Part II: Chapter VI.

Negotiating the Mines
Politics of Safety in the Jharia Coalfields 1890s—1960s

It is regrettable that the discipline maintained in Indian mines is far below the standard attained in other countries. During the year at a certain coalmine, a miner went down the mine after absence from work for a fortnight. Instead of going to the sirdar for instructions, he drilled a hole and fired a shot in the corner of a pillar of coal, and was the cause of another miner being injured. ...Most of the labourers in Indian mines are illiterate and ignorant men to whom ideas of discipline are something new and difficult to comprehend. They are, however, amenable to discipline, and it is one of the most important duties of a manager to train the labourers in "safety first" principles both by personal example and through subordinates. At many mines, a great deal has already been done, and at this mine after a change of management, improvements were effected. ...In the course of an enquiry into the circumstances, it was disclosed that during the night shift on which the accident took place there was no underground official on duty. And, this had come about because the night shift overman had been acting for the day shift overman who was ill and the night shift sirdar had been taken ill and had failed to report his ability to go on duty (Simpson, CIMAR, 1928: 19).

That was how R.R. Simpson (Chief Inspector of Mines), while reporting in 1928 on the circumstances responsible for dangerous mining, summed up the problem of development of safety wisdom amongst miners in the Jharia coalfields. His anguish draws our attention to the problems of work discipline, working techniques and mining sense of the colliers. An enquiry into the colliers' work belief, experience and work pattern is necessary to grasp the dynamics of development of a mining-labour community that lived a precarious existence. This chapter will explore how mining
capital perceived the connection between safety politics and systems of labour subordination, and how miners negotiated the dangers in the mines. I will try and explore how miners conceive and articulate their ideas of safety. Taking a cue from Burawoy (1985), my attempt will be to see how the cultural and political locus of the worker helps them adapt to work relations.

Working in the colliery

The industry adopted a production method, officially known as 'slaughter mining', some of the features of which were as follows: the employment of untrained colliers under a few trained supervisors, a productivist anxiety, working under minimalist safety essentials, and the handicraft-type labour-process. In the workplace, especially underground, colliers (such as coal cutters, loaders and trammers) worked in gangs of ten or twelve, and occupied an 'autonomous' territory so as far as the execution of tasks was concerned. While executing a mining plan outlined by the manager and the overman, the gang of colliers and other direct producers (such as line-mistries and timber-mistries) were responsible for the testing of gasses, for checking the supporting roof and sides, and for assessing the right size of pillars. A gang of colliers, under the leadership of a gang headman, relied on their collective practical skills. Working at the mine's face, where the geophysical condition could undergo a sudden change, was danger-ridden. W.H. Pickering (CIM 1908: 3-12) identified the problem:

Two young men were at work as miners for the first time in this mine (Kuordih Coal Company's Kuordih colliery), and it seems doubtful that they had had any previous experience of coal-mining. They were at the time actually not at work in the place intended ... They had undercut some coal as far as a joint, and one of them was wedging it down. Owing to several joints, a coal piece about one ton in weight probably came away more quickly than they anticipated, and in falling it struck the unfortunate man and nearly tore his arm off ... With proper supervision, it would be impossible for men to work for hours in the wrong part of the mine;

As mining practices advanced, a new generation of 'better-informed' young colliers however appeared. Mining wisdom was imparted in popular classes: safety related knowledge imparted by parents to their newly recruited children, along with peer
group discussions, were important in this context. This was what Kesho Rawani, employed at the Bhowra colliery in the late 1910s, had benefitted from. He, in turn, imparted his accumulated learning to his elder son, Shyamnarain Rawani, who was employed in the mines in the 1960s-1970s.

When I first began working underground, my father used to admonish me, and warned me against the following: working at the working face, tearing off coal from pillars, sitting on tram lines, riding on tubs etc. He asked me to take note of the condition of the roof and the sound of the timber that supported the roof.

Shyamnarain is the third generation in his family to work at the Jharia coalfields (Interviews: March 30, 2008, at the Bhowra Twelve-number incline bastees). Towards the end of the First World War, Kesho Rawani, born sometime in 1907-1909, had joined his parents as a helper. He handed over his job at the nationalised Bharat Coking Coal Limited to his elder son, Shyamnarain Rawani, in 1978.³

Many a new recruit were, however, not as privileged as the Rawanis. Miners counted on the principle of trial-and-error to meet the demand for safety. Many were unaware of, or indifferent to, geophysical and mechanical challenges, and to accident control measures; they continued to mine coal in an unsafe manner. They tore off coal by sheer force, took away pillars, cut under the sides, ignored the need to prop up roofs, tampered with safety lamps, used too much of explosives, and regularly snatched a nap in the workplace. They were often seen riding on trams to cover a distance and holding on to the rope of the cage-lift that carried them up and down the shaft. The Inspector of Mines and other Observers regularly bemoaned such ‘unsound’ mining practices on the part of miners. They lamented the absence of a training scheme, which would make a labourer technically informed, in a position to anticipate imminent danger, undertake accident control measures, and display thereby a new mining wisdom. To address some of these issues, the industry initiated two measures: modernisation of production through mechanization, and the introduction of a new class of safety staff (including managers, overmen, mining sirdars, surveyors, and short-firers). Such measures conformed to the stipulations of the Indian Mines Acts (IMA) of 1901, 1923, and 1937-1939.⁴ The safety supervisory staff were however inadequate in number, and of poor quality. ‘Archaic’
mining therefore continued in practice. The lack of constant and efficient safety supervision led to the collier’s dependence on the mining sirdar. 5

The coercive nature of labour relations was responsible for the importance that coal cutters, loaders, carriers, trammers and the safety supervisory staff (such as mining sirdars, surveyors and overmen) gave to the production of coal; there was not adequate concern for the life and health of the worker. The wage relation between capital and the worker was responsible for the permeation of this fatal productivist orientation. The piece-rate and return-based wage structure led them to search for easily accessible coal and move into ‘prohibited’ areas, take part in ‘forbidden’ mining activities, and spend long hours in the working faces. Onselen (1976) and Nair (1998) have observed how such work-relations are responsible for endangering the lives of miners.

The *chalak* and the *burbak* colliers

Work culture of the miners was not frozen in time. It changed. Colliers drew upon inherited wisdom, adapted to new times, developed new sensibilities to apprehend danger, even when they were not trained by those in authority. Karpo Rajwar, a malcutta and loader, informed:

The Burhak (reckless/quixotic) man indulges in a risky manner of extraction and gathering of coal; why would a Chalak (rational/prudent) man show such an indulgence and risk his life and limb?... A person might think that by taking away a chunk of coal from the pillar, he could quickly fill up more tubs in the given time. We did not do such things. I saved my gang members on one occasion by persuading them to leave the working face early since I could sense that the supporting timber was giving certain warning signals. It was making a certain sound that I knew indicated that it would soon come crashing down due to the weight of the chals (coal roofs). On another occasion, I dragged one of our dangai (gang) persons from the place where the jhurri (the loosened colliery sides left in the aftermath of the blasting undertaken in the working face) was about to fall (Interviews: March 31, 2008, at his residence at Bodroo Bastee in Chandankiyari Block, Dhanbad District). 6

The terms *burbak* and *chalak* provide two sets of contrasting meanings. In the first set of meanings, *chalak* denotes the ability of a person to be manipulatively successful; in contrast, the *burbak* stands for an inability to play tricks on the system, be conformist, or
have a contented human nature. The second set indicates the life preferences of the person rather than his/her ability or inability. While the chalak stands for a guarded, correct and righteous path, the burbak follows the path of misadventure, ignorance or negligence. Karpo Rajwar seems to have referred to the second set of meanings. His misadventurous (Burhak) gang person seems to have shared the ethics captured by the first set of meaning. The burbak, who was a chalak in his own perception, wanted to take advantage of the condition of production in various ways: he could also bribe the tub clerk in order to get hold of a sufficient number of tubs and a better working face. Karpo Rajwar, in this sense, shared the language of safety discipline. His mining career spanned across the latter 1940s and 1990. While he began his colliery career at the Phulwara, Madhuban and Tetulia collieries that were located in the southwestern part of the Jharia fields in the Baghmara block, he was associated with the Muralidih colliery (Bhatdhee Coal Co.: Messrs Andrew & Yule Co.) for the larger part of his mining career.

