

SUMMARY OF FINDINGS AND CONCLUSIONS

The present thesis is intended to study woman mica workers in a region called Nellore Mica Belt (NMB) in Nellore district of Andhra Pradesh. The thesis examines various details related to mica industry and its trajectory and the woman mica workers conceived from a gender perspective. The woman workers are seen working in the three major segments of mica industry namely mica mining (underground and surface mining or open cast mining), processing of raw mica ore and manufacturing various mica products.

The study is situated in a broader context where rapidly progressing industrialization is leading to a shift or what is popularly called ‘migration’ of manufacturing sector to the developing world from the developed world. Manufacturing sector is believed to generate employment for women. The consequences of this employment are conceptualized from two perspectives:

Boserup holds the view that industrialization inherently marginalizes women and push them to the lower ranks of market ladder; in fact the ‘modernization’ school of development postulate that women’s labour is alienated or downgraded both from the family and the factory, in the process of industrial production (Boserup,1987).

Elson and Pearson uphold that industrialization incorporates women as a strategy to eradicate gender discrimination and subordination. This premise is based on the assumption that lack of job opportunities is the main reason behind women’s subordination and can be moderated by provision of sufficient job opportunities (Elson and Pearson, 1981). These consequences form the curtain raiser or an analytical prologue for this study.

Various works/activities/ jobs in the mica industry are not only non-traditional but also involve technical skills largely manoeuvred by means of manual labour. For long, mica mining (just as mining any other mineral) is generally considered a male dominated profession. However, women are not entirely excluded; they are employed to carry out various jobs since the beginning of mica mining in NMB. But with the

importance gained by the processing and manufacturing sector, women workers are increasingly preferred and are considered suitable for this sector. There are virtually very few studies conducted on woman workers in the mining industry in general and mica industry in particular. This is clearly a new area of research domain which deserves descriptive and explorative studies.

Objectives and Methodology

The overall objective of the thesis is to explore gendered nature of woman workers in mica industry and to appraise to what extent participation in different sectors of mica industry helps women's emancipation from the socially constructed gender stereotyping and paves way towards empowerment. This work endeavours to elicit personalized identity constructions by the women as opposed to the 'externally' generated social construction. The major objectives of the study are to trace out the growth and decline of mica industry, to analyse socio-economic profile of woman mica workers, to understand the impact of mining industry on social structure of the village community, to examine the gender ideology and discrimination concerning women's participation, and to explore various problems faced by women mica workers.

This study is explorative and descriptive in its design basing on intensive fieldwork. The study is conducted in Chennur, a large village in Gudur Mandal of Nellore district, Andhra Pradesh. The universe of the study area is primarily the Nellore Mica Belt (NMB). A multi-stage sampling is adopted to select the Mandal, village and sample households. The sample was selected based on purposive and random methods. Care was taken to select woman workers proportionately to cover nature of work and social categories.

Fieldwork has been conducted in several spells. The total duration was six months. For primary data collection, the researcher employed qualitative anthropological techniques. The tools employed are observation (both participant and non-participant), household census schedule, interview guide, interview, case study, and focus group discussions. The tools were pre-tested. Audio-Video accessories were also used for the collection of primary data.

The Trajectory of Mica Industry in NMB

The mica industry has experienced more or less three distinct stages: War-time boom (1900-1950); Decline period (1950- 1985); and extraction of other minerals and establishing manufacturing companies (1990- till present). Some important conclusions are:

1. Mica being a strategic mineral, its market value was very high and has attracted considerable labour force, both women and men.
2. Due to technological advancement and political intervention during the British regime, the industry was at the mercy of the colonial powers and demand for mica sheet has collapsed with the invention of mica substitutes.
3. Mining mica was engulfed in uncertainty because of the mineral's geological pattern of occurrence; it was only through trial and error method mining activity was organized.
4. The mine owners paid scant attention to the development of the industry; they were chiefly interested in making a profit and seem to have embraced the awkward philosophy of "get rich and get out".
5. The labour supply and demand also oscillated according to the growth and decline of mica mining.
6. Of late, there is some diversification in mining and also in downstream planning; other co-occurring minerals are now exploited; fabrication and manufacturing of mica products are gaining importance.
7. In almost all processing works and fabricating and manufacturing works women have gradually replaced men leading to the process of feminization of mica industry.
8. These developments have implications for the occupational segregation of female and male employment in mica industry, the labour conditions of women workers and their social status and role as home-makers and mica workers.

