safety measures would mitigate risks; and compensation and restitution schemes would rehabilitate workers. These proposals captured the imagination of common miners, too, and from the late 1950s, began to demand jobs for a family member of deceased miners in the colliery, and rehabilitation programmes for the injured, and alternative surface jobs to the disabled collier. Of course, there were areas of experience and necessities, which did not allow quantification and financial accounting. There were folktales that expressed the tortuous and terrifying experiences of the ‘sad collier’, her/his longing for relatives, and the
fortitude to face ‘disagreeable’ discomfort. Miners moved, in the early period, to the plantation from the dreaded mines, or moved away from the more hazardous deep pit to shallow quarry. Therefore, there was the movement of colliers between collieries, which was resented by the capitalists. No wonder that men and women discouraged their children from taking up their professions, as in Kesho Rawani’s serious advice to his son Shivanandan Rawani: ‘As long as I am alive and able to earn money, you need not take up underground mining’.

Over time, a two-fold tendency evolved in the mining world: the reification of collieries as the womb of the goddess Kali and compensation struggle in the aftermath of the colliery accident. The reification of underground labour and the propitiation of otherworldly spirits such as Khadan – Kali served as insurance for miners. (Chapter, ‘Negotiating the Mines’). Two points are worth noting: (a) the belief in spirits of the underground did not fully occlude concerted endeavors to prevent the chance of accidents; it coexisted with (b) the miners’ knowledge of and engagement with, over time, the rules of the game of compensation and restitution. Nevertheless, it was the latter activity of miners that served to ‘naturalise’ and normalise the industrial order, which was ridden with hazards and made for a very precarious existence. Md. Yakub (a loader employed at the Bera colliery) reflected on this normalization effect: ‘Our working in the coalmines and going into a war by a Javan (the soldier) are similar acts. The demands of risk and fortitude characterise both the works.’

The discourse of industrial sacrifice encouraged by the labour associations such as the National Mine Workers Federation seemed to inform the opinion of Yakub. The union regularly depicted the fatality and injury borne by colliers in colliery works as sacrifices made by the former to serve the cause of industrial progress in republic India. The coal industry was a strategic industry on which the prospect of overall industrialisation depended. Hence, the sacrifice of miners made in the coalfields was tantamount to a nationalist sacrifice, and a matter of pride. For instance, labour associations of all shades decided to commit themselves to industrial peace and long workweeks during December 1962, when national government called on them to contribute to the national war (Prasad, IMA, 1963). The smarak̆s (monument) built in the
memory of the persons who sacrificed life in the Chasnala disaster (December 27, 1975) amply represented the new ethics of production politics.

Photograph (I) of the smarak of the Chasnala Disaster Presenting List of the Colliers Sacrificed/Martyred their Lives in the service of the nation.
The normalisation and naturalisation of workplace risks meant that the mining society began to see frequent instances of accident, resulting in 'only' a few fatalities or
injury, as ordinary daily affairs as against disasters that caused a larger number of fatalities. Rai Jee (one retired Onsetter employed at Chasnala colliery) expressed such a view, when he stated his observation on the condition responsible for the notorious Chasnala disaster occurred on December 27, 1975:

A debased mining community developed by the mid-1970s at the Chasnala colliery trembled, and its world turned upside down when it faced the disaster which took of the lives of three-hundred-eighty members in one shot on December 27, 1975. This woke us up from the moral and spiritual slumber into which we had fallen, taking us from a stupefied and in-fighting existence to self-purification and fraternalism.36

At the time of 1975 disaster in Chasnala colliery, he was employed there as a Chanakman (Onsetter) on the face of the pit number one. It was a night shift. The detail he provided me is as follows:

By the 11 o’clock of the night shift work (Friday), the overseer, Mukherjee, asked him to lift all the coal tubs filled by that time. The numbers of tub were twenty-seven and were placed in two galleries. He told Mukherjee that his team usually took all the tubs from around four o’clock. But, Mukherjee told him that the situation was urgent and that he (the onsetter) should drive all the tubs soon, as a great danger was expected. The flooding was taking place beyond the capacity of the water-pumps installed. A blast would result in an explosion, followed by a disaster. After all the tubs were lifted at 12.30 pm, all the miners including the Banksmen were withdrawn from underground. The overseer and the mining sirdar, Singhjee and (Mia, made an entry in the production notebook that no fresh blasting could take place until and unless some a sound arrangement was made to meet the problem of water flooding from the coal seam at the working face. Mining was going on at some 1800 feet depth at that time. Both these personnel were regarded very tough, and they knew that they would be held responsible for any untoward happening but also concerned themselves with the safety of other mining staff.