Beyond however the burbak and chalak ways to mining, the miners adapted to the demand of colliery tasks by adopting the method of trial and error. Frequently, miners faced a situation that challenged the given wisdom at their disposal. Mahadeb Chatterjee (a certified overman), Meghua Kahar (a certified but ‘illiterate’ mining sirdar), and D. Howieson (a manager, holding a diploma certificate in mining) were seriously challenged at the Bararee colliery when disaster occurred due to the air blast caused by the sudden fall of a colliery roof in goafs, that is, that part of the mine in which coal has been cut away and waste is left in the old workings. The classification of such disaster as ‘misadventure’ by Kirby (Inspector of Mines) obfuscated the gap between the available knowledge and the unfolding geophysical circumstance (Department of Ind. & Lab., 1929: M-966 (88)).\(^7\) Mining work requires an elaborate, measured and reflective association between a mining individual and the constraints that he faces in the colliery. Yet, the collier’s burbak approach to mining appears as an expression of the work behaviour of a person who has migrated from a rural/‘feudal’ society where s/he had engaged in occupations like agriculture, herding, the manufacture of handicrafts, or other such services characteristic of a pre-industrial economy. S/he was thus ignorant of the principles of mining, and was attached often to a pre-modern, religious and cosmological view of things. S/he worked in the colliery through a trial and error method, as s/he learnt
the work. The *chalak* collier, in contrast, was one who followed sound mining methods, and was thus posed as the opposite of the *burbak* miner, though a boundary between the two was difficult to always sustain. In the tea-stall and the *Kalali* (local pub), a *chalak* collier (equipped with the pit-sense) would boast of his expertise. S/he would, with time, refuse to ride back and forth by clutching to the rope of the shaft-lift with his toes, avoid overcrowded shaft-lifts, and refrain from stepping out of a moving lift-cage, riding on a haulage-tub or sitting beneath an overhanging roof. Further, s/he would not use an overdose of explosives and tamper with safety lamps. The growth of a mining-sense was apparent in the discrete fall in the fatality rate of shaft-accidents and haulage accidents; and a check on the casualties that occurred due to ordinary falls of roofs and sides. Rather, it was now the explosion of coal-dust and inflammable gas, and the inundation of water, that claimed a disproportionately high number of fatalities. The explosion of combustible gases was due to the use of naked lamplights, and because of the failure of the overman and mining *sirdar* to test gasses in goafs. The inundation was caused due to a fault of the managerial and technical (surveyor) staff, and not because of the *burbak* practice on the part of an ordinary collier.

The formation of a *chalak* collier was the result of twofold conditions: autodidactic learning by the settled and permanent workers, and the creation of a new group of safety - supervisory staff. The practical skill of colliers inevitably grew with time as their experiences grew. The new generation of miners like Kesho Rawani was bequeathed with a mining sense; by the time Shyamnarain Rawani and Karpo Rajwar ventured into collieries, they were well-versed with the norms of the *burbak* and *chalak* mining approaches. Modernising the workforce and regulating mining practices facilitated the development of a didactic mining wisdom. By outlining the principles of precaution, training and regulation, and prosecution, the Inspectorate enforced a regime of discipline, as we have seen in earlier chapters. On the question of improvement of the mining practice in the industry, Balchandra Ravidas reported: ‘The prosecutions meted out to the truculent impelled the rest to, reflectively, make use of their experiences to resist shoddy method and temptation for easy coals’. The responsible mining *sirdar* was a key figure in this regard. Unlike the residential segregation enjoyed by most managers and supervisors, the mining *sirdar* lived amidst the direct producers. He took keen
interest in imparting safety techniques to his gang persons and neighbours since he was also answerable for the fatality which could occur under his supervision. In his response to the question as to how he learnt the chalak mining technique, Karpo Rajwar emphasised the function of the mining sirdar.

The safety supervisor shared a responsibility for the advancement and propagation of wisdom required for sound mining. This was especially so after the IMA of 1901, that made the colliery manager answerable for safety. Along with the Inspectorate and other scientists, the managerial men undertook research and development activities in order to address the challenges. For creating an informed mining community, the National Association of Colliery Managers (NACM) formed in 1906-8, along with the Indian Mine Managers’ Association (IMMA) formed in 1922, conducted regular deliberations on safety issues, and screened film shows on safety. The first association represented the managers of European origin, and the second represented the managers of Indian origin. As members of the Mining, Geological and Metallurgical Institute of India (MGMII) and the Geological, Mining and Metallurgical Society of India (representing Indians), many participated in regular discussions, study circles, lectures and research activities that were organized by the associations.

The discussions entered the public arena through publications. A few of these papers are worth mentioning since these were concerned with some of the predicaments that were acutely felt. In 1907, the MGMII discussed the following papers: ‘Fighting a Colliery Fire’ by W.H. Pickering and R.R. Simpson, ‘Solid Rope Capping’ by T.H. Ward, ‘Chersea Electric Power Plant’ by T. Adamson, ‘Premature Explosion of Powder’ by J. Grundy, and ‘Mine Dams’ by WT Griffiths. In 1917, the following papers were discussed: ‘On Hydraulic Stowing in Mines in Bihar’ by J. Hendry, ‘The Burning of Coal Seam at the Outcrop’ by L.L. Fermor and ‘Housing of Labour and Sanitation at Mines in India’ by J.H. Evans. And in 1924, 1927, 1929 and 1935, we find references to the following papers: ‘Notes on the Coal Dust Danger in Indian Mines’ by D. Penman, IM and Chairman of the Coal Dust Committee (1924); ‘Further note on the Ventilation of British Mines’ by F.L.G. Simpson and ‘Coal Resources of the Jharia Coalfield’ (N. Barrowclough, IM); ‘Discussion on the future of the Jharia coalfields’ by R.R. Simpson, CIM (1929); and the ‘Report of the Second Subsidence
Committee appointed by the MGMII’ (1935). These essays had common threads: There was a stress on the adoption of mechanical safety tools (ventilators, safety lamps), safety techniques (stowing, supervision, planning), and organisational arrangements (cooperative investment in stowing and power plants). A few of these, in addition, highlighted the necessity for general training, attractive living conditions and mass education. In this sense, the authors of these papers upheld the idea of cooperative financing to meet the financial constraint on individual initiative.

These essays were later published in the annual proceeding of the associations. Lantern lectures and research tours were organized for the dissemination of ideas to the safety staff in the fields. A ‘pedagogical mission’ was thus carried out in what may be termed as the earliest form of the public sphere in colliery social life. To what extent this pedagogical mission influenced social forces and contained malefic mining practices is a subject to which I will return later. Notably, there was a difference of emphasis between the managers and the chalak direct producers on the concept of sound mining. The latter warned against the pressure on colliers to raise a higher numbers of tubs during the given work hours. In contrast, the manager and supervisor emphasised the safety agenda on contradictory grounds: a safe method of mining and yet the incitement for highest output. Thus Karpo Rajwar, whom we have referred to earlier, shared the discursive field of safety discipline, but did not entirely conform to the latter. Rather, he seemed to represent a critical modernist discourse of safety, which expressed the new safety politics of the colliers in favour of the removal of a hazardous work pressure.

As I have argued, autodidactic learning, the circulation of the wisdom through parenthood and neighborhood, and the norms of safety discipline as outlined by the Inspectorate, were responsible for the advancement and democratization of mining wisdom. There were of course embarrassing failures. We need to probe into the adaptation patterns and the safety politics of miners in order to understand the contesting nature of mining wisdom and the discourse of safe mining. The subsequent section of the chapter deals with this.
Ideas of safety in coal mines

In the quest for sustained advancement, the mining society, confronted with a precarious existence, inevitably recognised the necessity of enquiries into preventive and remedial measures. The response of mining classes and other social groups to such measures was often multi-pronged. A few mineworkers moved away from the accident-prone shaft mines. As Pickering reports:

It apparently takes very little to frighten the native worker away from the mine, and it will become increasingly important for mine managers to study the prejudices and customs of those under their charge. ... As soon as it was known, the place was visited by the officials, but the bodies had already been removed from under the coal by the other workmen. A lamp however was found beneath the new falls. ... 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 altogether, and the third, who either could not or would not give any clear explanation of the occurrence, died two days later from excessive drinking (Pickering, 1908: 1, 3.12).

The disappearance of an eyewitness in the aftermath of fatal accident is suspicious.

A permanent departure from the coalfields was not an option at the disposal of most miners who came from wretched social backgrounds. Some however moved away from a fleecing deep-shaft colliery to a more congenial work atmosphere. Their movement towards shirmuhan (incline colliery) and pokharia (quarry) gathered strength during the period of the first World War and continued till the collapse of coal price in 1923. In fact the movement was such that the deep-shaft-mine employers found it difficult to attract labourers. The bitter and melancholic expressions found in the folklore of the colliers reflect their experience of working in treacherous environments.

We sad coalcutters,
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.¹⁷

Ghuga Mahto’s bitter feeling of a thwarted life stands out as a critique of the varieties of difficulties in colliery work that he was confronted with. He yearned for an industrialization that would bring in employment, along with a healthy and joyful life.