Profile of the Woman workers

Chennur village is very ancient as reflected from its ancient temples. Located about very nearby (4 km) to the Mandal headquarters of Gudur, it is inhabited by 22 social groups that include OCs, BCs, SCs, STs and minorities. The population is 11,542 distributed in 3,025 households. The gender ratio is 973 women to 1000 more. The main occupations are agriculture and agricultural labour, handloom weaving, working in mica industry and rice mill. Lemon business is recent occupation. There are various other occupations which are caste-based and secular and modern. Most of these avocations fall under the category of self-employment and wage-based manual labour. These are practised by an assortment of individuals cutting across caste and class. Caste plays a significant role in the village affairs.

The impact of mica industry can be conceptualized basing on some probable consequences concerning the mica workers in general and women workers in particular: 1. Emergence of a class of proletariats; 2. Emergence of an independent working class; and 3. A transformation from a status of un-free labour to free labour. All these eventualities are masculine categories. Of the three eventualities, the last one – transition from unfree labour to free labour- is working among the mica labour including both male and female workers. However, this is not a total transition. In understanding transition from traditional labour relations to that of modernized labour relations, women are largely neglected.

The gender analysis of labour relations indicated that two separate identities are created namely feminization of un free labour by women mica workers and masculinisation of free labour by male mica workers at the work places.

The Mining crew always maintain formal relations with the management and with the planning crew. They maintain affective-neutral, universalistic relations, oriented toward self development, and have become achievement-conscious. They maintain functionally specific relations with their employers and management. By creating a defiance and solidarity, the male workers could assert their free labour identity. It is common among the male workers to seek occupations outside the village entrenched economy and mica industry.

Women mica workers on the other hand, assumed a reversal of their male identity demeanour. At work place they are more docile, less demanding, regular and work-minded in their work habits. They offer their labour more easily for a low wage, seek job security and create a 'supply' situation rather than a 'demand' situation. They maintain unfree labour relations with the mine owners, managers and other staff. They re-enact the traditional societal values- affective; collective, particularistic, ascriptive and functionally diffused relations with others. Women workers deem that mica work in processing and factory as well as in mining grounds as dirty, dusty and hazardous. At the same time they shun undesirable labels by saying that they are proud to do the work and they rate the work as not as simple as it appears to be. In their perception, the work they do is skilled. A very often cited work is splitting mica blocks into different thicknesses. This requires expertise and precaution. They show their hands which are rough and hard and many a times bruised.

Mica factories are important because they provided the conventional wage labour and incorporated women's labour into factory regime. Such labour is inexpensive and available. Mica owners recognized that women's productive contribution is important and reflected considerable skill. The mica industry reflected a balance between factory work and local culture/traditions. The latter are carried into factory settings as a way of articulating and humanizing the routine as hired hands. They tend to become unfree labour so that job security and job for relatives get assured. Besides, family histories have assimilated with experiences in factories. When work became too problematic because wages and savings or because labour practices are exploitative, workers drew upon the strength of community networks and traditions of interdependence to come out of the problems. When women enter into workforce, they do so on terms that are less favourable than men. This is attributed to work arrangements within the family, family commitments, number and ages of the dependent children, sick persons; insufficient liquidity status, contingent expenditures, debt burden, peer women encouragement etc

Labour Market in Mica Industry

Labour market is governed by 'demand-supply' situation and the nature of mica industry. Regarding the former, there is ample supply of labour – particularly

manual labour. Demand exists for the high skilled manpower (geologists, civil engineers, mica business people etc). But their services are utilized only during certain phases in the lifecycle of mica industry. The relationship between the mica owners and the experts is highly formalized and sometimes results in to partnership. The owner's relations with the workers is detached and mediated by managers or supervisors.