At the time of the next shift, 7 Am., the mine manager compelled colliers to go down into the pit number one. One of the mining sirdars, (Mr.) Upadhyay was goaded on to carry out blasting and assuage any fears of explosion among his gang-men. The overseer, Mukherjee, had to accompany this new team of mining majdoors underground due to the absence of the morning shift overseer, but was nevertheless determined not to permit any blasting. But, (Mr.) Upadhyay either without seeking any formal permission from his overseer or in brute defiance, was tempted to allow the blasting of coal by nine o’clock. The other loaders followed him, as they used to prefer colliery works, despite all risks, to escape poverty. We were (my informant and his colleagues) resting in a field on Saturday after our
breakfast. We were interrupted by the cruel sound of explosion. As we rushed towards the pit number one, we witnessed a series of explosions, like fires of bullet and blasting of bombs, and the smoke, the water, and coal pieces forced their way onto the surface. The chanak (gin) was electrocuted too, where one onsetter, who climbed up on the top of the gin, got out alive.

The 1975 disaster was an eye opener for all of us. Before that, life in the Chasnala area was fraught with strife, squabbles, and debauchery. A regular rivalry, sometimes leading to a brawl, existed between the men recruited and commanded by the labour contractor Bachan Dusadh, on one side, and Ram Prasad Singh, on the other side, characterized the life at the Chasnala bastees. The former drew his men from the Arah and Chhapra areas, while the district of Munger was the labour catchment area for R.P. Singh. No one was safe, especially the ijat (dignity) of a mother, sister, sister-in-law and daughter. The persons hailing from the district of Munger (Bihar), recruited and commanded by the labour contractor known as (Mr.) Ram Prasad Singh and his brother Bachu Singh, used to call on the women of the Chamar and Bauri communities, and hold them for the night in their rooms at the four number dhowrahs (Rajputs pada). In the 1960s, in one of the skirmishes that occurred between the men of two groups, Ram Prasad Singh was fatally stabbed. A few years later, the Bauri men stabbed his younger brother, Bachu Singh, when he attempted to snatch away a Bauri woman in the evening from the Bauris dhowrahs, and his body was thrown into the abandoned Pokharia (abandoned quarry).

The bastees population was shaken, shattered and awakened by the 1975 disaster and had to rethink their social life and recover in a fresh manner to secure harmony, solace and peace. The long presence of the paramilitary in the bastees and a major reshuffle of the working population in the wake of the disaster also contributed to reorganization of social life.

The workers' indulgent pursuits were symptoms of the normalisation of economism of MADA, too. There the 'positive economy' of the bourgeois world reaped its harvest. The Chasnala disaster less frequently called on the colliery population to sacrifice their lives and there were renewed efforts for reforms. The disaster prompted this response not only because of the large numbers who were affected but because it represented the systemic failure of the discourse of faulting individual personnel (Chapter, 'Negotiating the Mines'). The mining community took up daily industrial battles as inevitable, but detested the industrial war, namely disasters.

The employers, in their effort to naturalise the possibility of industrial tragedy had the task of adjusting to a gradual appreciation of colliery life. It helped to address problems to an extent. This was a long drawn effort, indeed. We can see its signs way back in the aftermath of WWI, a few years before the Workmen's Compensation Act
(WCA), 1923-24, came into effect. This played a definite role in providing respite to the collier and other members of the management. We notice a marked shift through the classification of accidents according to the responsibility of different ranks of mining persons. The increased number of accidents, represented under the head called “Misadventure”, accompanied a crucial subsidence found in figures for the categories of “Fault of Deceased” and “Fault of Management”, and a marginal surge was registered in the category of “Fault of Subordinate Staffs”. The shift was only partly the result of the new legal and political effects of the WCA, 1923-24, and imposing initiatives taken by the association of colliers to articulate the agenda. Those classed as due to “misadventure” included those which were due to carelessness or mistakes on the part of the deceased and the other living persons. But, the Inspectorate simply approved the alteration in the 1920s in classification of the human responsibility which was already underway. Virtually, the new legal environment, ironically, spurred up colliery management to screw the returns on causation, such as the breach of safety regulations on the part of colliery management (Chapter, ‘Morphology of Accidents’).

Such strategic manoeuvres helped to thicken the haze that surrounded the real causes of accidents. The self-congratulatory words referred to at the outset were associated with the audacity of wrecking humanity and other resources employed; and hence a preposterously slothful adoption of safety measures that were necessary.

