



Resource Management in Asia-Pacific

Working Paper No. 28:

From Gin girls to scavengers: women in Indian collieries

Kuntala Lahiri-Dutt

Reader in Geography, The University of Burdwan, Burdwan

The correct citation for this publication is:

Author: Kuntala Lahiri-Dutt

Year of Publication: 2001

Title: From Gin girls to scavengers: women in Indian collieries

Series: Resource Management in Asia-Pacific Working Paper No. 28

Publisher: Resource Management in Asia-Pacific Project, Division of Pacific and Asian History,
Research School for Pacific and Asian Studies, The Australian National University

Editor: Karen Fisher

Place of Publication: Canberra

ISSN – 1444-187X

Resource Management in Asia-Pacific

Working Papers

The Resource Management in Asia-Pacific Working Paper series seeks to provide readers with access to current research on environmental and resource issues in the Asia-Pacific. Working Papers produced by the Project aim to facilitate discussion and debate on critical resource management issues in the area, and to link scholars working in different disciplines and regions.

Publication as a 'Working Paper' does not preclude subsequent publication in scholarly journals or books, indeed it may facilitate publication by providing feedback from readers to authors.

Unless otherwise stated, publications of the Resource Management in Asia-Pacific Project are presented without endorsement as contributions to the public record debate. Authors are responsible for their own analysis and conclusions.

Resource Management in Asia-Pacific Project
Research School of Pacific and Asian Studies
The Australian National University
Canberra ACT 0200
Tel: +61 2 6215 9978
Fax: +61 2 6215 4896
Email: rmap@coombs.anu.edu.au

Abstract

Coal mining began in India during the colonial period as an enclave to fuel the engines of the Raj. Women of tribal and lower caste communities were an important part of the labour force. Their role in the resource extraction continued to be significant as long as the techniques of production remained basic, labour intensive, small and surface bound.

The expansion of coal mining (particularly in the post-colonial period when the industry was nationalised), with consequent increasing reliance on more mechanised production techniques, has led to a rapid decline in the participation of women. This exclusion has been aided and abetted by the State and its various agencies and laws, trade unions and the ILO who have all worked together in defining a place for women in a gendered resource economy. This place is at a lower level, secondary to the needs and struggles of men, in Indian collieries.

In my presentation I will describe how the work of resource extraction becomes gendered in the first place, what happens when women find themselves marginalized from the formal mining sector and alienated from access to environmental resources, and how they are rendered illegitimate and invisible in the economy that separates women and men's spheres of work.

From Gin girls to scavengers: women in Indian collieries

Introduction

Just as the feminist movement in the western countries was beginning to earn women rights to work in what had usually been predominantly male-dominated industries, women in Indian coal mining industry were forced to give up their traditional roles as partners in the production process. The process of exclusion was aided by the formal declaration by the Indian State of its ownership of large scale mineral resource production - a process termed 'nationalisation' and various legislation that intended to 'protect' women workers from the 'risky' work of mining.

Coal mining in India carries a symbolic significance in the development process. Mining of coal represented the 'new', modern economy that began to flourish in Bengal during the British period; it had fuelled the engines of not only the British steam ships but also the Nehruvian model of post-colonial industrialisation (Chakrabarty, 1992) in India at a high cost to the environmental and social stability of the resource-rich regions.

Coal mining, like the plantations, fully manifested almost all the symptoms of colonial modernity that descended on feudal economic relations and production systems – private investment and the involvement of indigenous capital, import of labour from other parts of the country to build up a reserve of 'captive labour', a low level of technology, and its nature of a secondary 'enclave' meant to serve the primary metropolitan enclaves within a vast sea of subsistence agriculture.

However, the inclusion of local, poor, *adivasi* and lower caste women in coal mining is in no way comparable to the way women in urban India were exposed to colonial modernity. In Bengal, where the British influence was felt earliest and was strongest, urban women of upper caste or elite families were learning with the patronage of both Indian and English social reformers how to read and write, and how to interact with men in spaces other than domestic (Karlekar, 1991; 1986). Standing (1991) noted that Bengali women, with the exception of a small professional group from the upper class, have conventionally taken little part in waged work. The separation of *ghar* and *bahir*, the home and the outside world, was so complete by the emerging nationalist ideology in colonial India (Chatterjee, 1993) that there were only a very few instances where women worked shoulder to shoulder with men as in the collieries. On the other hand, the exclusion that is taking place now somewhat represents in a microcosm the post-colonial development scenario in India. The political economy of development in India and other third world countries has specifically excluded the poor and indigenous peoples such as the *adivasis* and low ranking castes and women (Mohanty, 1997). Exclusion of women workers from coal mines, therefore, has an ethnic dimension too.

Mining is an area where women had at once interfaced with men, with overlapping spheres of activities. It is a sector that has geographical ramifications from the local economy and socio-cultural levels of the region and national as well as international levels. Women miners in Indian collieries provide a fascinating way to trace these connections conceptually and visibly. From 'gin' girls to scavengers has been a sharp decline in the status of women workers in Indian coal mining. The trajectory brings out how the State and international agencies, aided by a patriarchal Indian society have worked together in defining a place for women in a gendered resource economy. This place is at a lower level, secondary to the needs and struggles of men, in Indian collieries.

Mining is perceived as a uniquely male world where the separation of men and women's lives is virtually total (McDowell and Massey, 1984). It is perceived as a dangerous, dirty, risky and hazardous job in which men go down the mines everyday to earn the 'bread' for their families, endangering their lives, and sharing risks that contribute to a particular form of male solidarity and endow the manual labour with attributes of masculinity. The unequal economic and social relationships between men and women imposed by the social organization of mining increase the subordinate position of women in a mining region both directly and indirectly.

In this paper I attempt to understand women's role in coal mining. Firstly, I address how the resource extraction process becomes gendered. Secondly, I examine what happens when women find themselves excluded from the mainstream economy and how difficult their survival becomes in face of a rapidly deteriorating environment denying them access to basic resources. Thirdly, I will discuss how the prevailing perceptions about men and women's spheres of work held by the International Labour Organization (ILO), the trade unions and the State create gender polarisation at home and in the workplace.

This paper describes the exclusion of women from the coal mining industry in India and tries to unravel the relationships between the various social, economic and political factors operating in producing this exclusion. The research concentrates on the Raniganj region – the oldest coal-mining region located in eastern India about 250 km northwest of metropolitan Calcutta. Mining in this old colliery region of India is still a thriving activity, almost the only livelihood provider in a sea of poverty, overcrowding, decaying agriculture and severe environmental degradation. The Raniganj coal-belt has a high level of urbanisation – above 67 per cent of its population live in mining towns of various sizes as compared to an Indian average of only 25 per cent. There were hopes that economic planning would turn it into 'the Ruhr of India' (Chaudhuri, 1971) but none of the industries set up by the government has been quite successful and the region now suffers from chronic high unemployment.

The research presented here was done over a period of seven years between 1993-2000. The research involved repeated and extended visits to the coal mining and other settlements in Raniganj, meetings with the trade union leaders, mine managers, workers and their families, and other local women. Through these visits, I came to know personally the region and its peoples. My research has also benefited from personal memories and observations made on travels in the area since I was a child. Historical material from printed sources available in libraries as well as with individuals were used to trace out the past. Statistics from census reports were consulted as well as data from Eastern Coalfields Limited (ECL) and Coal India Limited (CIL) – the government companies in charge of mining in the region – and other actors in the industry such as the trade unions. Most official data normally club all women in collieries as one group leading to problems of understanding the nature of their jobs, how they got the jobs in the first place and so on. In-depth interviews provided important insights into women's subjective experience of local-level environmental changes. The exclusion of poor women from the formal mining sector has not only rendered them as marginal, but has turned them into illegitimate and hence invisible to the policy-makers.