Although there were some ‘locals, the coal miners largely comprised immigrants who gradually became settled workers. These majdoors preferred sweating in big mines because they had a relatively higher wage rate and accommodation. Because they could bargain for better remuneration, they were willing to offer themselves for an eventual ‘human sacrifice’.¹⁸ The efforts of colliers to adjust to the mining work and safety imperative came up with three subtexts: the growth of a mining-sense in the populace, the formation of a class of safety staff, the politico-legal struggle for ‘safety-first’ principle, and the investment in deified colliery in the image of goddess Kali. The formation of a mining culture that was informed with mining sense, I suggest, was born not only out of the needs of the industry, but also due to the efforts of the mining classes. In the efforts of the latter, a group of labour publicists allied with them, and this acted as
the harbinger of modern associational efforts to secure labour welfare. Since the 1920s, they took up the cause at various levels. They took a keen interest in the implementation of safety provisions, and worked towards strengthening the safety mechanism as advocated by the scientific community. Following the burial of 74 persons in the Parbelia colliery disaster, N.M. Joshi, a political advocate of labour and the founding member of the AITUC, insisted in 1922–1923 on the necessity for legislation for ‘compulsory certification of mining sirdar and overman with a view to improve their performance as the front line safety supervisors’. (Deptt. of Ind. & Lab., 1924: M-407 (16)) On 3 November 1920, Simpson pointed out:

... management of collieries was very much handicapped by the poor caliber of the persons who were appointed to make the daily statutory inspections of the workings. Sirdars should be required to have certificates, and certificates would be granted after an examination in which the sirdars’ practical knowledge of timbering, goafing, ventilation, etc. would be tested and, in the case of gassy mines, the sirdar would have to prove that he understood the principles of safety lamps and know how to test for gas. (Deptt. of Inds. and Lab., 1924: M-498 (11)).

In March 1921, while discussing the Simpson Draft, B.Y. Hajibhoy, a member of the legislative assembly, raised the question of the need for regulations with a view to minimising the chances of accidents; he also asked for rules that would provide for the examination and certification of underground sirdars. Faced with a renewed insistence by Joshi on the Simpson resolution, the colonial government acceded that ‘a prompt measure taken in 1921 would have helped minimise the danger of accidents as had occurred in Parbelia.’ The concern of the labourers with regard to the need for fighting the menace of combustible coal dust was pertinent to legislative discourse. Hence, the Mining Regulations of 1926 stipulated the sprinkling of water or incombustible material over coal dust that was found in galleries.
The politics of safety

In the late 1920s and 1930s, there was a staggering increase in the instances of roof collapse, in explosions of coal dust and inflammable gasses that caused fires, and in the inundation of the water into the collieries; this had greatly shaken the mining community (See Chapter, ‘Classifying Accident’, pp. ). Political advocates now called for a thorough examination of the problem and an inquiry into the consequent ‘loss to the public’; they demanded a comprehensive statutory control on the reckless methods and shortsighted schemes prevalent in Indian mines. The Burrows Coal Mining Committee (1936-37), constituted by Government of India (GOI) in response to the public hue and cry, made a comprehensive investigation into the reasons for perilous mining practices, and emphasised the necessity of significant control on mining methods. Consequently, a series of regulations and amendments to the IMA were stipulated in 1937–1939. Under Mines Regulations Act, 1937 and 1938, the following became mandatory: training for mining sirdars and shot-firers, the employment of certified surveyors for every colliery and the conducting of joint surveys by contiguous collieries, the maintaining of a barrier of a minimum of 12 feet from water bodies and the use of non-flammable safety lamps and electric lights in all gaseous mines. The guidelines for the first workings and Designs of galleries and pillars were set out. The colliery management was asked to submit a working plan for approval, and the statutory mining authority was given the right to stop any work in progress in collieries that appeared dangerous. The Indian Mines Conservation (Stowing) Act, 1939, laid out the guidelines of the stowing project. The financial resource generated would support the fencing and safety of abandoned mines. The classes of operators and managers rancorously opposed many of the proposed safety checks. B.K. Bose, S.K. Ghosh, S.N. Mullick and A.N. Mitter, who represented the Indian Mines Managers’ Association, regarded the control on mining methods as an unwarranted and undesirable interference in the working of the industry. On other occasions, unlike proprietors and European managers, they were also known to affirm other legislative measures, including the idea of universal mandatory stowing.
Colliers however appreciated the function of the Inspector of mines and his ideas of accident control. Yet, they were critical of the Inspectorate. Unlike the employers, colliers found inspection to be inadequate, as was proved by the high number of accidents and casualties. At the same time, they complained bitterly that the Inspector of Mines was susceptible to influences exercised by the management. P.C. Bose, a representative of the Indian Colliery Employees Association, ICEA, complained to the Whitely Commission (RCL) in 1930 that 'false prosecutions were conducted against the poor workers at the instance of the management, wherein false evidences, many times put forward by management to contest cases under the Workmen’s Compensation Act, became the basis of judgment’ (Whitely Report, 1931. Vol. II: 144-47). Therefore, they demanded that the number of inspectors be increased, and that the method of inspection be optimised for stringent regulations. Chapala Bhattacharya, representing the All India Mine-Workers Federation before the Mahindra Committee in 1945-1946, acknowledged the improvement in the safety situation in post 1937 under the regime of more stringent mining regulations, though, as he argued, a lot more needed to be done (Mahindra (1946, Vol. II: 298).

When they insisted upon legislation to ensure sound mining techniques devised on scientific lines, the labour publicists had two distinct approaches. On the one hand, they insisted upon the training of employees and on statutory controls on the mining processes prescribed by the scientific community. By the mid 1930s, they began to argue in favour of ‘universal stowing’ and ‘considerate pillar cutting to check fall of roof and sides’; these measures were seen as the most assured resolution to the threat of collapse and fires, which accounted for a little more than half of the total accidents. For reducing the loss of life and injury to miners, there was a need for a general supply of boots and fiber or steel helmets (in place of the bamboo hat). Despite the suggestion made by R.R. Simpson in 1924, these were supplied only to managerial and supervisory staff (until 1961-63). Similarly, a programme of mass training for rescue operations would help bring down the scale of casualty, as S.K. Bose (General Secretary of the Indian Colliery Labour Association) had suggested to the Burrows Committee. Such technical and technological proposals were ahead of their time, and were not always taken up by the authorities. The necessity for education and training all adult members of
the mining community was another area for improvement that failed to receive concrete response till as late as 1975.

They however recognised the necessity of taking up the safety question beyond established technological, bureaucratic and managerial exercise. They now began to champion the cause in the legislative domain and organise representation and agitations for the implementation of accident-control measures and for publicising loopholes of negligence. Faced with lukewarm response on the part of employers and the state with regard to their demand for universal education and training in the fields, the labour associations began, since 1926, to hold weekly lantern lectures for ordinary colliers on questions of trade unionism, sanitation, housewifery, health, and safety measures. Whether these popular lantern lectures helped overcome the challenges of precarious life is yet to be examined; yet this creative exercise led to the creation of a number of chalak colliers.

Their politics of safety emphasised links between safety and the necessity for bettering working and living conditions. Most of the labour advocates seemed to believe in the ‘labourite’ politics and stressed on the principle whereby ‘the interest of labour is the interest of industry’. As they argued, ‘for a settled, experienced and efficient mining community, living and working conditions should be improved. Their demands included improved wage rates, housing and water supply, reduced working hours, paid leave, social insurance (sickness, old age and maternity benefits), as well as arrangements for ventilated working faces, adequate supply of tubs and other safety materials. In particulars, it was emphasised: ‘a short and delayed supply of basic appliance like coal tub, timber and safety light to miners causes overlong and fatigued workdays, and consequently miners are hurried up in the end to finish day’s task, such as loading of on an average two to three tubs in a pair. Such work behaviour resulted in negligence and misadventure. The practice of nonpayment of wages or imposition of fines for any underloaded tub and low wage rate also played role in forcing collier to show indulgent work behaviour.’ S.K. Bose (General Secretary of ICEA) reported in detail to the Whitely Commission on forced or advance (dadan) based bonded-labour, popularly known as Bandhua Majdoori. Under the dadan system, the sirdar (recruiter) made deductions from wages of the recruits for paying off the advance that they had taken, and insisted
upon a regular submission of *salami* (six to eight paisa per tub or rupee of earning) to the *sirdar*. A few proprietors exploited zamindari rights and service tenancy relations to fleece the service tenant to perform 'forced service', and work for long hours in collieries (Chapter, 'Time, Work and Politics'). *Sarkars*, or supervisory staff like overmen and tub distributing and checking *munshis*, took interest in gains of a few pennies from over-loading or from cancellation of payment for under-loading (Chapter, 'Politics of Wage').