**Conclusion: problematising the idea of externality**

I have pointed out that classification of workplace risks was a contentious and evolving terrain. The management devised various ways to provide a decent picture of the mining activity through the statistics of accidents and the human loss. In the long-run, the mining class public evolved to demonstrate the silences in the statistics and, at the same time, to challenge the black spot in the vision of the employer towards the condition of the working classes. The manner of assessment of the risks at the workplace held critical significance for remedial measures. It depended on the meanings of work hazards and the consequent social losses suffered by workers. The meanings, in turn, were subject to the mediation of experience, ideology, and political practice. They interposed contending
meanings of human loss and of safety and restitution. These measures were articulated in
the narrow utilitarian and the broad utilitarian senses, which aimed to rescue the
vulnerable social body. The proposals for comprehensive accident control measures,
compensation and rehabilitation schemes were expressions of the new paradigm.
Ironically, even when it critiqued the inhuman work conditions of the mines, it served the
project of normalizing such risks.

Gadgil and Guha (1995/2004:122-23) have pointed out, in case of environmental
(social and ecological) issues in India, that an unenviable ‘disregard between the elites
for degradation’ is involved in the growth of a ‘high cost and low quality’ (inefficient,
wasteful, inequitable, and unsustainable) economic order. Apart from devious, corrupt
and manipulative business practices, the disregard is rooted in the elites’ ability to pass
on the cost of their existence to the ‘ecological refugees’ whom the operation of
capitalism facilitates. The resolution lies, they suggest, in an effective imposition of state
control, such as the removal of state subsidies, and a levy for degradation and restoration
to be imposed on the business elite. Additionally, there the need is to have one system
of ‘people’s’ governance. Martin, Smith, and Cummings, Ganderton & McGuckin
(1994) have highlighted the need of applying the notion of optional and existence values
for assessing the social loss (like the NRDL), and the ethics of optimal externality based
on the positive economics than any normative economics. Our above exposition suggests
how an appreciation of the cost and externality is in itself hermeneutic, experiential, and
political struggles. The output of this act – safety and restitution programme – had
furthermore to deal a lot with the politico-legal structure. The differential or antagonistic
appreciations of the affliction or MADA equally play out as discursive basis to naturalise
and normalise the operation of the wasteful and inequitable economic life, on one side.
On the other side, the very demand for externality, as an expression of economism
paradigm, serves the former process. As a whole, in consequence, the mining people
confronted an ambivalent improvement trap: whether it is vicious or virtuous.
2 Such business statements were grounded in bourgeois liberal philosophy which was based on the British industrialisation experience. It was believed that the early stages of industrial development must be dire, difficult and taxing. In contrast, in its mature stages, capitalism would graduate to abundance, guaranteeing prosperity and comfort to all members of society. Accordingly, it called on the workers to make sacrifices in the present in the interest of a prosperous future.
The function of 'ontological re-figuration' is something like the concept of 'black spot in the employer's vision of working class condition of life and work', which Dipesh Chakrabarty (1989) has detected in capital's discursive strategies, and which governed relations within the industry.

I analyse data generation processes and the possibility of alteration at four levels: at the primary level, the mine employer offers his report to the public office; at the secondary level, the Inspector presents his analysis in his annual report; at the tertiary level, the State's Archive preserves them—in accordance to its political criteria of worthiness. At the last stage, we confront not just destruction of 'C' category files as well as many of those files in their status of 'Not-Transferred'.

Ilyas Ahmed Gaddi (1982/1994) and Sanjeev (1986), non-fiction novelist, help us in understanding such incidents of disappearance of witnesses from the sight of a Public Investigator.

Deshpande, 1946: 111. The re-invigoration of the mines department and the punitive legislative environment were the chief factors responsible for a fall in fatality rate after the mid 1940s. The Mines department classified two chief sources of accidents: geophysical and mechanical factors and human responsibility. The classification helped devise technical and management focused solutions. By the latter part of the 20th century, the ministry of labour and its mines department focused on human responsibility as the cause of accidents and saw people as the key site of activism for accident control (M/o Labour, 2004).


I conducted these oral interviews between December 2003 and mid February 2004.