Working class: caste, tribals and other influences

Cultural identities such as ethnicity, caste and religion have powerful influence on social and gender relationships within the formal industrial labour force in India. Class is inextricably intertwined with identities such as gender and ethnicity, a situation which necessitates that the assumption of a singular, monolithic working class be rethought. The relationship between the politics of class and community has been noted by subaltern historians (Guha, 1982-1997) who opposed the Marxist notion of a working class having universal validity in India. The complexity that gender introduces in this relationship was brought into focus by Fernandes (1997) through her ethnographic study of the jute mills of Bengal in India. The political economy of resource extraction in India has traditionally been characterised by three hierarchies – caste, class and gender. In coal mining, as I will show, a specific cultural group of women participated traditionally; exclusion means these women are being denied their subsistence; not the urban, educated, middle class women who are clubbed by official data as 'women workers in the mining sector'. Everett (1989) simply called them 'lower class' women, which brings us to the debate over the relationship between caste and class in India and whether they can coexist or are mutually exclusive (Bremen, 1985; Omvedt, 1981). In this paper, I have used the term '*adivasi*' to mean the original inhabitants, the indigenous peoples. These and the lower castes together form that vast amorphous mass that the Indian officialdom calls 'weaker sections of the society'. In coal mining in India, lower castes and *adivasis* (indigenous peoples) formed the initial labour force along with their women.

In cases such as this therefore, was the definition of a 'working class' valid? Chakrabarty (1996) has shown that in India such universal categories of Marxist thought as 'capital' and 'labour' are not valid in defining the industrial working class. In Indian collieries, the labour process or the choice of technology (that again interacted with the labour process) is rooted in the culture of the 'company' owners as well as the labourers. The deeply entrenched mercantilist outlook and the cultural milieu of the British *raj* in India that continued after the independence of the country have played significant roles in selective exclusions – whether of *adivasis* or women – in Indian coal mining industry.

Caste has been famously described by Risley (1891, reprinted 1998) as the smallest endogamous groups of people in Indian society. Beteille (1996) has given the simplest definition of caste as 'a system of enduring groups whose mutual relations are governed by certain broad principles'. Louis Dumont (1970) declared the uniqueness of caste-bound Indians as 'Homo Hierarchicus', which has been severely criticised by Gupta (1984). Though 'caste' is predominantly a Hindu phenomenon, similar groupings are also found among Muslims and Christians in India. The caste division of Indian society is in the realm of 'cultural' relations whereas Marx's formulation of caste for class is opposed to this cultural interpretation.

Bayly (1999) dates the making of modern day caste to the eighteenth century and colonial intervention, which increased the stake that Indians had in their 'traditional' caste order. This practice continued until present day India where caste has emerged as a useful tool to galvanize support across boundaries of region, language, religion and economic status. This transcendental role of caste has at one level helped build allegiances; but at another level it has also provided the means to exclude and subjugate some sections of the society.

In Hindu society in India, caste divisions played a part both in actual social interactions and in the ideal scheme of values. Members of different castes are, up to a point, expected to behave differently and ascribed different status according to their castes. Formerly birth in a particular caste fixed not only one's ritual status, but by and large also one's economic and political positions. Today it is possible to achieve a variety of economic and political positions in spite of one's birth in a specific caste, although caste still sets limits within which choice is restricted. The government of India sees the presence of 'lower caste' called the Scheduled Castes population as a criterion of backwardness in a region. However, Rudd has recently (1999) shown that in some rural areas of Bengal, being of a lower caste attributes greater political empowerment. Mukherjee noted (1999) that today caste is denoted more and more as identification within the class-stratum its constituents belong to.

Other subaltern groupings of indigenous populations of India include tribals, untouchables, *adivasis*, *dalits* and *Harijans* (children of God so called by Mahatma Gandhi). Of these, 'Tribal' is a colonial construction and has fallen into disrepute. The term '*dalit*' (oppressed) is often used generically to include (in the words of the Dalit Panther Manifesto of 1973-'75) "members of the scheduled castes and tribes, neo-Buddhists, the working people, the landless and poor peasants, women and all those who are being exploited politically, economically and in the name of religion" (Joshi, 1986). Recently, Mendelsohn and Vicziany (1998) have retained the original term, 'untouchables', in their study arguing that both *Harijan* and *Dalit* are political names for a creature whose identity continues to be rooted in the concept of ritual pollution that is itself a part of a very elaborate theology of the pure and the impure. To say 'Untouchable' is to stress the fact that the destiny of these people is crucial to the social order - the caste society - which excluded them in a way such that their exclusion sustains the symbolic architecture on which this order is founded. Clearly, the terms *Dalit* or *Harijan* are far more wide ranging for my purposes of this paper.

An understanding of the ethnic division of labour in Indian collieries is important in examining the problem of the decline of women workers in non-traditional roles outside the home such as in the organized coal mining sector. I emphasise that the increasing marginalisation of women miners in the post-colonial or the post-nationalisation period has to be seen beyond the economic changes

taking place within the country or the industry. It has to be put in the specific regional perspective and examined in terms of the overall transformations occurring in that context. The exclusion of women miners and the transformation of the labour force into a predominantly immigrant male working class represent a gender politics underlying what is seen as 'development' in India.

In this paper, I intend to show how national and international discourses produced by the State, International Labour Office and trade unions tend to conceptualize the working class as a unitary category transcending both cultural and gender differences, and then juxtapose this unitary conception to the special interests of women workers to protect them from what they see as a male job. Marginalisation from the formal sector denies them survival opportunities through a deterioration and decay in the subsistence resources of the lower caste and *adivasi* women far more than other rural women (Parpart, 1995; Venkateswaran, 1995).

Coal mining in India - a brief history

Coal mining in India until the independence took place almost entirely in east India. The history of coal mining in Raniganj, particularly in the early days of the industry, is synonymous with the trajectory of modern development in India, whether in colonial or postcolonial times. The existence of coal was known early in India and some authors have cited archaeological evidences of the use of coal since ancient times (Murty and Panda, 1988). Local folk tales tell of a river-borne exchange trade of salt and coal between the coast and Raniganj. However, the necessities of fuelling the industrial-urban engine during the British Raj and beyond encouraged coal mining in Raniganj. Raniganj, with its counterpart Jharia in Bihar, was the only supplier of coal in India for about one hundred years after coal was first struck by Mr Suetonius Grant Heatly and John Summer, two employees of the East India Company in 1774. The two Englishmen worked on six mines, three of which were at Chinakuri, Aituria and Damodar, all located well within Raniganj coalbelt.

In spite of indigenous enthusiasm, the Company initially showed little interest in developing the coal resource in India. Several reasons were floated: Raniganj coal was inferior to its British counterpart, it was unfit for ordnance works, and working it involved heavy transport costs. Heatly was even transferred – a rather common colonial instrument of punishment - to a remote district to discourage him (Bandyopadhyay, 1998).

Coal mining in Raniganj continued to be sporadic in nature until it was realised that was more economical to extract this resource in India itself instead of bringing British coal to India by steamships. This simple economics generated much enthusiasm in opening new collieries. The British emerged as the main investors when, by the second part of nineteenth century, coal mining picked up in the region in spite of immense difficulties. Transport of coal to the main market in Calcutta was the main problem as the rivers had little navigability during dry season. The Damodar and Ajoy rivers were flood prone during the monsoon season and often upset transport schedules. Koilaghat (coal point) on the Hooghly River in Calcutta strand still bears the old memory of coal transport by rivers from the Raniganj region.

Three factors provided the initial stimuli for growth of coal mining industry: the abolition of East India Company's trading monopoly in 1813; opening of Raniganj mine under European supervision; and the introduction of railways in 1855 (Munsi, 1980) to facilitate coal transport to the market in Calcutta, the capital of British empire in South Asia at that time.

By the time of Hunter's visit to the region it was 'practically treeless' (1872, reprinted in 1973), and a change in the region's social fabric had become palpable. Indigenous entrepreneurs, however, eventually came to dominate coal production; as many as 13 of the 17 companies were owned by Indian operators in early part of the twentieth century (Bhattacharyya, 1985). Prince Dwarkanath Tagore's Carr, Tagore and Co. merged with Gilmore Humfrey and Co. to form the Bengal Coal Company that soon became the largest operator. In 1860, the 50 collieries of Bengal Coal Company produced 99 percent of Indian coal. The low levels of technology and capital investment ensured that Indian landowners could make an easy entry into the industry (Rothermund and Wadhwa,

1978). As mine owners concentrated on underground resources, and left the surface cultivation rights to local people, there were fewer conflicts with agriculture than at present and instances of displacements from land-based occupations were fewer.

