



The Feminisation of Mining

Kuntala Lahiri-Dutt*

Resources, Environment and Development Program, Crawford School of Public Policy, College of Asia and the Pacific, The Australian National University

Abstract

This paper argues that feminisation is beginning to occur in the mining industry, a process associated with an expanded notion of mining as a livelihood in the radically changing political economy of extractive industries. It demonstrates that new gendered geographies are being created as grinding rural poverty pushes large numbers of women into informal mining (also known as artisanal and small-scale mining or ASM)—a fundamentally different type of economic activity from the capitalised, industrialised mining operated by large corporations. Further, it shows that a number of civil society initiatives, industry measures, policy processes and action-research with large-scale mining corporations are currently underway in response to an overall enhanced awareness of gender mainstreaming. It argues that these initiatives, ensued from women's struggles and feminist contributions, are helping to integrate gender more firmly in a wide range of extractive environments, and how these have enhanced the visibility of women and gender in mining. The paper ends by indicating the existing gaps in inquiry and possible directions for future research by feminist geographers into these gendered economic spaces.

1. Introduction: *The Feminisation of Mining?*

This paper uses the term 'feminisation' as relevant for both the subject being studied and the research.¹ It uses the term 'mining' in a broad economic sense to mean the entire spectrum of mineral extractive practices ranging from highly capitalised to purely artisanal, from large to small- and micro-scale, and from the formal to informal. It argues that after years of being portrayed as an archetypically hyper-masculine industry, mining is beginning to experience a process of feminisation. A number of factors are driving this change: the locational shift of large-scale mining industry to the Global South, the radical transformation of the nature of mineral production through the rise of informal mining,² and a number of initiatives—civil society, policy and industry—in mainstreaming gender in their work pertaining to mining. Compared to the proportion of men, women's participation has not increased significantly in large-scale industrialised mining. What is transforming the extractive industry is a growing understanding of informal mining (also known as artisanal and small-scale mining or ASM) and women's roles therein, a lively debate of the role of mining and development in the Global South, an increased space for women in mining-related policy-making and their enhanced visibility in mining. Crucial in this transformation is the absorption of women into a range of informal extractive practices that were unfamiliar to industrialised nations before; this kind of mining is at once creating new gender geographies of mining and expanding the definition of mining. The paper suggests that feminisation is resulting from all these processes: the informal involvement of rural women in mineral-extractive practices in order to survive, as well as the growing visibility of women in mining industries. Neither policy-makers nor scholars and activists have remained oblivious to gender in mining, and feminisation is occurring through women's growing visibility in policy-making processes and civil society actions around mining.

In some countries heavily invested in mining, the industry is responding to labour shortages by hiring more women into the formal, well-paying jobs that were previously reserved for men.³ The unprecedented global mineral/mining boom is transforming women's and men's lives differently according to local geographies, and these particularities or 'context specificities' raise challenges for new feminist interpretations and engagements by geographers with mining practices as they unfold in the contemporary world.

Conventional economic geographers were prevailingly concerned with why certain extractive industries develop in particular locations, leaving no space for analysis of gender, which is regarded as unnecessary 'overburden', to use a mining term: disposable material. Similarly, political ecologists—who in recent years have focused on resource conflicts and the retreat of states in the face of aggressive mining corporations (Bebbington et al., 2008; Bridge 2004; Gilberthorpe & Banks 2011; Rifai-Hasan 2009; Ballard & Banks 2003)—also omit the study of gender, regarding it as immaterial.

The capacity to perceive accurately the divergent and gendered labour practices in mining has required in-depth understanding of disparate mineral extractive processes through years of engagement with the field and exemplary feminist scholarship. To begin with, this review paper traces the substantial feminist contributions in illuminating the gendered nature of mining (Gier & Mercier 2006; Gibson-Graham 1994; Gibson 1991; McDowell & Massey 1984; Burke 1993; Robinson, 2003; Allen 1981; Nash 1979). It then explains how and why feminisation is occurring, and outstanding issues such as the legislative framework around women's work in mines. The paper concludes with discussion of potential directions for further inquiry.