The state concern over the health of mining people first came to the fore in the early 1890s when the Inspectorate of Mines came into existence. Early concerns were focused on the question of general health and sanitation, and the specific affects of occupational affects of mining. The four member coal mining committee, headed by James Grundy (a mining expert from Britain, employed as Mines Inspector in 1894), did not find mining in India injurious to health. For Grundy, ill health meant of the stunted growth of persons employed. (Deptt. of Rev. and Agri., 1897). Nonetheless, they underscored the need for proper sanitary arrangements and empowered the Inspectorate for future initiatives, like the prohibition of employment of women and children in the areas of mines that were injurious to their health. The frequent attacks of epidemics like Cholera, small pox and plague, which regularly wreaked havoc, led to the adoption of some labour protection measures. They included the constitution of the Jharia Mines Board of Health in 1915, Jharia Board of Water in 1916, and the Bihar and Orissa Mining Settlement Act, 1919 which focused on the improvement of housing for colliers.

In this way, it further raises the rate of prevalence of CMP, i.e., fifteen percent suggested by Dr. K.B. Roy, who conducted in 1956 first ever survey of such occupational diseases prevalent particularly in the coalfields in Madhya Pradesh (M/O Labour and Employment, 1961). The M.N. Gupta Pneumoconiosis Committee showed that cases of pneumoconiosis were to be met with in all types of mines, whether big or small, mechanised or non-mechanised, and therefore warranted attention to all phases of mining.

A leading superintendent of the collieries proposed the universal provision of boots to colliers to lessen the severity of injuries to the lower extremities. Simpson, 1925: 12-25.


Financial contributions were made to meet the costs of battling with epidemics like cholera and smallpox Colliery capital offered a cess of nine paise (Paisa) per ton of coal raised to the JHB for the purpose of supplying water, minimal sanitation and health related arrangements.

The coal seam is known to produce a number of toxic, inflammable and combustible gases produced which stem from three components of the coal making process: organic substance, as those from plants and animals, inorganic substances, mixed up with the former in the process of natural carbonisation for thousands of years, and bacterial activity which generates gases held back in the porous part of coal seam. Carbon, hydrogen and sulphur in coal generate heat while other constituents of coal are retained and affect the human body. For instance, a miner exposed to oxides of nitrogen, in the absence of adequate freshair, is known to cause gradual loss of mental control, leading to states of unconsciousness. Sulphur in coal...
seams has a similar effect. Workers when exposed to the above two gases suffer from breathlessness and decrease of lung function, tiredness and exhaustion; and are thus vulnerable in the workplace.

16 Following the disastrous explosion of coal dust, which took a toll of 72 lives, in the Parbelpia colliery in 1922, the Provincial Government constituted the Coal Dust Committee under R.R. Simpson (CIM) to develop know-how for controlling the fatal role of coal dust. A series of valuable reports and recommendations were submitted between 1924 and 1928; but, it took the next three and half decades to implement these recommendations.

17 In 1924, Vasant Ramji Khankalkar the first pathologist in India occupied the chair of Pathology department in the Grant Medical College and J.J. Group of Hospitals (Nashik) He made major contributions to the epidemiology and understanding of cancer, blood groups, and leprosy. He was the first to show the existence of dhoti cancer, and was among the earliest to demonstrate the carcinogenicity of tobacco and the use of needle aspirations cytology for the diagnosis of neoplasms.

18 The government undertook a survey in 1960-61 to implement the newly amended Workmen’s Compensation Act, 1959.

19 Several hundred woman colliers were employed as late as 1921 as coal-cutters. See, Census Report of Bihar and Orissa, 1921. Vol. IV. Pt. I.

20 Officials often took recourse to statistical jugglery when confronted with embarrassing questions refusing to accept the reality of inadequate wages paid to miners, mining authorities usually said that miner’s wages were better than the rural agricultural laborer’s wage. Confronted with mining hazards, they referred to the new safety regulations (Dept. of Ind. and Lab. 1925: M-366 (6): 19-21).

21 ‘Memorandum of Indian Colliery Employees Association Submitted by P.C. Bose’ to the Whitley Commission (Report, 1931, Vol. IV. Pt. I. 187). Under the Indian Mines Act, 1923, a nominated labour representative could become part of decision-making bodies like the Mining Board and the Jharia Health Board. Usually, either the ADC of Dhanbad Subdivision, some colliery official (like Mr. Mackie, Bhowra managing agent) or the Chief Inspector of Mines was appointed in these bodies to represent the labourer. No labour representative was involved in the Court of Inquiry constituted to look into the disaster – except the case of Muddidih disaster in 1928 where ICEA managed to have simple observer status. The Montague-Chelmsford reform (1919) offered two seats to the two collectivities of colliery employers in the provincial Bihar and Orissa Legislative Council. During the visit of the Simon Commission (1928), colliery employers grabbed the opportunity for advancement of legislative and commercial interests by making ‘unreserved’ representations to and submissions before the commission. See Bray, IMA, 1929.