The affect of coercive labour also impinged on the performance of safety supervisors. Safety supervisors were subject to 'despotic', 'abusive' and 'racial' work relations. The mining *sirdar*, for instance, was often charged with responsibility for more than one gallery. As remedy, the Bose and Mitter demanded employment of separate safety staff that would not be saddled with production tasks, and for deployment of separate and trained shot firers. The staff was inadequately paid, and truculent personnel were dismissed on flimsy grounds for inability to conform. The Indian staff was subject to change upon a change of management, and the new management favoured substitution of Indians by Europeans. 'Justice is non-existent and fairness is guided by self-interest ... palatial manager looks down upon down-trodden, clerk, and overman' (Whitely Report, 1931. Vol. II, Pt. I: 193–94). They thus suffered from a sense of job insecurity and demoralisation. Consequently, there was little commitment to work. The labour publicist raised the following points before the government: 'for any real improvement in the delivery of performance, the relation between superior staff and labour must improve. Racial discrimination must be abolished. Recognition of qualification must replace favouritism. Justice and fairness must be more than lip-deep. The mining person should be better paid, and the legislation for reduced working hour, paid leaves rules should be framed.'

Likewise, the colliery manager, especially of Indian origin, protested against autocratic work relations:

The colliery proprietor makes undue interference in the working of mines for cost effective mining and compromises with the necessity of scientific method. A commitment to principle is meant loss of favor and replacement. They are inadequately rewarded and placed in little reassuring social
condition. For efficient and rational management, the manager deserves full facilities and reasonable salaries and amenities, for enabling him to discharge of all those statutory responsibilities and obligation. (Burrows Report, 1937, Vol. II: 20)

With time, the dominance of Indian proprietors increased. Consequently, the initial grumbling of the native manager gave way to the idea of defense of private ownership. The remedy for conservation lay in the nationalisation of mines. In contrast, European managers suggested that the ‘need is for a strong association of technical men’ (Mahindra Report, 1946, Vol. II: 276). At the same time, they opposed the official proposal of regulating mining methods since it meant ‘an excessive interference in the working of mines and management; rather, proper remedies to the problem of wasteful mining method lies in the increased powers of the manager so that he can successfully withstand the demands of owners’.

The third strand of colliers’ safety views concerned the politico-legal structure of the industrial system. ‘Prevention is better than cure’ was their strategic principle. For protective legislation and safety regulations, they argued that ‘substantive labour representation in legislative process is needed’ (Whitely, 1931, Vol. II: p.147; Burrows, 1937, Vol. II: 25). P.C. Bose (a colliery doctor), S.K. Bose and Mitter demanded the participation of labourers at the level of the Inspectorate. ‘Some of them [Inspectors] should be chosen by labour unions. Accuracy in figures of statistics ... can only be obtained by regular inspection and investigation conducted in collaboration with the labour unions.’ By the 1930s, the stark experience of the failure of the Inspectorate led S.K. Bose to canvass for the direct role of labourers to address the problem; the labour representatives should conduct inspection on their own and draw the attention of the inspectorate towards lapses and exigency:

The rules, Regulations, Bye-laws and Temporary Regulations, if followed in proper spirit, are quite adequate. More useful rules can be framed but they are of no use, unless they are actually adhered to in reality than in paper. We hold that unless some Trade Union officials are allowed to inspect the mines and report directly to the Mines Department about the observance of the laws, the Mines Department with their best efforts cannot humanly detect all the violations. They can at best investigate and come to conclusion after some catastrophe has happened. Nobody in owners’ employee can have the audacity to report about any violation. It is apparent that bonafide Trade Union officials should be
allowed to cooperate and inspect the mines for finding the condition of the mines as far as safety is concerned more or less on the line of the British Mines Act (Burrows, 1937, Vol. II: 25).

Bose’s call for direct involvement of labour in inspection remained un-realised in the next few of decades due to the stiff resistance from colliery owners and the indifference shown by the Mines Department. Meanwhile, by the 1940s, radical reformers were convinced that resistance from industrialists, contractors, and managing agencies to the working of remedial and protective legislative measures should be stopped. They argued for state ownership (nationalisation) and the socialisation of the industry. Initially, they had found fault with the contract system in the industry:

The contract system is evil responsible for all problems of as extracting maximum works at the minimum cost, and skewed work relations are its governing principle. This system should be abolished; the company should be responsible for employment of and payment to miner, managerial and other safety staff, known as Sarkari system (Whitely, 1931, Vol. I: 181-91).

Agreeing with the new proposition advanced by P.C. Bose, S.K. Bose argued in 1930 that ‘given the necessity of rationalisation of the industry for scientific mining, for protection of coal and labour as two “national assets”, the mines will have to be nationalized as a way to keep alive this industry.’ He however vacillated over the issue. In contrast, by the late 1930s, P.C. Bose and C. Bhattacharya insisted, upon the necessity of ‘socio-political takeover of the means of production as a means to effect recommendation of the fact finding committee.’ Unlike the ideas shared by Nag, Krishnan and Mookerjee of state control, ideas of nationalisation and socialization were advocated by P.C. Bose and Bhattacharya. Again, Dange, vice-president of AITUC, described Indian mines as ‘Death Pits’ and saw ‘nationalisation as way out’ (Dange 1945). Furthermore, with their varied views on the desirable form of politico-legal structures, they adopted different political practices. S.K. Bose and Mitter represented the nationalist movement under the aegis of the Congress, while P.C Bose and Bhattacharya were vanguards of communist politics.

Safety resolutions, articulated by the mining classes, were decidedly comprehensive. A worthwhile examination would be to see their strength and limitation through a
distinction that pertains, if any, between ideas and transformative practice in politics. In the period up to the 1950s, these insights were of practical importance at the level of legislation and educational propaganda. In their collective actions, the emphasis was on questions of bread and butter, social insurance and labour rights; this was an expression of their overriding concerns for pet (bread and butter) and izzat (dignity or rights), as Bakshi Dā (a labour acumen) reported. Responding to a question as to why the safety-movement was timid, he said without any reservation:

... the keen concerns of those colliery struggles were security of Pet and Izzat (dignified social standing) regarded tantamount to graduation of life to the status of Aadmi (politico-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 paradigmatic colliery movements, the issue of security from workplace risk failed to receive due attention and political energy.

Bakshi Dā (a communist labour-union activist and member of the CITU) was a science teacher in one of the Jharia higher secondary schools since the 1950s; he began to air the grievance of the mining people since the early 1960s (Interviews: March 20, 2008, at his residence, Jharia Town).³⁴

As the unbridled series of fatal and serious accidents grew, the faith that the miner had reposed in the Inspectorate began to disappear. The function of the Inspector of mines faced a set-back in 1957-58, when the labour association categorically opposed the presence of S.S. Grewal (CIM) in the court of enquiries that was formed to look into the disaster that occurred in Central Bhowra Colliery (B.L. Agarwala owned). The Court of Enquiry attributed the prime responsibility to the owner, but let the ‘under-staffed’ Mines Department go free for failing to exercise preventive power. The finding did not satisfy the opinions shared by the mining community. Jaipal Singh, an MP (Chhotanagpur) appointed as the assessor in the Court of Enquiry, argued against the observation made by the Chair of the Enquiry Court. Unequivocally in his separate declaration, he blamed the Mines Department for ‘letting regular violator go free and not vigorously effecting the rules’ (Grewal, CIMAR, 1959: 181).³⁵
There were instances where the colliery populace gheraoed the management office and assaulted the 'guilty' and 'irresponsible' official in order to seek instant [popular] justice (Interviews: Amulya Mali, January 18, 2004, at the Industry Colliery bastee). At the same time, the malcuttas and loaders refused to go with the production tasks when they faced an unsafe condition of mining: the presence of accumulated firedamp, inflammable gas, other noxious gas and inadequate oxygen, and inadequate supplies of timber and other supporting materials. The gang of colliers went on sit-in in the gallery until the remedial measures were arranged. Such direct action became possible in the aftermath of the approval of their demand, by the Mazumdar Colliery Dispute Award in 1956; this related to the payment of a minimum wage in case the work was not done due to no fault of the miner. The mining community called for sit-ins when they were unionised and united. (Interviews: Balchandra Ravidas). Such spectacular events, of course, caused panic in quarters of the Inspectorate and the management.