Techniques of mining were simple. Shafts were sunk every few hundred feet. Quarries were often opened below the high water mark whenever an outcrop was found near a waterway. The mining appliances, tools and methods were simple. For example, coal was brought from the face to pit bottom in head baskets, usually by women. There it was put into larger baskets (6-7 maund or about 250 kg) and wound to the surface by a winding engine, called a 'Gin' (an abbreviation also used in other industries such as cotton) The Gin was worked by women, perhaps by more than twenty. Small 'beam' engines were occasionally employed to do the combined work of pumping and winding and were operated by three women. Steel tipped curved pieces of iron were used as picks with shapeless wedges and hammers and one inch round crowbars.

In the 1920s, the technology of coal production in India began to change in response to greater demand. This led to the replacement of open cast and inclined mines by deeper shafts. Around the same time various measures began to be taken to 'protect' women from the heavy mining work. These developments and the resultant exclusion of women workers took place at several scales. At the international level, women's participation in mining was affected by several ILO measures – the 1919 Convention on Night Work (Women), the 1935 Convention on Underground Work (Women) – restricted women workers from working in both shifts and from working in underground mines (ILO, 1999; 1997; 1996; 1988). At the national scale, the Indian Mines Act, initiated first in 1901, restricted the age of employment of children in mines. In 1929 and finally in 1935, the Mines Act entirely prohibited company owners to employ women in underground work. Such orders were issued again in 1946, followed by a complete ban in 1952 stating that women miners would be employed only in surface work during the day shifts (Coal Handbook, 1997). These Acts restricted the period of work from 16 to 12 to 10 and eventually hours 8 for underground workers and 9 hours for surface workers. The Acts and measures were presented as a means of protecting women from an unsafe job such as mining. The Indian State assumed its traditional benevolent role through its commitment to the protection of women. The legislation tell us that women miners were perceived by the State as one group that needs to be 'protected' from the hazardous mining work.

However, in spite of the various rules and regulations, the Second World War provided exigencies that forced the mining companies to flout all of the ILO inspired acts and measures. Consequently, women continued to be employed in large numbers in production to meet wartime demands. These women became 'unofficial' employees, as there are very few quantitative data available on their participation during this period. The period after India's independence is hazy with regard to official statistics; this was the period of 'company' *raj*, non-Bengali business entrepreneurs, the 'company' owners, had replaced local *zamindar*-owners in many Raniganj collieries. The feudal relationship between labour and colliery-owners had been replaced by a more cash-oriented relationship and the mining companies' main objective was to increase production to fuel the industrial dreams of planned development.

The land laws of India also changed around this same time so that the mining companies could gain control of both surface and sub-surface rights to land as operations grew larger in size (Manindra, 1946). As long as coal mining was 'extensive' in nature, technology did not undergo any decisive changes, the units of production did not grow in size, and mines of similar size were added to each other to increase production; women miners continued to take a significant role in the industry. With more intensive, technology oriented production, and higher capital investments women's role in coal mining began to decline. In 1901, women formed about 48 percent of total mine workers in India. Of these women, 65 per cent worked in underground collieries. The proportion remained more or less the same till 1921 (61 and 60 per cent, respectively). The data in Table I show that the participation of women was significant till 1930s. The proportion of women miners decreased from such high levels to about 20 percent in post-colonial India and has now fallen to only about 6

percent. Most substantial declines, however, have taken place in recent decades under State ownership of the mining industry.

Table 1
Proportion of Women Workers in Eastern Indian Collieries
1901-1996

Year	Female	Male	% of Female to Total
1901	26520	55682	47.6
1921	70831	115982	61.1
1973	15181	60620	20.0
1980	16094	169136	9.7
1990	12875	165829	7.2
1996	9879	151855	6.1

Source : Compiled from Seth (1940), Census, CIL and ECL Reports.

Coal mining industry was 'nationalised' or brought under State ownership in several phases during 1971-1973. Nationalisation of coal mining was in tune with the socialistic rationale of the Indian National Congress party representing the modernising bourgeois elite and ruling the country from Delhi since 1947 (Kumarmangalam, 1973). The measure was meant to keep parity with the principle of controlling the 'commanding heights' of the economy in a 'mixed' pattern of economy (Yergin and Stanislaw, 1998). The commanding heights included the core sectors such as steel production, coal and other 'major' mineral production, railway transport, banking, which were viewed as requiring government control for a planned development for the country. In mineral resource exploitation, all minerals were classified into two categories, 'major' and 'minor', and all major minerals including coal were brought under State control. India is now the third largest coal producer of the world with an annual production of about 299 million tons, which is about 68 per cent of total energy resources of the country (Coal, 1999).

Trade unions¹ were delighted at the time of nationalisation. The entire coal mining industry was brought under the umbrella organisation Coal India Limited, with its headquarters in Calcutta in eastern India. This State owned company was divided into several regional subsidiaries of which the Bharat Coking Coal Limited (BCCL in Jharia in Bihar) and the Eastern Coalfields Limited (ECL controlling the Raniganj collieries) had the largest number of women miners. Even today, the proportion of women miners remains higher in eastern India than the rest of the country. This is because coal mining in other parts of India which began to be established after the First World War involved different labour processes and labour relationships compared with the early feudal relations that characterised the *adivasi* and lower caste family labour in collieries in eastern India. In collieries in other parts of India labour relations were capitalist from the beginning. In Raniganj, the private owners were given compensation and expelled from ownership at the time of nationalisation, but the labour relationship that were created continued to exist. The change in labour relations from feudal to capitalist in Raniganj led to the withdrawal of *adivasi* labour from the collieries after 1930s. The introduction of the State as the owner of resource extraction did not bring about any significant changes in labour policy from 'company' owners.

Women's role in the mining industry has declined at an alarming rate during the last two and a half decades under state ownership. During this period, the Indian coal mining industry can be characterized by two trends: increasing mechanisation to improve production through technologies such as dragline and shovel for the open cast mines, and longwall for underground mines, and increased thrust on open cast mining to compensate for what CIL perceives as loss-making underground mines. New technologies were not developed indigenously by the several mining

¹ There are at least six recognised unions operating in the Raniganj region now.

related research organisations and the newly opened mechanised mines are usually worked with foreign assistance, both financial and technical. The conventional board and pillar system of mining still accounts for 95 per cent of the underground production in Raniganj. With developments such as shaft-sinking technology, deployment of longwall and other heavy capital equipment underground, and the introduction of dragline-based open cast mining, women have been assigned mostly unskilled tasks; there has been no attempt to impart training and skills to enable them to adjust to the reorganisation of work. Women now occupy a marginal position in the Indian coal industry because they were made redundant in the labour process (Ghosh, 1984).

Ethnic division of women's labour

When Heatley opened his first mine in 1774, he had brought in some experts from England as well as employing the local labour. William Jones, one of the early British entrepreneurs to invest in coal mining, was the first to employ local *adivasi* and lower caste labour around the middle of nineteenth century. The British administrator of Burdwan district, Paterson (1910) reported in the Imperial Gazetteer that two-thirds of the total workforce in the mining industry was 'locally born'. Of the different local *adivasi* and lower caste groups, the Bauris were the first to bring their women into the collieries and their contribution in the early development of Indian coal mining industry was quite significant. As a result, they came to be known as 'traditional coal cutters' though the traditional occupation of these peoples has been agriculture-related work. The Santhals, Kols, Koras and Bhuinyas also joined the mining workforce along with their women. Upper caste women usually stayed away from the dirty, heavy work of collieries. Women of different local castes and communities participated in varying proportions in coal mining (see Table 2 below).