2. *Feminist Reflections on Industrial Mining*

Feminist studies of industrial labour have rarely articulated with feminist literature concerning the political ecology of gender-selective impacts in mining. *Five broad areas of concern* emerge from the literature: the discursive masculinity of mining; mining as a gendered industry and employer; gender in working-class struggles in mining communities; women in mining communities as illustrative of gendered home/work relations; and mining as a global/national agent of capital accumulation that dispossesses impoverished women.

THE DISCURSIVE MASCULINITY OF MINING

A substantial body of feminist literature considers the normalising discourses of hegemonic masculinity in mining. It typically analyses how images of men conquering nature epitomise imagined masculine virtue in what is represented as mysterious, dangerous, filthy and heroic work. Such work requires the destruction and penetration of the earth's surface through sheer physical strength (Robinson, 2003—*Tunnel Vision: Women, Mining and Communities*, p. 137). These concepts (Lahiri-Dutt, 2006) have normalised the male miner as typical, whose interests are to be protected over those of women workers (see Eveline, 1998; Metcalfe, 1988—*For Freedom and Dignity: Historical Agency and Class Structure in the Coalfields of New South Wales*; Campbell, 1984). Mayes and Pini (2014) invoke the logic of capital to explain industrial-scale mining's hegemonic hyper-masculinity. Within this logic, women have become the subjects whose biological functions—such as motherhood—are to be protected from mining's harsh environments (Lahiri-Dutt, 2013a). Anthropologists look beyond capital when invoking the antipathy of mining to the natural environment (Taussig, 1980). Eliade (1962) expands the notion of the 'death of nature' in mining to a protracted legacy of gendered symbolism, whereby the benevolent female spirit degenerates into destructive male devilry. Mumford and Merchant (1990) describe the post-industrial revolution extractive industries as modernity's gross commodification of nature by hegemonic corporate enterprise.

A second strand of feminist literature investigates the family labour unit and the sexual division of labour in pre-industrial and industrial mining. Women have a long history of working in mining: Agricola portrays sixteenth-century women breaking and hauling ore, smelting and working windlasses (Long, 2003, pp. 93–94). Similarly, Vanja (1993) has revealed women's contributions in pre-industrial mining in Europe. Women accompanied men, as prostitutes or companions (Laite, 2009; Vermeer, 2006; Higgins, 1999); during gold rushes, they often worked alone (Zanjani, 2006).

MINING AS A GENDERED INDUSTRY

Although women worked in early industrial mines, in the colonies, Europeans only hired women selectively (Alexander, 2007) and for a variety of reasons. Early colonial collieries in India employed women as part of a family labour system that kept local tribal workers tied to the newly established industrial mines (Lahiri-Dutt, 2012b). In modernising Japan, a sex-based labour division called *naya* ('stable') existed in its coal mines (Nakamura, 1994).

Early modern industrial mines saw the participation of women in large numbers. Women coal mine workers in Belgian mines—*hiercheuse*, the feminine version of *mineurs*—earned public respect elsewhere reserved for men (Hilden, 1993). Lahiri-Dutt (2011) shows that women's labour in industrial mining remains fraught with controversy owing to four main reasons: sex-segregation of jobs, pushing women into lower-status roles compared to men; sexual delineation of tasks; the past prevalence of a family wage, ensuring women rarely received recognition for their labour; and protective legislation, largely initiated by the International Labour Office (ILO) during the 1920s and 1930s.

The relationship between gender ideology and the sexual division of labour has meant that women's labour as part of the family remains largely invisible. John (1980) observes that since men recruited the labour of their female relatives, women who worked as 'pit-brow lasses' (p. 87) in early modern collieries in England were rarely recorded. Official employment records also fail to reveal the full extent of women's participation because of the bias of mostly male surveyors and labour inspectors (McCulloch, 2003; Forestell, 2006). Retaliating against this invisibility of women mineworkers in industry records, feminist labour historians have resorted to alternative sources of documentation. Following Aiken's (1999) testimonies, Gier and Mercier (2006), Tallichet (2006) and Murray and Peetz (2010) use primarily oral histories of women mineworkers in order to unearth their hidden stories.