Mukhopadhyay (2001) has suggested that the ‘ill fed’ and ‘ignorant’ mining classes fought only for petty economic demands, and that their response to hazardous mining appeared only in the form of withdrawal from the colliery, or a movement between collieries. Such conventional analysis of colliers’ safety ideas and politics misses the particularistic ways that miners handled the safety question and behaviour pattern. The pronounced tendency in the collier’s safety politics was to address the accident-control question in terms of a ‘social insurance’ question. The social insurance form of the safety resolution however meant postponement of everyday agitation over accident-control measures

Worshipping the Khadan—Kali

The deification of mines was part of the miners’ effort to negotiate the mines. The worship of the Khadan-Kali was decidedly pervasive and a popular way through which direct producers related to the colliery. The practice however began to decline in importance from the 1920s as modern methods of accident-control became more popular, and compensation came to be increasingly demanded for afflicted households in the aftermath of a mishap. The Khadan-Kali cult pointed to the fact that the miner was
confronting the present by drawing upon the resources of tradition, even as s/he reinvented that tradition. As 'the believers in the intervention of god or spirits in the everyday life', the colliers, in their quest to adjust to social and psychological strains, emerged as worshippers of khadan. ‘The regular offerings to khadan, conceived as the womb and mouth of Kali, helped further the cause of preservation and protection of the life of the miner.’

As Karpo Rajwar reported:

We used to organize offerings to Khadan in the aftermath of an accident. A fatal accident called upon suspension of work for a while, and collective offerings were made. A goat was sacrificed, and sweet, pious fruit was offered amidst chanting. The meat of the goat was distributed later amongst all the participants. All the members of the colliery, including the Muhammedan and the Company/management, made financial contributions for conducting such offerings. We regard the khadan as the womb and mouth of ‘Kali Maee’, and working in it is a visit to her womb. The accident is the expression of the displeasure or anger of the Ma/Maee, and therefore she calls for bali (blood sacrifice). A bali assuages the Maee, and helps secure, in a renewed way, blessing for preservation and protection. … Entering her womb, and mining coal by cutting and blasting would cause disquiet and disturbance, and hence invoked the displeasure of the goddess.

Colliers bowed before her image, or at the site of the cult, located usually at the mouth of the colliery in order to invoke her blessing every day. Besides, there were occasional offerings and the annual ceremonial Puja (sacred religious ceremony). Shyamnarain Rawani continued, though with detachment:

The rite of offerings/bali to Kali Maee, especially in the aftermath of a fatal accident, has been in practice since time immemorial; we have been witnessing it since childhood. The Maee becomes displeased and angry over the wrong doings in the khadan, such as reckless coal cutting and mining … blasting … and other ‘unethical’ behavior. Notwithstanding the offerings, accidents recur, but the people continue to trust her and renew their offerings.

The belief of the colliers in a form of contract with the mystical master of the cycle of life, livelihood and death, is also common in other societies. The fertility cult of miners draws upon popular religious customs. In Eastern India, the cult of the mother
goddess - Kali, Bhawani, Rudrani, Bhairavi, Chandika or Shakti Devi - was popular, and along with the worship of Durga (one of the avatars of the goddess Paravati), attracted large numbers of believers. The syncretic customs that grew around the Kali cult also attracted believers from other religious establishments. As the Census Commissioner of the 1921 Census of Bihar and Orissa observed with reference to the customs and belief of the people in Purnea district that was known for its substantial concentration of Muslims, 'The Muhammedans also makes prayer, alongside Allah, to Kali and organize offerings to the Hindu deity'. ‘The aboriginals’, like the Santhals, Oraons, Mundas, Hos, Bhumij and the Ghatwals, ‘are also taking interest in Hinduism and offerings to deities Durga and Kali’. Although they were ‘animists’ (the worship of the spirit-devata), they increasingly turned to popular Hindu rites and customs, especially in areas where they were in a minority and losing their dominant social standing since the beginning of the twentieth century. ‘The Bhuiyans and other low caste Hindus like the Doms and the Musahars in the Hazaribagh and Chatra (Palamu) areas term themselves as Hindus, for their awful attraction to the religion of their landlord and mahajan.’ The pursuit of ‘purification’, referred to as “revivalism” by Census Enumerators, appears to have informed their new experiments with religion (Census of Bihar and Orissa Report (1921, Vol. VII, Pt. I: 121-36); (1931, Vol. VII, Pt. I: 246-58)). The spirit of bhakti re-articulated the miners’ cosmological ideas: Kali and Durga were deities that were popular among the neighbouring Bengalee population, and became divine figures comparable to the Vaisnavaite deity of Krsna.43

The mining population could borrow from the Kali cult that was popular in peasant society because of the belief system that the cult represented. Two elements of the peasant Shakti cult would have appeared worthy of import: the divinity of the mother goddess, and the presence of a pervasive cult of popular ‘animism’. Unlike the goddess Durga, Kali was the goddess of death, destructive power and violent punitive action. As the Kalika Purana suggests, the goddess Kali would express fury over an assault of her body, dignity and pious will.44 How was such a cult transplanted into the khadan? Had the khadan become the dwelling place of the Maee, as a few persons indeed believed, one could have readily resolved the puzzle. Yet, most colliers regarded the khadan as the womb of the Maee; the khadan and the Maee were thus one entity rather than separate
ones that had come together. Taking an altogether different, yet historical, route would perhaps help us understand this phenomenon. Since the very early days, khadan would have been revered as a physical - natural entity that represented a frightening natural phenomenon to the people who worked in the mines. These people – belonging mostly to the local ‘aboriginal’, ‘semi-aboriginal’, and ‘depressed’ social groups that included the Santhals, Bauris, Mahtos, Bhumij, Ghatwals, Bhuiyans, Rajwars, Chamars, Dosadhs, Turis, Beldars, Goalas and Momins - were worshippers of natural phenomenon. Their customs and rites were differentiated; yet they paid offerings that frequently included blood sacrifice to the Mountain Bonga/god (called Morong Buru), Fire Bonga (Moronko), River and Water Bongas, Forest (sacred grove) Bonga, Saran Bonga (Village Devatalgod) etc. Based on their dreaded experience of colliery life, and in the pattern of their worship to the bongas, burus or gods, they submitted to the khadan’s mysterious power, conceived of its blessings, and dreaded its destructive spirit. The practice of putting vermillion on the side of colliery, or beside the stone image representing Kali, can be traced to the belief in the Khadan Buru. Finding such a belief system prevalent between colliers, an exasperated S.R. Deshpande (Investigator of the Labour Enquiry Committee, 1946: 114) observed that on account of their primitive or backward culture, miners’ squandered money on organising offerings to the Bongas, whenever they faced a formidable worldly challenge, or celebrated occasions of birth or death. How did a revered Khadan Buru and Kali subsume each other? Or to structure the question differently, how did a Khadan Buru give way to the Kali cult in the colliery?

The definite merger of the Khadan Buru cult and the Kali cult had taken place, and Kali had emerged as an ‘avatar’ (incarnation) of Khadan Buru; her womb was seen to symbolize the mine - khadan, a hollow space, a cave. The practice of ‘animism’, then, was now subsumed within the image-worship cult of organized religion. In other words, organized Hinduism, associated with image worship, now appeared to be ‘degraded’ as it compromised with ‘animism’ and ‘primitive’ religion.

The Khadan–Kali cult seems to have been an expression of popular religious practice in the early 20th century; and was essentially syncretic in character. The colliery populace appeared as worshippers of the Kali image as well as of the Khadan spirit.
Early colliers, belonging to the ‘aboriginal’ and ‘semi-original’ people who came primarily from Manbhum, Hazaribagh and Bankura districts, supplanted the Kali. With time, on the other hand, the new immigrants who soon attained a dominant position – predominantly the ‘depressed’ caste Hindus and the Momins who were also followers of Kali – integrated a Khadan Buru by subordinating its form and subsuming its substance.46

From the frames of reason, science and freedom, one could disapprove of the worship of the Khadan Kali, and the passivity of the colliers.47 Yet, such observations, I will show, points to the lack of an understanding of the Khadan-Kali cult. The cult denoted a protest against hazardous mining. With blessing of the Khadan-Kali, the miner undertook risks, and sought to meet the challenges of formidable work in the mines. Nash (1979) and Taussig (1980) have pointed to similar customs in the Bolivian context; such a cosmological notion of predestination was also characteristic of the Puritanical [Calvinist and Evangelical] Protestant movement in Europe.