Table 2
Ethnic Division of Women Miners in Eastern India, Between the Wars

Castes	Women/100 Men of Their Caste	Castes	Women/100 men of Their Caste
Doms	111.0	Kurmis	67.5
Jolahs	59.4	Bauris	55.8
Telis	45.5	Rajputs	27.2
Goalas	24.5	Beldars	102.0
Santhals	87.9		
Bhuinyas	80.1		
Mallahs	79.5		

Source: Seth (1940), p. 129.

Around the 1930s, women miners were employed in a variety of operations in collieries. As steam engines 'phased out' gin girls, and collieries came to be owned by Indian entrepreneurs, women found themselves working as *kamins* (feminine for coolie – a manual worker) on surface as well as underground work. However, eventually the job women workers came to specialize in was as 'loaders' – lifters and transporters of coal cut by their male partners - father, brother or husband (RoyChaudhuri, 1996). This 'family labour' system was suitable in view of the primitive techniques used in the shallow open cast mines, locally called *pukuriya khads* as well as the inclines.

To British visitors A. A. Purcell and J. Hollsworth (as mentioned in Sinha, 1975) such a family system of labour appeared entirely 'different' from that 'in our collieries' where miners as an industrial working class had already been formed. Indian coal miners collectively were not yet an industrial class and their traditional rural roots and occupations were still strong. The family system of labour operated well for several social reasons too – the *adivasi* sentiments of family attachment, and the unwillingness of women to carry coal for men of another caste. Above all, the dominant economic reason was that it provided uninterrupted maintenance of work schedule. Trade unions believe that the system was an exploitative one; it is true that women as one single unit of production did not receive equal wages to men.

An account of coal mining in Raniganj was written by Col. Frank J. Agabeg, the General Manager of Apcar and Co., and the pioneering coal mining concern in the Raniganj coalfield. He described how Asansol, now a major urban centre, had then just started to develop and Raniganj was the most important mining town. Barakar was the western terminus for the East Indian Railway, whereas Ondal had a large railway siding. These towns have now grown into major urban centres with populations over two hundred thousand.

Collieries located at a distance from the railway transported their coal by bullock carts across dirt tracks. Only those adjacent to the railway lines had sidings for loading and unloading of coal. The cost of such infrastructure construction was borne by the companies using them. The Bengal-Nagpur Railway eventually extended the subsidiary lines to the less accessible collieries and thus an intricate network of 'company roads' grew up in Raniganj.

What was the view from below? Paku Mejhen, whose Santhal *adivasi* ancestors came originally from nearby Dumka four generations ago, describes the hierarchical colliery life that placed women workers like her great grandmother at the bottom:

In the colliery, Managershaheb was the boss. *Borobabu* ('*babu*' denotes the educated Bengali middle class men, the Bhadraklok) was under him, translated his instructions and in case of any trouble controlled the situation. The *managershaheb* would shout, '*borobabuko bulao*' (call the *borobabu*) if any problem arose! *Gomostababu* managed the *coolies* and *kamins*, *Gudambabu* looked after the store, *Hazribabu* took attendance, *Loadingbabu* supervised coal loading, and *Batibabu* distributed the lights. We Santhals did all the dirty and heavy jobs - our men cut the coal and women loaded it in baskets. We grew up on collieries; my great grandmother first went into the *khadan* (mine) with my great grandfather. She had to work very hard even on days she wasn't well.

Later, more *babus* (clerks) came to occupy middle-positions between the *malkata* (coal cutters) and the Manager in collieries. The *Bijlibabu* for instance appeared with the advent of electricity in collieries before the Second World War. Thus came *Compassbabu* (surveyor), *Miningbabu* and *inchajbabu* (in-charge). This structure has remained more or less unchanged until now, the exception being the creation of more white-collar jobs in colliery offices.

The society of Raniganj went through a process of transformation as coal began to be mined. The physical and social isolation of the *adivasi* lands of jungle *mahal* was more or less complete before mining began in the region (McLane, 1993) and cultivating castes had claimed much of the more accessible land. However, the local *adivasi* and semi-*adivasi* labour often used to leave the collieries during cropping season to work in the agricultural fields, which interfered with maintaining mining operations. As a result, collieries began to employ 'upcountry labour' from north India (normally originating out of two simultaneous migrations; one from the western districts of Bihar, Gaya, Patna, Sahabad, Saran and Muzaffarpur districts while the other from the adjoining eastern districts of United Province - later Uttar Pradesh - such as Azamgarh, Balia, Ghazipur, Benaras, Jaunpur and Bilaspur) to create their own captive workforce. *Thekadars* (contractors) brought hardworking able-bodied males from eastern Uttar Pradesh, Bihar and even Madhya Pradesh. Intra-state voluntary migration was initially comparatively smaller in volume, possibly due to the ravages left by frequent *bargi* (Maratha raiders) attacks from the western states of India (Guha, 1955). A statutory body called the Coalfield Recruiting Organisation was introduced to maintain, often forcibly, the supply of labour to the mines (Mahindra, 1946). Tales of how labourers were kept in chains in the coolly-barracks have now become part of the folklore in Raniganj. Work was at least for 12 hours and cash wages could never compensate for the kind of work that these agricultural people undertook since many could not have even visualised the nature of such work. Many of the upcountry labour left the mines after their 11 month contract period never to come back. Collieries are known to have maintained '*lethel*' (armed guards) to regulate and control the new recruits (Dasgupta, 1997). Paku Mejhen remembers how 'Bilaspuris' and 'Gorakhpuris' (labour from Bilaspur in Central Province and Gorakhpur in north India) were brought in to work in collieries and kept in 'labour depots'. The manager used to send the *sardar* (leader of workers, a foreman) to a depot to get a few additional hands as soon as there was a labour shortage. The organization received commission from the companies in return. Bilaspuris and Gorakhpuris, of course, began to permanently live in

Raniganj as working conditions began to improve in post-colonial times when trade unions began to wield their full weight. Paku still names each coolie dhaora (residential quarters of miners) by its cultural origin; to her it is always a Santhal *basti* (settlement), Kora, Nunia, Gorakhpuri or a C. P. (Central Province) *dhaora*.

As mining brought in a large number of male labourers from adjoining parts of the country, local *adivasis* such as the Santhals and Bauris responded to such immigration by withdrawing from collieries in favour of the plantations in North Bengal or Assam. Gradually a large segment of the workers in the collieries become typically immigrant and male, caste Hindus from north or central India. Women like Paku's grandmother still carried on, though their contribution in the resource extraction process increasingly began to be devalued in more ways than one.

During the years from 1891 to 1931, outbound migration was almost double in size to that of inbound migration to Raniganj. However, the high rates of outflow of local labours eventually subsided over time and inbound migration grew rapidly as more collieries were opened. In the heterogeneous local labour market of Raniganj, an abundance of unskilled local workforce was certainly available. Still, the majority was drawn from outside areas. Moreover, the colliery workers, like other rural-based workers in Indian industries (see Chakrabarty, 1996; De Haan and Sen, 1999 for more discussions on the cultural rootedness of industrial labour force in Bengal) neither economically nor ethnically belonged to the same class. The withdrawal of *adivasi* labour from Indian collieries during late nineteenth and early twentieth century proves this fact. It also indicates how changing production relations changed the social-ethnic composition of labour.

Was there a 'choice margin' available to local labour in view of the higher wages in the mining industry as compared with local agriculture? From a Marxist point of view, Bagchi (1975) has theorized that such a margin may be significant for a peasant and was responsible in drawing local labour in nascent industries like coal mining. However, as we find, conversion from an agricultural proletariat into a coalhand was at the endpoint of choice for local *adivasi* and lower caste labour. The local labour was tied to the land either as sharecroppers or agricultural hands participating in such activities as families with their women. In the capitalist production process that collieries were adopting, local *adivasis* with their first commitment to land would hardly constitute stable and dependable labour force. The colliery companies had initially tried to maintain a semi-feudal *zamindari* style of functioning and recruitment policy with the objective of offering homestead to captive labour supply, but failed to integrate the land-ties of *adivasis* with a capitalist production system. At the same time, the technology of coal mining made a changeover from opencast and inclines to shaft or pit mining after 1920s and 1930s, a change that required far greater initial capital investment. Consequently, the interests of the owners to secure a stable and skilled labour force grew considerably. Thus, technology of mining was intricately interlinked with the social-ethnic composition of labour in Indian collieries.