WORKING CLASS STRUGGLES

Another crucial contribution by feminists is emphasising women's active roles as political agents in mining struggles throughout the historical development of mining, opposing capitalist exploitation (Loeb, 2007) or offering critical support to the solidarity of working-class movements (Fisher, 1993). Maggard (1990) describes how gender roles were contested in these struggles. Emil Zola's *Zola* (1985), set during the 1860 coalminers' strike in northern France, and Maxim Gorky's (1906) novel, *The Mother*, about Russian factory workers, offer archetypal images in this genre. Coal miners often led demands for improvements in working conditions, and women generally were an auxiliary force in these class movements (Loeb, 2007). The 1984–1985 miners' strike in Britain relied on women's economic support of families throughout the crisis, as well as their active political roles as protesters (Stead, 1987). Women adopted an impressive number of strategies to ensure their position as activists (Waldron, 2006); they focused on building relationships with trade union activists (Beckwith, 1998) and supported striking miners (Murray & Peetz, 2010).

However, some feminists have argued that conflicts in class and gender identities are such that women are never an integral part of mining unions (see Lahiri-Dutt, 2012), and that the politics of socialism portrays a fiction in the character of ‘the miner’s wife’ supporting men’s struggles in solidarity (Lahiri-Dutt, 2014; see e.g. Spence, 1998). Yet, in the absence of recognition of their political contributions, women continue to deploy gendered narratives in explaining and legitimising their activism (Jenkins, 2014).

GENDERED HOME/WORK RELATIONS

At the same time, women’s roles in family management and labour in mining communities need to be acknowledged; feminists have critiqued how unpaid labour undertaken by—at home and in the community—helps to sustain the social life around mines. Gibson-Graham (1994, p. 206) famously described mining wives as ‘the hewers of cake and drawers of tea’, who work to build the homes of mining families. Transnational mining capital takes advantage of this, upholding the concept of the family as one with a single male income-earner as the ideal social configuration. Patriarchal social norms also require commitment by women to household duties and childrearing (Nash, 1979, pp. 12–13). Furthermore, in monitoring men’s and women’s roles and behaviours, the state ignores the complexities of gender, thereby engineering a shift to the male head-of-household model (Klubock, 1998). Mining corporations expound this ideal in order to pressure women out of professional and civic life and into domestic spaces. In mining towns of the Northern Rhodesian copper belt, corporations encouraged mineworkers to live off-site with their wives to enhance the ‘stability’ of the labour force, while women vainly sought access to family income (Parpart, 1986). Similarly, in the colonial coal mines of Indonesia, married workers were preferred because of the perceived ‘stabilising effect’ women had on the labour force (Erman, 2002; Robinson, 1986). Moreover, mining corporations expected managers’ wives to take on leadership and welfare roles in the community that complemented the positions held by their husbands (Rhodes, 2006). Geographers McDowell and Massey (1984) argue that such gender division of labour creates a spatial division between home and work.

Married women in male-breadwinner mining communities are perceived as belonging to the class determined by their husbands’ employment—theirs is a ‘male-contoured social landscape’ policed by the company (Murphy, 1997, p. 29; Finn, 1998). Mining towns and outlying camps are structured along class hierarchies, reproducing company positions within and between social spheres to function as an informal instrument of subjugation of women and those with low work status. In mining communities, the gendered aspects of everyday lives enmesh with production and consumption, and women’s contrasting identities—the domestic woman vs. the political/economic woman—reinforce normative gender roles and reduce women’s autonomy (Hall, 2001).