Mica industry in NMB manifests 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 to build up a reserve of 'attached labour', and a low level of technology. Mica industry is totally owned by private people. These mining enterprises are small-scale units with small or non-existent mechanical equipment and based mainly on the use of cheap manual labour. It is by means of this cheap labour that the fluctuations in the prices in the mica market are dealt with. Reliance on cheap labour instead of on technological renewal and the calculated organization of production has an advantage. In the periods of falling prices, production can be reduced by closing the mines. The labourers can be reduced and their wages can be reduced. Thus the enterprise is safeguarded from serious losses. In order to achieve this goal, labour must be controlled by various strategies. The labour market has shaped along with the trajectory of mica industry in NMB. Some of the strategies of controlling labour market are:

1. employing skilled labour force from outside;
2. Employing local or village labour who were already in some form of relationship with mica owners or their relatives or deputies or employees.
3. Reliance on some castes who are traditionally associated with earth digging, well-diggers and stone quarrying as these activities are intimately connected with mining.
4. Leasing in "labour-supply contractors" and sub-contractors.
5. Employing migrant labour.

6. Employing some experts and through 'them' train a workforce (this training act as precondition for recruiting labour on whom some conditions can be imposed).
7. As mining acquired a certain level of scale, mine 'development' require specialists (level engineers, mining geologists).
8. Streamlined local labour (in this case a supply side of labour gets emerged; the role of labour contractors become redundant or lessened; women tend to tap the resources – traditional ties, their femininity, contact persons- in order to seek employment).

Due to the fluctuating nature of mica business and shifting to processing and manufacturing and mucking of other minerals the conditions resulted in the employment of women. Women are employed in the mica industry in increasing numbers. The women workers have developed a distinct place and identity in the industry. This has resulted in a process known as feminization of labour.

Women mica workers face several problems of which health problems, the dual burden of wage work and domestic work and low wages with uncertain job security are prominent. The influence of masculinity and gender stereotypes are daunting. The conditions of work are depressing. But the women have found themselves a space in the masculine world warranting a relook. They have successfully came to dominate the processing and manufacturing.

Major Conclusions

1. Women worked in mica mines since a long time as revealed from the secondary sources of information. The present informants have no vivid ideas about the historical past. Nevertheless, they said that their forefathers and foremothers worked as mine labourers.
2. During the British rule women actively participated as mine labourers. Around 1940's (before Independence), the British prohibited women from working during evenings and nights and along with male members. Later on, rules were

passed prohibiting employing women as mine workers. The prohibition was imposed considering the gender stereotypes.

3. Women worked as marginal labourers around the heaps of dumped waste.
4. Till 1950's mica was only cobbled, graded and exported; there was much less processing like splitting. Later on processing has picked up involving several activities for which women were found to be more suitable. In fact, the mica industry survived on due to availability of cheap labour. Women were traditionally paid less wages compared to the male labourers.
5. With the emergence of mica product manufacturing around 1985, women workers almost replaced male workers from the processing and manufacturing. Males predominantly work in underground mines and play a major role.
6. One significant feature of mica mineral is that it is used in its mineral state itself devoid of any metallurgical processes. Mica occurs in layers which can be peeled into different thicknesses and sizes. So far mica processing is done only by hands and eye examination. There are no technological improvements in splitting, removal of gaunge, defects etc. Hence human labour has become very essential for mica industry.
7. The trajectory of mica industry is rather very uneven. Mica industry in Nellore is totally under the private sector- individual owners of mine, processing yards and manufacturing companies; partnerships to a lesser extent and much lesser of registered factories or mines. Illegal activity is very rampant. The production figures of mica are far lesser than the export figures. In a broad sense, mica industry can be phased under four categories: mining both underground and open cast/pit, processing, manufacturing of mica products and mining and 'scavenging' for other minerals occurring along with mica like feldspar, quartz, vermiculate etc. As the industry traversed in a fluctuating environment, the mica workers bore the burden of lesser wages, unemployment and got deprived of any security- either job security, retirements benefits or accident coverage etc. The mine owners seemed to have adopted the satirical dictum of 'get rich and get out'. Mine owners in a majority of the cases never had any direct touch with

labourers. A major part of the mica industry is left in the hands of managers who are not interested in the development of the industry.