Ray Chaudhuri (1996) attributes the disappearance of Santhal and other *adivasi* labourer to the influx of upcountry labourer but does not mention the causes of conflicts between the local and immigrant labour. The *adivasis*, in order to maintain their family units of production, opted for work in plantations or in construction of roads or railways where both women and men could again 'join hands together'. The *adivasi* labour, exchanged 'the plough for the pick' (Read, 1931) and still continued to prefer the plough from which they were displaced by the first wave of colonization (Guha and Gadgil, 1989).

Into scavengers: gender and resource extraction

Women workers are more vulnerable to job loss in the event of increased mechanization and technical innovation. In case of automation, women workers are the first to be affected and last to gain from any extension of skills. In Indian coal mining technological changes have transformed the resource extraction process in ways that favour male workers. Since much of this technological change was not autonomous and used indiscriminately without paying attention to its suitability to the region, it has failed to stimulate other sectors of the economy. On the other hand, the obsession

with the import of technological input has had major impacts on the regional environment and destroyed the natural resource bases of livelihood for poorer, rural communities (Vicziány, 1998). The absence of expansion in other sectors of the economy in mining regions, especially the loss of commons such as water bodies and orchards, and decline in agriculture, have resulted in a loss of livelihood opportunities for rural women. In Raniganj, women's banishment from the male world of 'work' has in several ways excluded them entirely from the power to determine their own lives.

Women still participate in mining, including coal mining, in India and elsewhere in the world (see for example, Mitha, et al, 1988), but their roles remain significant as long as the resource process remains low-technology. In the Raniganj region, the introduction of underground mining restricted women to surface work, machines restricted them to unskilled work, the process of mechanization generally reduced their opportunities in the coal mining sector, and a degraded environment truncated the alternative subsistence bases in agriculture, forestry, fishing and such other primary productions which have traditionally provided employment to local women.

The case of the coal mining industry in eastern India shows how changes in the economic organization of resource extraction in colonial and post-colonial India have interacted to produce a rigidly hierarchical and patriarchal society in the region vis-a-vis women's place. For example, the Female-Male Ratio (FMR, the number of females per thousand males) used as a convenient index to assess women's status in a society, is extremely low in the Raniganj coalbelt (only 839). This is a much lower figure than that of India (929), the state of West Bengal (917), and the district of Burdwan (899) within which most of the collieries are located. This skewed gender distribution in favour of males suggests there are three features associated with coal mining in the region: male labour migration in search of job opportunities; fewer economic and social opportunities for women; and gender bias in the coal mining industry.

The participation of women in the workforce in the Raniganj colliery belt is significantly below the official Indian average of 15.9 per cent or the state average of 8.0 per cent. In larger towns in Raniganj where the range of services is wider, participation of women in the workforce is higher but still lower than the state average. In small new colliery towns the number of women workers is even lower. Take the case of a tiny colliery town of Madhusudanpur as an example. Here mining employs more than 86 per cent of its total workers. The female population is slightly above 40 per cent whereas the mining sector employs only 0.5 per cent of the female workforce.

High paying (that is, mining and industries) occupations offer only 4.9 per cent of jobs to women in Raniganj. Low paying (that is, agricultural labourers, cultivators, and livestock, fishing, forestry and allied activities) jobs on the other hand employ as many as 13.3 per cent of women workers. Clearly, women's labour is concentrated in the low-pay, traditional or unorganized sectors. Unpaid labour in family-based subsistence production is yet to be recognized by the Indian census.

Sitting in her 'rehabilitation' home Aduri Ruidas, an 'evictee', a person displaced by an expanding foreign-capital aided langwall project in Kottadih colliery, talked to me. She explained in a few words the process of turning women into scavengers. "When the mining company takes the land on lease, it pays compensation to the owner of the land, and gives the family jobs. What happens to people like us who worked on that land? Who collected twigs and branches and fruits from the *bagan* (orchard)? Who used the water tanks for our daily needs? Not only the owner but us too. What will happen to us? What shall we do with a brick house? Shall we eat it?"

Gender and class in Raniganj

The trade unions have come a long way in the Raniganj region from the days of long working hours, lack of security and frightful conditions as described by the leading Marxist leader, Dange in 1945. The formalisation of the coal mining industry and the successful bargaining on the workers' position have now put the trade unions in a place to have representations in each management decision and discuss issues like pollution in the region. The unions have indeed earned for the workers many of the benefits they enjoy now, and have in turn made getting a job in collieries a

highly attractive proposition - far better than what was described by the Government of India in 1967 survey report on labour conditions in the coal mining industry. It is true that instead of treating 'family' as a unit of production, trade unions fought for equal wages and have thus helped to achieve a better valuation of women's work in mining. Ensuring that a widow gets the job of her deceased husband was also the achievement of these unions.

Still, the trade unions have remained insensitive to the declining numbers of women workers in collieries. As institutions they are male dominated in that neither the leaders are women, nor have the number of women members registered a significant increase. But above all, while some trade unions have added women-related issues to their 'list of workers' demands' their policies have not placed them at the forefront of these agendas. Women workers are excluded at the level of leadership and policy, and even if women are members they are discouraged to participate in union meetings. The belief in a monolithic working class is shared by all trade unions whether leftist or not, thus subsuming gender issues within the class issues.

Union activity seems to be shaped by a gendered discourse that looks at women as a 'special' category externalised from the general interests of workers (Basu, 1992). The Colliery *majdoor sabha* (Labour congress) of Raniganj takes pride in their mass movements and how women 'participate' in these movements, but it never goes beyond that. The active participation of women in leading or key roles in trade unions has not always been welcomed by male trade unionists (Akerkar, 1995). Mining is such an overwhelmingly male world in terms of power and domination; men are perceived to be risking their lives to earn the bread for their families. The notion is that women belonged in the home and were only working to earn 'the butter', claiming equal wage where it is clear that their frail bodies can not put in the kind of hard labour demanded by coal mining. The labour leaders are vociferous that the family wage system was more exploitative; but they in general refuse to engage in a debate on the declining numbers of women in the collieries. As Sunil Basu Roy, a respected senior unionist noted in a rare moment of insight: "in a poor country like ours, let men get the jobs first" thus reflecting the conventional wisdom that since economic problems such as mass labour retrenchment, mine closures and losses due to lack of productivity are intense, the position of women workers can only be of secondary significance.

Up until Independence, 'family wage' was one way in which women's right to work was compromised. The recently introduced Voluntary Retirement Scheme (VRS) is another way to declare women workers as redundant. This scheme arises out of deep-rooted contempt of ECL management for women miners. Phulomoni Kora told me how she has been identified as 'surplus labour' by ECL and will be retired soon in spite of her repeated requests to ECL for jobs that she is skilled to do, such as sorting of coal or making '*guli*' (mud-containers for explosives) or baskets. These are skills that *adivasi* and lower caste women workers have acquired over generations of participation in coal mining work; it is incomprehensible to Phulomoni why women like her are not trained to do other kinds of work that may be relevant to the nature of work at present.

In India the displacement of women from the industrial workforce and the subsequent construction of a male working class has not been limited to the coal mining sector only. Jhabvala first showed in 1985 how retrenched women workers from cotton mills of Ahmedabad in west India were pushed into lower paying and insecure jobs. Banerjee (1991; 1992) has studied women in the unorganized sector in metropolitan cities and noted the lack of political protection by unions. Baud (1991) has demonstrated that in the case of women workers in the Coimbatore textile industry in South India, gender segregation is most marked in the mill sector where regulation and trade union activity is more evident. In coal mining too, trade unions are less responsive to women workers than their male members' interests. The attitude directed toward women workers is condescending and in their 'noble' efforts to 'protect' the weak women, the trade unions often fail to look after women's issues and interest in a substantive way. Fernandes (1997) has shown how the politics of gender, class and culture produces notions about the spheres of work of women and men in Calcutta jute mills.