MINING AS A GLOBAL AGENT OF CAPITAL

A genre of feminist literature that has recently assumed prominence uses political ecology to analyse the impacts of mining on women. The reason for this is partly attributable to circumstances since the 1980s in which most large mining projects have been established in developing and poor countries. This body of literature has often been concerned with the struggles of industrial mineworkers in social movements and resource-based conflicts (Barry, 2007). Some of this literature can be categorised with Jane Humphries’ (1990) Marxist-historical explanation of the gender-selective impact in early industrial Britain of the loss of the commons: the enclosure movement undermined women’s economic status within the family as their dependence

on male wage earners increased. Nonetheless, the contemporary field broadly belongs to feminist political ecology, underlining how the introduction of large-scale mining disadvantages women more than men. Negative impacts on women's health have often been cited as the primary evidence of harm caused by mining (Hipwell et al., 2002; MiningWatch Canada, 2005). However, equally important is the loss of traditional autonomy and consequent changes in the productive roles of women. In poorer communities, environmental degradation can lead to rapidly depleted subsistence bases, with severe consequences for women (Lahiri-Dutt, 1999; Ahmad & Lahiri-Dutt, 2007). Women's loss of access to means of physical subsistence—either agricultural or through conventional urban employment—is related to altered notions of authority and interpersonal power and raises questions of environmental justice (Bose, 2004). Dispossession from productive agricultural lands, reduced access to water and loss of livelihood opportunities affect women more than men (Robinson, 2003), as these factors decrease women's ability to work on remaining land as rural men migrate to cities in search of cash income (Bhanumathi, 2003; Rothermund, 1994). As cultural expressions of gender change in these circumstances, women's autonomy is invariably restricted (Lahiri-Dutt & Mahy, 2007). The new cash-based economy also affects women indirectly, shifting power relations within communities and families, invariably translating into dependency on male relatives.

In conceiving of alternatives to the passive construction of women, the theoretical basis for viewing women only as victims of social and economic change has been questioned (Lahiri-Dutt, 2012b). Perpetuating victimhood conceals women's agency and autonomy. The prostitute—historically regarded as following cash-rich men (Laite, 2009) or lured by men into selling sex around mine sites (Kunanayagam, 2003)—has been the prevailing motif for women as victims, interpreted as synonymous with the degradation of nature by mining. Attitudes towards sexuality and women invariably change with the rapid influx of money and new social-cultural values (Emberson-Bain, 1994); moral and civic values in prevalently male societies in Papua New Guinean mining towns have been shown to change substantially, with growing incidences of alcoholism, rape, teenage pregnancy and other forms of violence against women (Macintyre, 2003). In contrast to this, Mahy (2011) and Werthmann (2009) have argued that economic opportunities through sex-work associated with mining boom-towns often benefit women more than the purported moral decay.

REFLECTION: GAPS AND STRENGTHS

A number of general observations can be made regarding gender and industrial mining literature. The first is that feminist research into labour regimes places excessive focus on industrial-scale, capital-intensive mining in rich countries. Even feminist political ecology research (see e.g. Bell & Braun, 2010)—which often focuses on countries of the Global South—expects that extractive operations would largely follow the trajectory established in rich nations. Therefore, it tends not to link research into political ecology with political economic issues, thereby failing to explore how a hyper-masculine industry could produce impacts that are not gender-differentiated. Moreover, portraying all women as victims of mining is essentialising and patronising.⁴ Even metaphorically equating womanhood with the environment involves biological determinism that is deprived of social, material or historical contexts. The danger in valorising prominent stereotypes lies in dissociating women from their political concerns. The two genres need to correlate; formal mining as a capitalised industry with masculine labour processes cannot be divorced from its gendered impacts, whereby women in developing countries bear a disproportionately heavy burden of environmental degradation and social disruption. To refocus on gender in the mining communities of the American West, Rolston (2014, p. 5) maintains that closer examination of the everyday lives of miners and their

families is necessary, concomitant with considering gender as a social process occurring in particular moments and places.