The fragile source of the productive strength of the collier was exemplified in the folkloric tradition that Ghuga Mahto shared:

*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.*48

Yet, the worshipping of Khadan-Kali did not represent any seamless, unmediated act of submission to a certain scheme of things, which was external to the narrative of Chalak collier coming into being. Colliers went for blasting operation for instance, even while they knew that such act disturbed the Mae and enraged her. Soon, they differentiated between a harmonious and apposite act that did not incite the displeasure of the Mae on one hand, and an ‘ unethical’ behavior that displeased her, on the other. Miners organised offerings of bali/blood sacrifice of a goat to the Mae, or a lama in the
case of the Bolivian Tin mines, to assuage not her hunger (as in case of the Tito), but her anger. The Mae cult gave way to the safety politics of Chalak colliers and, at the same time, inscribed newer meanings to the relationship between the deity and her adherents. According to Vinod Rai, a communist trade unionist and a pump-man employed in Bhowra colliery, the cult represented a ‘premodern’, ‘unscientific’ spiritual propensity. Notwithstanding such a belief, the Mae did not inhibit the agitation of miners for the constitution of a Court of Enquiry that would look into fatal accidents, prosecute the guilty officials, and make recommendations on how to improve the accident-control mechanism. The demands of the mining populace, since the 1960s, for instant justice against ‘irresponsible’ officials, and for a participatory pit safety committee, were a part of their safety politics on a ‘secular’ plank.

During my first stay in the Jharia coalfields for two hand half months in December 2003 - February 2004, I noticed that the offerings to the Khadan-Kali had become irregular. Only during disaster and in an attempt to prevent fatal accidents the miners would make offerings. At the same time, the Khadan-Kali cult had, to an extent, given way to the Yantras, a fortnight long offering to Brahma (the creator of the Brahmand/World). This was to ensure mining safety, as well as bring about peace, order and purity to the mining settlement. The workers of the Dubaree colliery held one such Yagan in 2003, which was after an interval of about five to seven years (Interviews: Satrughan Rajwar). The Chasnala Colliery saw for the first time such an affair in 1974, in the aftermath of the notorious disaster that Yash Chopra’s film Kaala Patthar had captured in 1979. To explain this shift, I do not suggest that the religious rituals of colliery life had withered away. On the contrary, the annual worship of the Vishwakarma (the god of production tools) had become the universal industrial festival.

The cult expressed a pre-industrial relationship between ‘nature’ and humankind: a natural entity was revered for its ‘operative’ spirit and had a relationship with the women who participated in the ritual and took solace from it. Pointing towards a similar case, Taussig (1980) has highlighted the distinctions between a Bolivian miner and an alienated modern Western worker. Nash (1979) has emphasised that Bolivian tin miners had reinforced, through the Tio–Pachamama cult their links with the larger society. An attachment to primordial traditions, she argues, pointed to the absence of alienation. Such
concepts of alienation however can appear to be a celebration of conservatism; a collier was necessarily ‘estranged’ in a society marked by relations of domination and subordination and thus created at he idea of a god who would govern earthly life. A more tangible meaning associated with the cult was the fact that it stood as a critique to the new official scheme that attributed responsibility for fatalities to individuals, and subjecting him/her to corrective punitive action under the IMA. In this context, a miner bitterly complained against the unholy nexus of the Mines Inspector and the management. The Bolivian’s Tito cult expresses, Taussig suggested, the alienation of miners from the management. Rather than collaborating with the management in the discourse of modern safety and productivity measures, the miner continued to hold to the pre-modern fertility and mining cult, and renewed contact with the Tito in modern times. In the Jharia mines, we find the management contributing to the colliers’ efforts at religio-ritualisation of the colliery life. In a similar vein, Gyan Prakash has suggested that in the countryside of the Gaya district, the concept of the Malik Devata, ‘represents relations of domination and subordination, rather than alienation, between landed gentry and Bhuiyan kamias’ (labourers). The Khadan-Kali cult became pervasive in the period where miners increasingly began to register their claims for compensation and were agitating against the colliery employer’s nefarious designs of evasion in the period where the colliery witnessed the growth of a stabile mining populace.

To conclude, I make the point that the explanations focused on the responsibility of innate and inchoate work behaviour of workers, or on the inhibiting [capitalist] work-relations in compelling workers to become fatally indulgent with their work, suffer from oversights. The political and ideological apparatuses of production process are subject to an impression that the worker makes. Their discourse of safety, and their work-behaviour patterns, thus reveals how most of them survived terrible working conditions. Its formation and function was part of the industrialisation process involving workers’ particular ways of adaptation—burbak (quixotic) and chalak (prudent)—to the demands made by work relations. The industrialization of the populace brought forth a mining-sense amongst increasing numbers. The denial of consent to fatal mining was evident in both their combative safety politics and in the colliery-goddess cult of a religious-cultural
response. Their contestatory safety politics inverted the marginalization of a regard for human integrity, and brought fetishism with industrialization to analytical criticism.

Photograph I: Karpo Rajwar
The Indian Mines Act (IMA), 1924, transformed the gang headman into a mining sirdar who was no longer directly involved in coal cutting and loading, except the blasting. The latter responsibility was also taken away and vested with the new class of shot-firer, as per the amendment to the IMA, 1938. Consequently, the social character of mining sirdar underwent dramatic change. He was no longer necessarily attached to gang members on ‘communal’ basis. Rather, the new mining sirdar, mostly from ‘privileged’ caste and Muslim community and suited to the demand of literacy, increasingly entered into the picture. In contrast, most gang members belonged to the ‘depressed’ and ‘aboriginal’ classes. The new mining sirdar displaced many traditional gang-headmen, who could not acquire the certification on account of their illiteracy, although they continued to be recruiters.

1 The injured man got his amputated arm amputated at the Asansol Hospital and was sent to his village-home. Two days’ journey by road, before he had regained sufficient strength, took toll of his life on the way.

2 Born in 1955, he took up the same profession as that of his father. In the late 1960s, he laboured as a contract-labour involved in the construction tasks in and about the colliery. Upon retirement of his father in 1978, he inherited a permanent place in the BCCL as a loader. The parents of Kesho Rawani, first generation miners in their family, were recruited at the turn of the 20th century from Bhojpuri area in Bengal (contemporary Bihar) province.