There is also a lack of activism among the women coal miners; political silencing remains an important factor because of the organizational strength of the *majdoor* unions (Barnes, 1989). The militancy of the trade unions, at least three of them being avowed Marxist organizations in a state that has been ruled for over 25 years by a conservative Marxist government that controls every aspect of human life, is understandable. The term '*majdoor*' itself denotes a male worker and the strong trade union usually perceive themselves as male organizations. Dulali lost her husband in a wall-collapse accident and applied to the company for her own employment. Here is what followed in her words:

'I made rounds of colliery offices for two years. Finally I went to the union leaders who insisted that I accept to my elder son being given the job. Following their advice, I decided in favour of my son and now I hardly get two square meals a day.' Her son has now deserted her and she lives by what she describes as 'collecting coal' from an old abandoned mine. The company, supposedly had stowed the underground mine with sand and sealed it off. Now local people have broken off the seals and finding that much coal is still left there and no sand stowed, are scavenging on it. Dulali is one of them. After deliberating in her mind for a long time when I asked why women like her do not protest about the union's reluctance to entertain them, she said, 'we are always ready for action, but first think before shouting. If the leaders are enraged, we will be in big trouble. So we keep quiet'. When I probed further, she said, 'Look at Prakashbabu (the local trade union leader) - he is just like other babus in colliery. How can we talk to him as an equal?' What we have here is a double dose of exclusion, and a chain reaction of impacts that multiply and accelerate to immense proportions.

Gibson-Graham (1994) noted that in Australian coal mining towns women's organizations gained some form of legitimacy by supporting men's struggles; in Raniganj too, the gender relations are such that women workers are patronised in certain cases and ignored in others. A Public Interest Litigation was initiated in the highest Court of justice by the General Secretary of Colliery Majdoor Sabha, India (CMSI), to protect the fundamental rights of residents of the region from the growing risk of environmental accidents and threats to life support systems. However, no such effort has yet been taken up on women workers' case. Women workers have become invisible to the trade unions.

Not surprisingly, the only patronising initiative came from the establishment itself. In 1997, Coal India Limited encouraged the formation of an organisation called 'Women in Public Sector' (WIPS) with the objective of optimising the full potential of its women employees and to play a catalytic role in improving the status of women. However, the organization is a city-based one with white-collar women workers. It has so far limited itself in holding academic seminars instead of establishing a dialogue with the trade unions and the colliery management. Women miners who work in collieries are not represented at all in this organization. Moreover, the mining industry has so far not taken any serious initiative to identify the technical job areas where women could be employed or trained.

The State measures reflect a compartmentalization of the issue of women workers. The various protective legislation developed for women miners, though probably designed to improve their working conditions, have acted as instruments to exclude them from the formal mining sector. The nationalized company has been unwilling to recruit women because of their special and protected status on the one hand, and on the other hand the legislation has not included any means for the protection of employment opportunities and job security. Thus the special biological attributes of women have been at the centre of concern by the 'protectors' rather than against discrimination due to cultural, social and economic factors (Pathak and Rajan, 1992). As a result, women of those ethnic groups that traditionally did mining jobs – usually the most disadvantaged of the lot – have been more affected than white-collar workers.

The exclusion of women miners brings out how the real exigencies of power struggles between genders in party politics are downplayed successfully and an ideology of 'protection' dominates women's active role in natural resource management. The separation of 'home' and the 'workplace' is now complete in the Raniganj collieries. Women are supposedly protected within the family,

'work' being a mode of access to a public space, a forum for combative actions to ensure equal rights. But are they, in reality? What happens after they have been protected from the dirty, dangerous mining jobs?

Scavengers: changes in resource base and employment

Mining by its very nature is an unsustainable activity from the ecological point of view. Mining in India is also unsustainable economically; if environmental costs are taken into account, even the most productive of mines would not seem terribly attractive. That in spite of the existence of innumerable laws and measures to monitor, mining in India completely alters and destroys the local environmental conditions has been proven by innumerable studies (see Dhar and Thakur, 1995 for an excellent overview). The overall environmental impacts of mining are uniformly negative especially in terms of displacement of social groups either from traditional homes (Fernandes and Thukral, 1989) or traditional occupations (Lahiri-Dutt, 1999). An entire range of issues are connected to the exclusion of women from resource extraction - the State and the rights of indigenous people, State policies regarding land transfer, rights of local communities over environmental and common property resources.

Besides the exclusion from formal mining sector, a changing environmental resource base constitutes the other driving force behind the transformation in women's lives in Raniganj. Such changes often have detrimental effects on women from the point of view of alternative work in a degraded environment (Emberson-Bain, 1994; Shiva, 1989; Jose, 1989; Tauli-Corpuz, 1988).

In Raniganj, the State (through the nationalised mining company) is the largest landowner and the largest employer, besides having the ownership of all mineral resources within its territory. As the pace of coal mining increased since 1970s, open casts expanded and newer collieries opened causing ecological destruction to occur at a rapid rate. The specific historical pattern of mining expansion in the Raniganj meant that there were innumerable underground voids at unknown locations. Since it is a densely populated area, land subsidence, coal seam fires, desiccation of vegetation and a falling water table are the main environmental concerns. A thinned or disturbed topsoil, mining-ditches and subsidence holes that contain more mosquitoes than potable water, little or no forest cover to provide fuel and fodder, a falling watertable due to the subsidences forcing women to travel further and further away from homes to collect water, deserted settlements, abandoned mines and pits that are sites of 'illegal' scavenging, frequent underground fires scorching lush paddy fields - these have completely altered the lives of women in this colliery region.

Lack of livelihood resources is now undermining the subsistence bases of women of local communities. What we see is a feminisation of poverty, where 'development' itself brings about that poverty (Lebra, Paulson and Everett, 1984; Mazumdar, 1978). Rural women in Raniganj have traditionally found employment in agriculture-related jobs. The recent expansion of coal mining and consequent urbanization has come at a cost of agriculture - mostly monsoon-fed subsistence rice farming. A decaying agricultural base and falling water tables, lack of fuel and other resources which were usually collected from the village commons, and lack of opportunities in this mono-industrial region have combined together to completely alienate women from the 'development' process. Exclusion of women from the coal production and environmental degradation as a consequence of mining have provided the double-edged sword that is threatening the survival of rural women in the Raniganj region.

The modern, formal, urban sector has absorbed women at the lowermost strata of the economy in low-paying jobs such as manual labourers in the construction works, various small factories, brick-kilns, stone-crushing units, as rag-pickers and as domestic help, as sex-workers catering to the truck-drivers, and as workers in the flourishing unauthorised coal mining business. The family no longer remains a valid unit of production; the family and the factory are of no consequence to each other, and may even have contradictory interests. The result is a lowered, powerless status for women (Dietrich, 1995) who continue to get drawn to the mainstream mining-urban-industrial

economy at the lowest level as unskilled, low-paid, high-risk, illegal workers, while taking the full brunt of environmental degradation. During a group discussion in Kottadih colliery Champa burst out, "the collieries have turned us into paupers' She continued: 'there is not enough green for our goats (cattle is reared only by the better off farmers having large holdings), to say nothing of fuelwood (the major reason for scavenging for coal on abandoned mines), we have to trek longer and longer for collecting drinking water for the family". Champa's mother, Lakshmi quipped angrily, "we have lived in this village for generations, but now the collieries are expanding and we may have to leave our ancestral village. Now they are bringing in the longwall, and going to subside the entire area. Some men are happy because they think they will get the jobs. Where will we women go?"

Conclusion

The past two decades have seen a global rethinking of what constitutes 'development'. In coal mining in India, development is State development. As the boundaries between public and private spheres, of cash/wage work and family/household survival, are created or redefined in the course of development, what are their implications for women in the resource process? What is the role of the State in defining the changing boundaries between public and private and how susceptible are these boundaries to State control (Charlton, Everett and Staudt, 1989; Also see Government of India, 1984, for a statement on 'equality')? I have shown that for women miners the enhancement of post-colonial State control over the resource extraction process has not offered greater opportunities than before. This study has also revealed the hypocritical position of the Indian State with regard to gender relations. Through its laws of protection and welfare, and then exclusion from livelihood, the State simultaneously reproduces and endangers the gender-based division of the public and private spheres (Lewis, 1983). Thus contradictions and inconsistencies are ingrained within the nature of recent 'mining development' as it has been perceived in India.