Such a feminist political economic approach would correspond with the feminist political ecology of industrialised mining production in terms of explaining gendered effects on host communities. That is, developments within the extractive industries are not unrelated to the wider processes of social, political and economic changes—a highly masculine industry produces gendered political, economic and ecological impacts within the community that hosts it. Similarly, a political economy of mineral extraction that draws the poor into mineral dependence for their livelihoods will reflect the gendered effects evident within the broader context. Such a theoretical approach allows us not only to extract gender, but also to reconsider the meaning of ‘extractive industries’.

3. A Masculine Juggernaut Changes Direction: Gendering the Mining Spectrum

This section deals with the contemporary factors driving the feminisation of mining. The foremost point to note is the radical change in mining as an extractive industry. Mining was for a long time regarded by Western-based scholars as the harbinger as well as the product of industrialisation, constituted by large-scale, mechanised and capital-intensive operations (O’Faircheallaigh & Ali, 2008). The first change is geographical, as some capitalised extractive industries shift their location away from the post-industrial Global North towards what are regarded as frontiers and peripheries. As more new and large-scale mining projects commence in Asia, Africa and South America, the peripheries are becoming central to the industry; the spatial shift raising new and difficult questions of social equity and new impoverishment triggered by mining (MMSD, 2002).

The second change is that alongside these capital-intensive mining projects with formalised production and labour organisation, less capitalised, less mechanised and highly labour-intensive modes of production are also coming into existence in developing countries, extending the reach of the informal economy into mining. This latter development is crucial in challenging the idea of mining as a homogeneous industry, and destabilising the myth of the male mineworker.

THE RISE OF INFORMAL MINING

The broad array of these mining practices—often conducted as part of the informal economy but not necessarily illegally—is widely known as ‘Artisanal and Small-scale mining’ (ASM). As compared to the formal mining sector, the range of informal mining practices is characterised by the large number of women working as wage workers, diggers, panners, processors and traders of mineral commodities. The rise of informal mining reflects the contemporary global processes of social and economic transformations in rural communities, and women’s involvement within this mining economy represents the growing extent of women’s labour within the informal sector in general. Inexorable agrarian changes in the global economy, caused by neo-liberal economic policies that aim to integrate the poor into ‘global circuits of production’, accompany cumulative concentration within capitalist enterprises (Akram-Lodhi, 1998, p. 135). Since the 1990s, these forces have pushed the poor to diversify their livelihoods (Razavi, 2009) by migration or by taking up other economic activities, including mining. As the states in the Global South⁵ aggressively invite foreign investment to exploit their mineral resources, often to the benefit of local elites (Global Witness, 2009; Rifai-Hasan, 2009), the poor actively diversify their livelihoods in their struggle to survive, often taking up different forms of artisanal mining practices (Jønsson & Bryceson, 2009; Lahiri-Dutt, 2008).

The numbers of rural poor in informal mining are stunning; for example, when the economy of Zimbabwe crashed during the global financial crisis, five per cent of the total population took up gold digging (Kamete, 2008). Often, there is no opportunity to return to farming. Bryceson and Jönsson (2010) demonstrate that peasants living on resource-rich tracts in rural Africa are moving away from farming to adopt mineral extractive livelihoods. Generally, mineral extraction has diversified into activities ranging from individual digging, panning and processing of minerals in family production units or cooperatives, through small-scale mechanised production to highly capitalised industrial projects. In the process of shifting from the plough to the pick, the rural poor are redefining the global mining economy (Lahiri-Dutt, 2014).

Vast quantities of minerals and metals are produced by this informal peasant mining >economy. By the early 1990s, more than 100 metric tonnes of gold were produced annually in Brazilian Amazonia, where gold mining had become the second most important economic activity (Godfrey, 1992, p. 460). As much as 65 per cent of gold production during 2005–2006 in Peru did not derive from large mining companies. It is estimated that three-quarters of the mineral export earnings of Tanzania in 1992 derived from gold produced by informal sources (Tesha, 2000). Of the nearly 600,000 carats of diamonds officially exported from Sierra Leone in 2006, as much as 84 per cent originated from peasant extraction (Government of Sierra Leone, 2011). Clearly, informal mining is a significant component of mineral extraction, irrespective of it being partially or wholly unregulated.