22 Gadgil and Guha (1995/2004) have discovered A similar kind of scenario in both the British colonial and Post-British [Independent] Indian state systems.

23 Interview with Karpoo Rajwar, conducted in March 2008 at his village home, Chandankari Block, in Dhanbad district. (Recorded interviews submitted to V.V. Giri National Labour Institute, Noida.).

24 The role of Berlin Convention in case of the mining reminds us of the marked role played in the latter 19th century by a few Calcutta intelligentsias in drawing public attention to the misery of plantation labourers in the Assam valley. The loss of individual miners was now equated with losses – society as a whole. Hence, advocacy called for the state intervention to regulate the working conditions and protect life of the vulnerable populations.

25 Foucault (1980, Chapter, ‘Body/Power’).

26 The Workmen’s Compensation Act, 1923 first moved away common laws that governed the matter of accidents, whereby the victim had no claim to restitution, though the employer could face the criminal charge of killing or assault when the accident was not the fault of the employee. The new law recognised the conditions of work, and hence a new type of liability was placed on employers. A half-monthly payment for the time of the disablement was ensured, and all persons who were in continuous employment for a period not less than six months was entitled to claim compensation, first aid, and proper medical relief. But tardy medical certification, by the colliery doctor (p.36.), and other conditions defeated the purpose of the Act.

27 Martin and his fellow essayists (1994) have introduced concepts of nonuse value (combination of option value and existence value) of nonmarket goods (such as natural environment) and the hypothetical market in favour of arriving at the appropriate assessment of the natural resource/asset damage liability. For the moment, I would avoid any discussion on the merit of a similar application of these concepts to the assessment of the workers’ asset damage liability. See, especially, Smith (1994).

29 Interview with Bakshi Da on 20\textsuperscript{th} March 2008, at his residence (Jharia town) in Dhanbad district.

30 A survey in 1961 suggests that the accidents occurred in 55 percent (36 percent in Bihar) of total coal mines (95 percent of the large mines and 40 percent of the small mines). These affected 36.5 thousand workers; 92 percent of them suffered from temporary disability, and 7 percent from permanent disability. The number of accident victims per thousand workers was 84 plus (59 in Bihar) as a whole and 87 in the larger mines. Of these, temporary disability accounted for 33.6 thousand persons (77 per thousand), the remainder suffering permanent disability (6.9 per thousand), and 0.6 per thousand died. This does not represent cases of occupational diseases (Labour Bureau (Srivastva Report), 1966: 88). The accident rate in the mines was 3 times higher than factories, and the fatality rate was 10 times that in factories and 3.5 times that in railways.

31 Bhore was an ICS and member of the Labour Department. To him goes the credit of regular investigation of occupational diseases afflicting the industrial worker and the factors associated with these (Bhore Report, 1946: 76).

32 H.C. Mookerjee's (1945-46) suggested that an exclusive focus on how to mitigate work hazards was better than scrambling for compensation regime. The labour association paid a heavy price for this 'blindered vision' applied to the question of insured mining life (Chapter, 'Safety Politics').

33 Chakrabarty (2000) has studied the ability of capitalism to fully subsume and subordinate the humanity to its order of things. He has broken down the fact of human nature in individual's life in two components, human-excess and social-necessaries. The latter submits itself to the affect of social construction project of capitalism or for that matter particular order of things; but the former is 'innate' substance of being/humaness like regenerative necessary that humankind essentially embodies, and hence its logic is inalienable and in-alignable with the logic of capitalist accumulation. 'Capital cannot satisfy', proposed Chakrabarty, 'human-excess'.

34 Interviews: December 23, 2003, Bera Colliery, Muhammadan baste. He worked in the colliery since the 1950s, and became the activist of the communist labour union in the late 1960s. He migrated from Pratapgarh district in UP. He retired from colliery work in 2001.

35 The march of the miner from the status of a mortal soul to the sacrificer or martyr hints at a revolutionary political journey; at the emphatic emergence of the proletariat as a social force to reckon with. I will map this journey later.

36 Rai jee (an immigrant from the Arah region) had worked in Chasnala colliery since the WWII. Interview with Rai jee, April 03, 2008.

37 The positive economy of liability, in contrast to the normative economy of liability, shares the ethics of a liability or externality that is informed by the concern of incentives for the agent responsible for own redemption and, at the same time, operation of the industry (Smith, 1994).

38 Two Ravanis hinted at a history of stabilization of the uprooted peasants and artisans in the industrial territory in the 20\textsuperscript{th} century.