Sinha (1999) noted that the huge and impressive democratic framework initiated since independence has excluded the poorer common people in spite of naming them at the centre of the statist discourse of governance. Seen as an amorphous macro-collectivity, poor women have been subjected to a range of exclusionary communication by various state apparatus at various levels. The fact that formal coal mining sector has excluded a specific group of women through legislation in the name of protection and made them invisible in the economy at the same time by providing them with no alternatives but to scavenge upon the formal sector shows how the modern State in developing countries like India render a category of people as illegitimate. This group then joins what is called the informal mining workforce - often illegal and persecuted by the State and at the mercy of the its law-keepers - and ekes out a living at the subsistence level.

What is needed is a reintroduction of women miners in underground jobs as well as surface jobs. Lotherington and Flemmen (1991) commented on the ILO's move towards gender-responsive policy after it noted (1988, p. 29) that "the majority of women workers continue to be concentrated in a limited range of occupations; doing work requiring low skills or earning low remuneration". Several countries have already revoked the ILO's regulation on women working underground. There is no reason why India cannot do the same and try to change the gender balance of its coal mining industry once again. What is now needed is a re-organisation of the economy in which trade unions, women's and ecology movements, political parties and all democratically minded forces must join together in creating a socially just system in which women would find equal opportunities to men.

References

- Agabeg, E. C. (1915) 'Labour in Bengal Coalmines', *Transactions of the Mining and Geological Institute of India*, Vol VIII, Calcutta.
- Akerkar, Supriya (1995) 'Theory and Practice of Women's Movement in India : A Discourse Analysis', *Economic and Political Weekly*, Vol. XXX, No. 17, April 29, 1995, pp. WS2-23.
- Akhauri, R.K. (1969) *Labour in Coal Industry in India*, Sterling Publishers Pvt. Ltd., New Delhi.
- Asansol-Durgapur Development Authority (1985) Survey of Coal-Mine Workers, Asansol-Durgapur Development Authority, Asansol.
- Bagchi, Amiya Kumar (1975) *Private Investment in India: 1900-1939*, Oxford University Press, New Delhi.
- Bandyopadhyay, Debnath (1998) *Raniganj Koilanchal Itibritta*, Jodhan Prakashani, H.C. Cables Town.
- Banerjee, Nirmala (1992) Poverty, Work and Gender in Urban India, Centre For Studies in Social Sciences, Calcutta.
- Banerjee, Nirmala (1991) *Indian Women in a Changing Industrial Scenario*, New Delhi.
- Barnes, Lindsay (1989) Women, Work and Struggle: Bhowra Colliery, 1900-1985, Unpublished PhD Thesis, Jawaharlal Nehru University, Centre for the Study of Social Systems, New Delhi.
- Basu, Amrita (1992) *Two Faces of Protest: Contrasting Modes of Women's Activism*, University of California Press, Berkeley.
- Baud, Isa (1991) 'In all its Manifestations – The Impact of Changing Technology on the Division of Labour' in Nirmala Banerjee (ed) *Indian Women in a Changing Industrial Scenario*, Sage, New Delhi, pp. 33-152.
- Bayly, Susan (1999) *The New Cambridge History of India: Caste, Society and Politics from the Eighteenth Century to the Modern Age*, Cambridge University Press.
- Beteille, Andre (1996) *Caste, Class and Power: Changing Patterns of Stratification in a Tanjore Village*, Oxford University Press, Delhi.
- Bhattacharyya, Harasankar (1985) *Zamindars and Patnidars: A study of Subinfeudation under the Burdwan Raj*, Burdwan University Publication Unit, Burdwan.
- Bremen, Jan (1985) *Of Peasants, Migrants and Paupers: Rural Labour Circulation and Capitalist Production in West India*, Oxford University Press, Delhi.
- Chakrabarty, B. (1992) 'Jawaharlal Nehru and Planning: 1938-1941', *Modern Asian Studies*, Vol 26, No. 2, pp 275-287.
- Chakrabarty, Dipesh (1989) *Rethinking Working-Class History: Bengal 1890-1940*, Oxford University Press, Delhi.
- Charlton, Sue Ellen M., Jana Everett and Kathleen Staudt (eds) (1989) *Women, The State and Development*, State University of New York Press, Albany.
- Chatterjee, Partha (1993) *The Nation and Its Fragments: Colonial and Postcolonial Histories*, Princeton University Press, Princeton, New Jersey.
- Chaudhuri, M.R. (1971) *The Industrial Landscape of West Bengal : An Economic Geographic Appraisal*, Oxford & IBH Publishing Co., Calcutta.
- Coal 1999, World Hard Coal Production, 1989-1998 (Mt), BP Statistical Review.
- Coal Handbook (1997) Government of West Bengal, Office of the District Magistrate, Burdwan.
- Dange, S. A. (1945) *Death Pits in Our Land: How 200,000 Indian Miners Live and Work*, Asia Publishing House, Bombay.
- Dasgupta, Priyabrata (1997) 'Lathial Theke Mafia', *Natun Chithi*, Sarad Sankhya, Burdwan, pp 270-274.
- Desai, Neera and M. Krisnaraj (1990) *Women and Society in India*, Ajanta Publication, New Delhi.
- De Haan, Arjan and Samita Sen (1999) *A Case for Labour History: The Jute Industry in Eastern India*, KP Bagchi & Company, Calcutta.
- Deshpande, S. R. (1946) Report of an Enquiry into the Conditions of Labour in the Coal Mining Industry in India, Government of India, New Delhi.
- Dhar, B.B. and R. Thakur (1995) *Mining Environment*, Oxford and IBH, New Delhi.