Informal mining is decisively linked to rural stagnation and poverty (Hilson & Garforth, 2013), and the livelihood that provides an alternative to or supplementing traditional rural livelihoods. With poverty being the driving force, informal mining reflects the patterns of the feminisation of poverty evident in other parts of the rural economy (Chant, 2006; IPC, 2008), and in the informalisation of women's productive labour (Razavi, 2007; Chen et al., 2006).⁶ Women are pushed into it as cheap or family labour; in some mining regions, women comprise a greater proportion of the labour force than men (Hinton, 2003; Graulau, 2006). As social scientists and development planners work to delineate the global–micro-level relationships between poverty and economic reform (Hilson & Potter, 2007; Lahiri-Dutt, 2008; Jennings, 1999; Labonne, 2002), evidence increasingly indicates that feminisation of the workforce is occurring globally in mining, along with informalisation and casualisation of women's work (van Hoecke, 2006; Purevjav, 2011; Perkes, 2011). The proportion of women among workers in small operations varies according to the location, nature and value of the mineral, the processing techniques used, marketing systems and local social circumstances (Yakovleva, 2007; Paley, 2005). In mining jobs, the percentage of women can vary from 10 to 60 per cent (Hinton et al., 2006; Olayide et al., 2013), although masculinity remains the predominant cultural value (Cuvelier, 2014). It has been observed (see e.g. MBDA, 2004) that the dangerous and physically demanding work of ASM leads to gender division of labour in which men undertake the roles requiring manual lifting of heavy loads, while women undertake repetitive chores. Labonne (1996) considers such mining constitutes an important economic stepping stone for women, the reason why Bashwira and colleagues (2010) critique the 'protection' of women from apparent threats of violence, exploitation and oppression by relegating them to informal mining. However, again it is important to remember that women are often the cheapest source of abundant labour in the labour-intensive processes of informal mining; they are often forced to work within severe constraints, at extremely poor wages, with little or no control over their work environment.

INDUSTRIALISED MINING MAINSTREAMS GENDER

Efforts to illuminate women's concerns in mining has followed the concerted global initiative in recent years to mainstream gender in almost every aspect of the work conducted by donor and

development agencies (Daly, 2005, 1997; Walby, 2005). Although it has been a late entrant in this arena (Macintyre, 2003; Lahiri-Dutt & Burke, 2011), mining is no longer excluded from this initiative, and an ongoing shift from a focus on 'women' to the wider notion of 'gender' is palpable in mining.

CIVIL SOCIETY INITIATIVES

Much credit for mainstreaming gender in mining debates can be traced to years of struggle undertaken by women's groups such as the International Women and Mining Network (RIMM). RIMM has successfully amalgamated women's groups working in informal mining communities, often indigenous and affected by large-scale formal mining. However, it has yet to align the divergent interests of affected women with women workers in mines, or even with women mobilising cooperatives to legitimise their contributions to informal mining (see van Hoecke, 2006; Third International Women and Mining Conference, 2004). Civil society actors have not only held successive international conferences and meetings and amplified local community perspectives (MacDonald & Rowland, 2003) but produced toolkits for the empowerment of local women in the use of the very tools that external actors use. Oxfam's initiative in developing a toolkit designed to measure gender impacts (Hill & Newell, 2009) is notable. Such initiatives on gender have followed in the wake of the growing body of literature on the social impact of mining and clarified the gendered aspects of social upheavals (for Australia, see Lovell & Critchley, 2010; Peetz et al., 2014; Lockie et al., 2009; Petkova et al., 2009; Carrington et al., 2011; for Canada, see Gibson & Kunck, 2005; on China, see Huang & Ali, 2015; and on India, Lahiri-Dutt & Ahmad, 2012). Overall, there is a rising sensibility that attention to gender—whether in social impact assessment studies or in the community development activities of mining companies—can lead to more sustainable livelihoods for mining communities (Lahiri-Dutt, 2011b).