3 Under the regulations, 1901-04 every colliery should be under the supervision of a manager (mining certificate holder), along with the overman (shift-incharge), mining sirdar, onsetter, banksman, engineman, and surveyor. The 1923-24 amendment to the IMA made mandatory employment of the trained mining sirdar. He was divested of the function of shot firing, under the 1937-38 amendment; and a new class of
shot-firers was mandated. Now, the surveyor was expected to join regular training courses, and the
provision called for conducting joint survey of contiguous collieries. Safety supervisory personnel had a
two-fold function, working on safety-tools and techniques, and being the foreman overseeing the direct
producers. Since the turn of the 20thc, three types of legal public injunctions for mining – precaution,
training, and regulation and prosecution. The public office known as Inspector of Mines (Mines
Department) carried out the task of disciplining slaughter mining, now to be conducted on scientific
principle. For a detail discussion on this point, see Nite 2008a.
No training scheme for direct-colliers was adopted until 1974–1975 (the aftermath of nationalisation),
despite and in defiance of the admonitions of inspectors and criticisms of investigators since the very early
years of the industry.
To him the cause of accident lay, besides the problem of management and supply of supporting
materials, in the nature of mining person itself. The neighborhood life was a source of learning about how
to protect oneself underground. Under the new mining law (1951–57), fear of punitive action against the
mining sirdar responsible for the accident made him attentive and vigilant to the question of safety.
Therefore, he used to instruct his gangmen as to how to conduct mining tasks safely, and avoid indulging
in pillar-robbing or smoking underground.
Depillaring, although carried on with elaborate precautions and a contingent plan of handling the
situation, was seen as essential for 15 seams southwest of no. 3 incline. The overman and sirdar used to
anticipate the falls of the main break and the small ones by reading signs of what was happening to the
weights on the timber props. To their astonishment, the main break (the final roof fall), expected to occur
only a few weeks later, cascaded at the time when only a small break (fall of a fraction of roof crust) was
anticipated. This illustrates how their practical skills at times fell short of anticipating contingencies. The
Baree coal colliery was owned by the East Indian Coal Company and managed by Jardine Skinner & Co.
Interview with Balchandra Ravidas, 20 March 2008, at his residence in one of the bastees near Industry
colliery bastee (Jharia). Ravidas is a second-generation miner. His father hailed from Nawada district
(Central Bihar), went to the coalfields in the 1930s and settled down in the Lodna colliery. Balchandra
worked as loader since 1962, and continued for next 22 years; he was promoted to mining sirdar and
worked this post for next 20 years. At the time of company mining, there was greater pressure on the
officials to extract coals. His safety and mining wisdom were based on experience gained with time
working as a loader. The old sirdar did have experience, as the knowledge of how to make sense when
wooden props showed any sign of tension and likelihood of collapsing. Upon such intuition, a mining
sirdar could call on his gang men to come out of the faces, despite pressure for increasing output.
Otherwise, he was liable to punishment for any accident that occurred under his supervision. The new
mining rules (1951–57) made the sirdar responsible for the life of gangmen under his charge. Every year,
several sirdars were fined and punished for accidents that occurred under their supervision.
In their deliberation, the safety issues usually included a discussion of the findings and prescriptions
which Inspectors of Mines made in the aftermath of enquiries into fatal accidents. Following the inquiries
into a spate of fatal accidents due to pillar robbing, W.H. Pickering (IM, 1905) brought forth, for instance,
a regulation: ‘No workman shall work in any other place than that which has been pointed out to him by a
responsible official.’ The ordinary colliers and sirdars were placed under the command of a ‘responsible
official’ like overman. In a similar vein, he proposed a system of weekly payment to be made to miners
with a view to secure steadiness. Grundy’s investigation (1905) of fatal accidents due to the miscarriage of
shaft at the Bamundiha coalmine in Sitarampore led the Mines Department to make it obligatory to put up
the rules for winding and descending near the winding engine used for raising and lowering people. The
use of safety-film shows, made since 1919 in Britain, for awareness programme was increasingly adopted
since the late 1920s.
He discussed ways to stifle the inherent danger in collieries due to coal dust and recommended removal
of coal dust from colliery, correct planning of shot-holes and estimation of the charge of explosives
necessary in each case, application of electrical means to detonate, coal-cutting machines to undercut the
coal to be blasted, artificial means of ventilation to stave off accumulation of gasses, locked safety lamps
and technique of driving a wider gallery equipped with adequate ventilating current.
Simpson once again stressed the pressing need for proper and extended installation of artificial means of
ventilation, like mechanical ventilator to attain the same ends, which Penmen underscored in 1924.
Burrowclough categorically drew attention to the risk involved in working in an unsound way: 'Unless
sand-stowing is adopted a considerable quantity of coal will, most certainly, be lost in the area lying
between Kirikand and Angurpatha villages where No. 14 and 13 seams are separated by a thin band of
shale varying in thickness from 4 to 12 feet only. ... Almost all the coal, which is standing in pillars in No.
13 seam lies beneath the developed workings in No. 14 seam. At several collieries where both seams have
been developed, the coal standing in pillars in the lower seam has been lost when attempts have been made
to depillar the upper seam. The land of shale separating the two seams is too thin and weak to resist the
below when the roof breaks down in the goaf of the upper seam, with the result that the galleries in the
lower seam are fulfilled with debris.'
17 See Deptt. of industries and labour, 1931: m-76 (18).
14 Following their enquiry conducted between 1929 and 1935, they stressed on the following points: need
for a planned way of gallery driving and the subsequent de-pillaring, designing large pillars and limited
extraction of coal in the first working, check on pillar-robbing, taking into consideration the presence of
"Faults and Dykes" in a seam, a gallery not exceeding 10 feet height (16 feet in widths) in its first phase,
not delaying the depillaring phase after the first working, mining arranged on the panel system, localizing
areas and working in a rapid way on an even line of face, and a complete stowing of the void space made
during depillaring. See Penman (1936: 30-40).
13 The coalfield fire, which flared up as early as in 1861 in the Raniganj coalfield, along with subsidence
collapse posed a cataclysmic threat to public life in the Jharia and Raniganj coalfields since the WWI
on. One colliery owner, in his response to Simpson’s paper (1929), criticized a technological solution to
the problem of collapses and fires and argued in favour of investment on education of mining populace to
promote safety, and alternative employment to the withdrawn women in order to compensate loss of
earning.
10 Simpson (1922: P.3). A large number of quarries were opened in this period to fuel the warships,
railways and the war-factories, and to seize benefits from a soaring coal prices. Supporting production of
coal variety from the deep shaft mine, the colonial state offered priority in the coal market for only this
variety of coal. This became also a way of checking the expansion of quarry mines, and thus to discourage
the flight of miners from the deep shaft mines (mostly owned by the Europeans) to the quarries.
18 Simpson (1922). The big mines are here those producing near one lakh ton of coal annually, employing
more than 500 persons; they work at over 200 feet’s depth. The effect of the desertion and withdrawal by
miners of the dreaded and tortuous mines is the difficulty of labour shortage. Addressing such a challenge,
big mines, increasingly adopt remedial measures, like investment in improved sanitation, water supply,
accommodation, medical facilities and training of miners. A few big colliery operators, like the Bhowra,
Jealgora, Jamadoba, Kustore, Lodna and Katras (Chaitudih and Bhadroochak) were more prompt in
developing those facilities in order to create settled and experienced mining hands.
19 Their conception of remedies evolved with time in response to increased awareness of the nuances of
the problem and consequent exigency, the possibility of political-social struggle. The role of non-mining
members—property and non-property—is critical in defining the shape of industrial practices.
Exploring this variable of industrial politics, Gutman (1966/76) highlights the determinant role played by
the non-striking and non-working citizen in supporting the struggles of factory workers against unfair and
tyrannical policy of industrialists and for remedial and protective legislation in latter 19th-century USA. He
highlights the non-subservient attitude adopted by the larger city citizens in relation to industrialists, for
ideological, normative, socio-familial and electoral-political reasons in the pre-corporate US society.
20 The 1919 Montague-Chelmsford reform to the Indian Council (Representation) Act laid down the scope,
expansion of numbers of elected member and their deliberative power apart, for nomination of labour
representative to the legislative assembly. Joshi’s enquiry led to the institution of an enquiry into the
Parbela disaster and of a representative committee in order to study the role of coal dust and how to check
its hazards. His enquiry contributed to the amendment in 1923–24 to the Indian Mines Act, 1901 in favour
of mandatory certification of overseer, surveyor, and mining sirdar, and regular evening mining classes.
See Department of Industry and labour (1924a and 1924b). In London, Mill and Hayday, members of the
British House of Commons, pressed for the necessary steps to minimize the increasing loss of life among
21 The Government of Indian Act, 1935 expanded the numbers of elected member and their deliberative
power to the imperial legislative assembly. See I.&L. 1935: M-407 (150) ("Question in the legislative
assembly by Pandit Govind Ballabh Pant); 1936: M-407 (158) ("Question in the Central LA by S.
a social and political force to reckon. Consequently, they got seats in the investigation and deliberation committee of the Royal Commission on Labour in 1929-31. Yet employers continued to scuttle the proposal of factory committee in the industry. Operators and government officials were called on to present labour in different industry and welfare specific committees. Labour was recognised as a social force to be reckoned with in term of safety and conservation in the late 1930s, when a separate Labour Department was, since 1938, equally responsible for the matter. P.C Bose was appointed, as labour representative, member of the Sowing Committee in 1939 and Mines Labour Welfare Board in 1945-46. The coal fields had to fight for a National Government of utilitarian orientation to get labour representation in the Mining Board and some kind of recognition of labour association in designing of mining regulation; and for nationalisation of the coal mines to gain a right of inspection and reporting to the inspectorate for calling for intervention.

24 Over the issue of the removal of women workers and children, from underground mining, the inspectorate and many public figures of the mining community collaborated with each other to see the proposal legislated. They argued that this removal was necessary in the interest of the safety of both the vulnerable workers and the mines, as 'the women come in the way of mechanisation of the work'. For a detail discussion on this issue, see Nite (2005a).  
25 'Evidences from P.C. Bose, B. Mitter, S.K. Bose (clerical staff), Shani Cheria (women miner), Chotan Kora (miner) and Gobinda Gorai (pumpman), members of the Indian Colliery Employees Association, Jharia', Royal Commission Report (RCL 1931, Vol. II pt. I & II). At the time of making representation to the Burrows Coal Mines Committee, P.C. Bose belonged to Indian Miners' Association (formed in 1933), and S.K. Bose belonged to Indian Colliery Labour Union (founded in 1930) and Tata's Colliers Labour Union. P.C. Bose, along with C. Bhattacharya, represents in 1945-1946 All India Mines Workers' Federation (affiliated to AITUC), which Indian Miners' Association is affiliated to, before Mahinda Commission.


27 Onselen (1976) has found a similar variant of labour relationship, popularly known as Chibaro, operative and bitterly detested by miners in the Rhodesian mines in the early 20th century. After Steinfeld (2001), one can work with the idea that coerced labour and free labour are 'negotiated relations'. There is a continuum between coerced and free labour types, and not binary between the two. State-law and social forces are constitutive of the labour regime within which judgments about the legitimacy of coercion is made.