- Dietrich, Gabriele (1995) 'Women's Struggle for Production of Life : Public Hearings of Women Workers in Informal Sector', *Economic & Political Weekly*, Vol. XXX, No. 26, July 1, pp. 1551-1554.
- Dumont, L. (1970, original in 1966) *Homo Hierarchicus: The Caste System and its Implications*, Weidenfeld & Nicolson, London.
- Emberson-Bain, Atu (1994) 'Mining Development in the Pacific : Are We Sustaining the Unsustainable ?' in Wendy Harcourt (ed.) *Feminist Perspectives on Sustainable Development*, Zed Books, London.
- Fernandes, Leela (1997) 'Beyond Public Spaces and Private Spheres: The Politics of Gender, Family and Community in the Calcutta Jute Mills', *Feminist Studies*, Vol. 23, No. 3.
- Fernandes, Leela (1999) 'Displacing Women Workers on the Margins of Working Class Politics in the Jute Mills' in Arjan de Haan and Samita Sen (eds) *A Case for Labour History*, K. P. Bagchi & Company, Calcutta, pp 176-196.
- Fernandes, W. and E. G. Thukral (eds) (1989) *Development, Displacement and Rehabilitation*, Indian Social Institute, New Delhi.
- Fuller, C. J. (ed) (1997) *Caste Today*, Oxford University Press, Delhi.
- Ghosh, Anjan (1984) Escalating Redundance: Dispensability of Women Labour in the Coal Mines of Eastern India, Paper Presented in EIWIG Conference on 'Women Technology and Forms of Production', Madras, 30-31 October.
- Gibson-Graham, J.K. (1994) "'Stuffed if I Know!": Reflections on Post-modern Feminist Social Research', *Gender, Place and Culture*, Vol. 1, No. 2, pp. 205-224.
- Government of India (1967) Report on the Survey of Labour Conditions in the Coal Mining Industry in India, New Delhi.
- Government of India (1984) Towards Equality: Report of the Committee on the Status of Women in India, New Delhi.
- Guha, R. (1955) Bengal District Records: Burdwan, Bengal Secretariat Press, Calcutta.
- Guha, Ranajit (ed) (1982-1997) *Subaltern Studies: Writings on South Asian History and Society*, Various Volumes, Oxford University Press, Delhi.
- Guha, Ramachandra and Madhav Gadgil (1989) 'State Forestry and Social Conflict in British India', *Past and Present*, Number 123, May.
- Gupta, Dipankar (1984) 'Continuous Hierarchies and discreet Castes', *Economic and Political Weekly*, Vol. XIX, Nos. 46-48, pp. 2003-5, 2049-53.
- Hunter, W. W. (1872, reprinted in 1973) International Labour Organization (1999) *Social and Labour Issues in Small Scale Mines*, International Labour Office, Geneva.
- International Labour Organization (1997) *Sectoral Activities : Mining*, International Labour Office, Geneva.
- International Labour Organization (1996) *International Labour Conventions and Recommendations 1919-1951*, Vol. 1, International Labour Office, Geneva.
- International Labour Organization (1988) Coal Mines Committee, Twelfth Session: Manpower Planning, Training and Retraining for Coal Mining in the Light of Technological Changes, Report II, International Labour Office, Geneva.
- International Labour Organization (1988a) Women Workers: Selected ILO Documents, Second Edition, International Labour Office, Geneva.
- JhabVala, Renana (1985) From the Mill to the Streets: A Study of Retrenchment of Women From Ahmedabad Textile Mills', *Manushi*, Vol. 26, No. 2, pp 2-5.
- Jose, A.V. (1989) *Limited Options: Women Workers in Rural India*, International Labour Office, Geneva.
- Joshi, Barbara (ed) (1986) *Untouchables! Voices of the Dalit Liberation Movement*, Zed Books, London.
- Karlekar, Malavika (1991) *Voices From Within: Early Personal Narratives of Bengali Women*, Oxford University Press, Delhi.
- Karlekar, Malavika (1986) 'Kadambini and Bhadraklok: Early Debates Over Women's Education in Bengal', *Economic and Political Weekly: Review of Women's Studies* 21, pp WS 25-31.
- Kumarmangalam, S.M. (1973) *Coal Industry in India - Nationalisation and Tasks Ahead*, Oxford and IBH Publishing Co., New Delhi.

- Lahiri-Dutt, Kuntala (1999) 'The Promised Land: Coal Mining and Displacement of Indigenous Communities in Eastern India', *Asia-Pacific Journal on Environment and Development*, Vol. 6, No. 1.
- Lahiri-Dutt, Kuntala (1999) State and the Market: An Analysis of the Crisis in the Raniganj Coalbelt', *Economic and Political Weekly*, Vol. XXXIV, No. 41, pp. 2952-2956.
- Lebra, Joyce, Joy Paulson and Jana Everett (1984) *Women and Work in India: Continuity and Change*, Promilla & Co. Publishers, New Delhi.
- Lotherington, Ann Therese and Ann Flemmen (1991) Negotiating Gender: The Case of the International Labour Organization, ILO' in Kristi Anne Stolen and Mariken Vaa (eds) *Gender and Change in Developing Countries*, Norwegian University Press, Oslo.
- Mahindra, K.C. (1946) Indian Coalfields Committee Report, Manager of Publications, New Delhi.
- Mazumdar, Vina (ed) (1978) *Role of Rural Women in Development*, Report of an International Study Seminar held at the IDS, Sussex in 1977, Allied Publishers Pvt Ltd, Bombay.
- McDowell, Linda and Doreen Massey (1984) 'Coal Mining and Place of Women : A Case of Nineteenth Century Britain' in Doreen Massey and John Allen (eds.) *Geography Matters! A Reader*, The Open University, Cambridge.
- McLane, John R. (1993) *Land and Local Kingship in Eighteenth Century Bengal*, Cambridge University Press, Cambridge.
- Mendelsohn, Oliver and Marika Vicziany (1998) *The Untouchables: Subordination, Poverty and the State in Modern India*, Cambridge University Press.
- Metcalfe, A. (1987) 'Manning the Mines: Organizing Women Out of Class Struggle', *Australian Feminist Studies*, Vol. 4, Autumn, pp. 73-96.
- Mitha, Yameema, Nigat Said Khan, Masood Anwar and Asmaa Javed Pal (1988) *Patterns of Female Employment in Mining and Construction Industries*, Ministry of Women Development, Government of Pakistan, Islamabad.
- Mohanty, C. (1991) 'Introduction: Cartographies of Struggle' in C. Mohanty, A. Russo and L. Torres (eds.) *Third World Women and the Politics of Feminism*, Indiana University Press.
- Mukherjee, Ramakrishna (1999) 'Caste in Itself, Caste and Class, or Caste in Class', *Economic and Political Weekly*, Vol XXXIV, No 27, pp 1759-1761.
- Munsi, Sunil Kumar (1980), *Geography of Transportation in Eastern India under the British Raj*, CSSSC Monograph 1, K.P.Bagchi & Co., Calcutta.
- Murty, B.S. and S.P. Panda (1988), *Indian Coal Industry and the Coal Miners Discovery*, New Delhi.
- Omvedt, Gail (1981) Capitalist Agriculture and Rural Classes in India', *Economic and Political Weekly*, Vol. XVI, pp A 140-159.
- Paterson, J.C.K. (1910), *Bengal District Gazetteers: Burdwan*, Bengal Secretariat Book Depot., Calcutta.
- Pathak, Zakia and Rajeswari Sunder Rajan (1992) 'Shahbano' in Judith Butler and Joan Scott (eds) *Feminists Theorise the Political*, Routledge, London.
- Parpart, Jane L. (1995) 'Post-Modernism, Gender and Development' in Jonathan Crush (ed) *Power of Development*, Routledge, London.
- Ray Chaudhury, Rakhi (1996) *Gender and Labour in India: The Kamins of Eastern Coalmines, 1900-1940*, Minerva, Calcutta.
- Read, Margaret (1931) *The Indian Peasant Uprooted*, London.
- Rothermund, Dietmar and D.C. Wadhwa (eds) (1978), *Zamindars, Mines and Peasants: Studies in the History of an Indian Coalfield and its Rural Hinterland*, Manohar Publications, New Delhi.
- Risley, H.H. (1891, reprinted in 1998) *The Tribes and Castes of Bengal*, Volumes I & II, Firma KLM (P) Ltd, Calcutta.
- Rudd, Arild Engelsen (1999) 'The Indian Hierarchy: Culture, Ideology and Consciousness in Bengali Village Politics', *Modern Asian Studies*, Vol 33, No 3, pp 689-732.
- Sen, Ilna (ed.) (1990) *A Space Within the Struggle: Women's Participation in People's Movements*, Kali for Women, New Delhi.
- Shiva, Vandana (1989) *Staying Alive: Women, Ecology and Development*, Zed Books, London.
- Sinha, Dipankar (1999) 'Indian Democracy: Exclusion and Communication', *Economic and Political Weekly*, Vol XXXIV, No 32, August 7, pp 2230-2236.
- Sinha, Pabitrabhasakar (1975) *Development of the Mineral Industries of Bihar-Muzaffarpur*, Calcutta.
- Standing, Hilary (1991) *Dependence and Autonomy: Women's Employment and the Family in Calcutta*, Routledge, London.

- Tauli-Corpuz, Victoria (1988) 'The Globalisation of Mining and its Impact and Challenges for Women, *Third World Resurgence*, No. 93, May 1998.
- Venkateswaran, Sandhya (1995) *Environment, Development and the Gender Gap*, Sage Publications, New Delhi.
- Vicziany, Marika (1998) 'Ecological Perspectives on the Development of the Piparwar Coal Mine in Bihar, 1954-1994' in Richard H. Grove, Vinita Damodaran and Satpal Sangwan (eds) *Nature and the Orient: the Environmental History of South and Southeast Asia*, Oxford University Press, Delhi, pp 484-533.
- Yergin, Daniel and Joseph Stanislaw (1998) *The Commanding Heights: The Battle between Government and the Marketplace that is remaking the Modern World*, Touchstone, Simon & Schuster.