8. Mining industry in general, is treated as a masculine space in spite of the fact that women have been associated with mining since a long time. Mine male workers are in a state of solidarity due to sharing of risks associated with mining. In mica mining male workers exhibit this sort of solidarity. The same solidarity (as generated from working together in a risky environment of mines) is not there for women working in processing yards or manufacturing companies. Here, women are closely supervised by the work supervisors who are exclusively males. The work ambience is monotonous, repetitive and does not demand any adventure. Each woman worker concentrates on her work and rarely an opportunity arises for extending work-related help. In other words, unlike males, work-based solidarity is absent. The nature of solidarity with male and female in mica industry is shown below:

Male	Female
Aggressive solidarity. Males either working in mines or processing yards, exhibit aggression mostly in the manner of shouting loud and commanding	Female solidarity is in the realm of sharing work experience rather than sharing work itself. It is in the nature of defending and docile solidarity. The solidarity surrounds the domestic sphere and negotiating household management by means of kin and non-kin networks. As group of workers they defend themselves, though strategically a 'vixen' can play free-riding, mend the supervisors, get excuses of late coming etc mopped off.
Confronting solidarity. Male mine labourers feel proud that their work is more valuable for the mine owners (for	Women workers do not indulge in disputes with supervisors. Bargaining is usually couched in a docile

profits) and confront for higher wages. They also express their dissent with management by absconding. In fact male labourers play a strategy of selective absenteeism where a driller will bunk work whereas a blaster attends. Unless both are present, the work cannot progress.	comportment. They are interested in finishing the day's work and get back home. Usually women leave in small groups of kin, friends and uncommonly all alone.
Mining work, unlike processing and manufacturing (to lesser extent in latter's case) is integrated and different jobs are interconnected. This condition facilitates co-operation and co-ordination which in turn generates shared feelings	Women's work is segregated in the sense each person's work is independent of other's work. Even in factory, punching is independent though co-workers are necessary. The co-workers like splitters, cutters, sorters do their work without being in integrated dependency.
Male miners maintain a quasi-hierarchy where status is iterated between different job loci. For instance a blaster is an expert in his own locus and his expertise is obliged. When it comes to driller, the same status obligation applies to blaster.	Hierarchical attitude exist in the role of team leader whose main job is to see that other workers attend for work without fail and to provide substitutes in case of a need.

Around the world, research has shown that the introduction of mining adversely affects women to a greater extent than men. A major factor that has contributed to adverse impacts experienced by women is that they have largely been marginalized and excluded from accessing benefits in mineral development, including employment. Discrimination basing on gender leads to social and economic disempowerment and contributes to economic stagnation and poverty.

Women entering into industrial sector, particularly manufacturing sector are believed to enhance overall position of women. Employment is thought of as relieving women from the gender stereotypes. In the present study, the women mica workers strive hard to develop an image for themselves. This image is mostly directed to

secure a place in the social system. Job security appears to be the guiding force. To begin with women seek employment out of family and economic compulsions disregarding pursuing a career in education. They settle for low rung jobs and for low wages. Being casual labourers they are more concerned of the job security. The dual burden perpetuates their subservience.

One positive indication of tasting the spice of empowerment is their defiance to break that mining is a masculine activity. Though women are employed in less number in mining, they feel that they can do all the works performed by the male miners. Their entry into processing and manufacturing and entrenching themselves as able workers is a testimony of their determination. One woman worker pointed out “that they are operating punching and die-punching machines; able to do screening and quality testing which are obviously male jobs. Sometime ago males were doing these jobs. They have come a bit away from the world of femininity to work in the presence of males, in a dignified way defying all the hurdles and one can see that women dominate mica industrial workforce”. These words desperately show that perhaps empowerment is not the life objective of these women mica workers.

Boserupe’s argument appears to hold good in the present study of women mica workers. Women workers could find employment in mica industry or what has been termed as feminization of labour. But this employment seem to be blind end with no scope for up-gradation in their career, stagnant discriminatory wages, hopeless working conditions and the retention of gender stereotypes.

The State and Central governments and also the NGO’s must take initiative in this regard to rejuvinate their spirits by creating better working conditions and also by providing equal wages along with the male workers. Policies must be framed to extend training programmes to women workers to skills to extend workers and place them in higher positions with better wages on par with the male workers. Systems followed in the western countries in this regard may be studied adopted and implemented in our country for the emancipation and empowerment of women community.