29 For a detail discussion on this point, see Nite (2008a). In the 1920s, the working class was recognised as a social and political force to reckon. Consequently, they got seats in the investigation and deliberation committee of the Royal Commission on Labour in 1929-31. Yet employers continued to scuttle the proposal of factory committee in the industry. Operators and government officials were called on to represent labour in different industry and welfare specific committees. Labour was recognised as a social force to be reckoned with in term of safety and conservation in the late 1930s, when a separate Labour Department was, since 1938, equally responsible for the matter. P.C Bose was appointed, as labour representative, member of the Sowing Committee in 1939 and Mines Labour Welfare Board in 1945-46. The coal fields had to fight for a National Government of utilitarian orientation to get labour representation in the Mining Board and some kind of recognition of labour association in designing of mining regulation; and for nationalisation of the coal mines to gain a right of inspection and reporting to the inspectorate for calling for intervention.

30 See, Revenue Dept (Industries) 1930, Deptt. of Industry and Labour, 1936: M-1055 (120). 'The Dissent note of Nag and Krishnan as part of the Burrow's Committee', 1937, Vol. I. Dr. H.C. Mookerjee 'Accidents in Coal Mines', Hindustan Review, December, 1945. Memorandum to the Indian Coalfields Committee on behalf of the All India Mine Workers' Federation (affiliating All Mines Mine Workers'
Unions under AITUC’, Mahindra Commission (1946). Notably, the RCL agreed to recommend replacement of the contract system by a sarkari system of labour employment. Burrow’s committee recommended a need to discourage the managing agency system.

31. Dange highlighted that a combination of factors redounded to fatal mining problem. These included the operator’s primary desire for accumulation, discomfited living and working conditions of the miner; and as a result, inexperienced workforce, low employment of safety materials, ‘backward’ technique and technology in the mines, and non-conducive work environment. Of course, his position appears to be blind to the inextricable link between the increased mechanization of production in the mines and the workplace hazards.

32. P.C. Bose moved over to the newly formed Indian Trade Union Congress in 1948, which the National Congress floated to check the influence of communists and AITUC.

33. Our discussion helps question the view that the official safety concerns were fully imbibed by the trade unions with a number of ramifications, such as the expulsion of women workers from the underground mines. We see that a few aspects of their safety resolution were not just different but apparently had a more adequate understanding of the condition responsible for colliery accidents.

34. For a detail discussion on the shift in their life orientation, see chapters on wages and space. The British Industrial Safety-First Association adopted the slogan of ‘Think Safety’ approach in 1920 in the midst of a movement for increased safety in the workplace and on the road and the railway track.

35. This was the second such occasion when the state official found the Inspectorate guilty of inadequate performance and complicit in the colliery accident. E. Hoernie, ADC of Dhanbad, came up with the same scathing revelation in the 1921 in the aftermath of the disaster occurred in the East Bagdiggii Colliery. On both occasions, the Mines Department replied in the same language: the problem of insufficient staff to undertake comprehensive inspection and the fact that it was only a guiding, advisory body.

36. Amulya Mali joined the colliery world during WWII, when the employer attracted the youth with a higher wage rate. He migrated from the Chandankiymi Block in the Manbhum district. Thus he was a local worker and settled in the Industry Colliery bastees. He worked as a pump-man. I shared his residence during my stay in the Jharia coalfields for oral historical survey.

37. The objectivisation of afflicted body and the fetishism of compensatory instance, after Sanjeev (1986), prevailed—but not before the 1970s—over the ethical sublime regard for humanity as constituent of human essence.


39. The discussion on the point chiefly relies on findings from my oral-historical fieldwork conducted in three phases between December 2003 and May 2008 at the Jharia coalfields.

40. She was known in this area by many names including Lilodi Maee and Shakati Devi. Every colliery had her cult site and occasionally also the presence of the image of Kalika. Her temples are also found in colliery settlements. The presence of Hanumana Dhaja (a saffron flag representing the god called Hanumana) represented the masculine and strenuous nature of coal cutting and loading work.

41. Rawani’s ambivalence toward the cause of Maee’s displeasure, the nature of people’s attachment with Maee appears to be shaped by a certain sense of modern skepticism, and a seeming internalization of managerial ideas. Such ambivalence came clearly, too, in the overall views shared by Karpo Rajwar. Believing in the destructive power of the Maee, he highlighted the role of burlak miner for the mishap.

42. The cults of Tito and Pachamama were found equally effective for the Bolivian tin miners. Pachamama controlled minerals and Tito, the devil, owned the mineral stream. The former was benevolent and munificent, the latter could turn up displeased, angry and hungry, hence the cascading affect of mishap and the withdrawal of mineral stream (see Abis, 2006; Taussig, 1980; Nash, 1979). Such industrial cults are also comparable to the fertility cults, and other gods and goddess of death and illness found in agrarian society (see Prakash 1990; Kosambi 1962/2005).

43. The puranic story goes thus: Paravati went to take bath, and asked her son Ganesa to take care so that no one violates her privacy. As Siva slaughtered Ganesa, placed as guard, and forcefully violated Parvati’s privacy. Parvati was infuriated; she went on rampage and slaughtering of the attendants of Shiva. Her uncontrollable fury was assuaged when Shiva, Parvati’s husband, according to a puranic tradition, offered his own bali, blood sacrifice, by lying down in her storming path. Her fury is traced, in the puranic
tradition, to the slaughtering of her son. In contrast, it could be traced, after Kosambi (1962), in a historic conflict or war between the 'pre-Aryan' societies known for worship of mother goddess (Bronze Age food gathering and simple agriculture stage) and the 'Aryan' society known for male god adherence (pastoral stage). In the early female or mother goddess tradition, she is known to ask for not just blood sacrifice but, occasional, 'husband sacrifice' upon a condition, where her privacy is violated by husband, husband attempts forcefully to see her naked, or he forces himself naked before her without permission. For a detailed revealing discussion on these points, see Kosambi (1962/2005).

Many of these social groups are euphemistically classified as animist, and their belief system is called animism. Increasingly, they shared the interface between 'animism' and other organised religion, especially a few Hindu customs and rites, as I have already stated in the preceding paragraphs; while many Hindu groups themselves appeared as worshippers of natural entity and phenomenon. Similarly, the Muslim commoners were found engaging Hindu Ojhas (master of the spirits - Bonga) in sickness and got the Hindus to make offerings on their behalf to a Hindu deity. See, Bihar and Orissa Census Reports for 1921, and 1931, and District Gazetteer of Dhanbad, 1964 (especially those sections concerning 'Religion and People').

Thus, the coalfield witnessed two distinct, though interspersed, temporal phases of the evolution of Khad- Kali cult. Its particular way of integration explains why there is noticeably a 'recessive presence' of both Vetala and Kali cults, backed by the Puranic tradition in the mines. I have come across only one collier (Balchandra Ravidas), belonging to the Paschimas social group and hailed from Western Bihar (Gaya district), who has been inclined to explain the problem of hazards in terms of the duo of Vetala – Kali cults. In his view, 'the khadan is the mouth and the belly of the Vetala; collier's attempt at getting coal is rather a struggle to win coal from the Vetala. The accident is an expression of the hunger and the anger of Vetala against the miner's adventure. Kali Devi is propitiated through bali, for she is popularly known to have conducted a successful battle against the menacing Vetala.' This view of Vetala – Kali duo in the mines also looks similar to that of Tito – Pachamama cults popular in the Bolivian tin miners. However Vetala – Kali duo had a marginal and recessive presence, the dominant presence within the mine was that of Khadan – Kali cults..

Mukhopadhyay (2001) has shared this view when he has argued that miners of 'fatalistic' outlook could make little effort at addressing the problem of workplace risks.

The dual features of material development under capitalism now calls for an accounting of not just the rate of annual growth but, at the same time, of the rate of human loss and disfigurement under and due to this socio-economic system.

' Replies of Indian Colliery Employees Association, Jharia', and 'Memorandum of Commissioner for Workmen's Compensation, N.P. Thadani' to Royal Commission on Labour, 1929-30. Vol. IV, Pt. I & II.

Operator's incoherent behaviour in this regard – fixing up individual responsibility for evading compensation obligation, and still recognising the power of the Devi – is an expression of the religious variant of Vishisht (elites). The white members of management related to the cult only in terms of sanctioning the space for ritual. They belonged to the English Church (Puritanical Christianity) and favoured secularization of the production realm, thus looking constantly for mechanical-engineering answers to questions of safety, productivity, and profitability. They had a policy of non-interference in the indigenous customs and belief, and hence sanctioned popular rites of offering. An intimate participant is the Indian labour contractor, raising contractor and other Indian members of management. The census reports tell us that they appear to have been attached to sects like the Jains/ "Jain – Hindus", the Brahmo Samaj, the Arya Samaj, and orthodox Hinduism. They would have believed in the views of interference of Supreme Being (god) in everyday life, 'knowledge, or purusarth – karma ways of salvation, and responsibility of rank-birth or laziness and thriftless behaviour of persons for poor and unequal living.