POLICY INITIATIVES

Early policy by the World Bank related to the evidence base of the 'negative impacts of mining' on women (Eftimie et al., 2009). This emphasis went against its own (2001) 'Engendering Development' document as well as the set of strategies adopted in the Beijing Platform for Action. This approach avoided the cross-fertilisation of ideas (Wards, 2006), engaging as it did with what the Bank envisaged as its constituents' interests and priorities (Byford, 2002), even at the cost of ignoring research outcomes (Lahiri-Dutt, 2011, p. 3). A high proportion of large-scale mining projects have been concentrated on Papua New Guinea, a country heavily dependent on large-scale mining. The industry's presence in the developing nation has involved horrendous social and environmental impacts on women (Filer & Mandie-Filer, 1998), leading the World Bank to convene two successive conferences attended by women's groups from mine-affected communities, and to establish the 5-year Women and Mining National Action Plan (WiM/NAP). In spite of being a typical example of top-down policy-making, the initiative of the Department of Mining (2007) of the GoPNG remains unparalleled in its attention to these issues (Menzies & Harley, 2012).

INDUSTRY INITIATIVES

Whereas the International Council on Mining and Metals' (ICMM, 2005) first 'Community Development Toolkit' made no reference to gender or women, the revised version (2012) included women as part of vulnerable and marginalised groups (p. 17). The Mining, Minerals

and Sustainable Development (MMSD) project report included only a small section on women (Ranchod, 2001). The multinational mining giant, Rio Tinto, published a booklet in 2009 to explain to its junior managers *Why Gender Matters* in its work around the globe. Similarly emphatic, the World Bank's *Gender Dimensions of Extractive Industries* (Eftimie et al., 2009) uses the subtitle *mining for equity*. A productive and gender-inclusive dialogue is currently under way in mining, largely as a consequence of attention to gender in other sectors of natural resource management (Elmhirst & Resurreccion, 2008) and policy initiatives (Lewis & Havaligi, 2007).

SOME OUTSTANDING ISSUES IN INDUSTRIAL MINING

It is still difficult to obtain detailed information regarding gendered workplace participation rates. A study on the attraction, recruitment and retention of women in mining by the Mineral Council of Australia (2000) revealed the gender-segregated nature of the industry: women comprise only three per cent of employees at Australian mine sites and mine processing operations (for international comparison, see *Women in Mining* study, 2014, discussed below). In general, mining women are younger than men (34 as opposed to 45 years), indicating that women are invariably unable to maintain employment once they begin to raise children. The report suggests that the lack of part-time and flexible work arrangements for women of parenting age has perpetuated the poor representation of women in the Australian mining industry. In a survey of the websites of 13 university mining engineering departments, Banning et al. (2007) determined that women were primarily listed as students, whereas men were far more likely to fill roles as instructors or lecturers. This observation supports Faulkner's (2007) argument that the concept of engineering as preponderantly technical rather than social in orientation entrenches its association with ideals of masculinity (Lahiri-Dutt, 2006). The explicit lack of attention to workplace issues such as the establishment of clear career paths for women within the mining workforce continues to be neglected by policy-makers and industry actors as a vital component in fully mainstreaming gender. A *Women in Mining* (2014) study, sponsored by three major mining companies (BHP Billiton, Rio Tinto and Anglo-American), unearths the impacts women have had on these companies. It reports that although women comprise up to ten per cent of the workforce of large-scale mining companies, only a few occupy executive positions (Jensen, 2014). Issues such as the systematic sexual harassment of women in the pits and the inadequacy of legal redress (such as those described by Bingham & Gansler in 2002, and subsequent film *North Country*) are yet to be publicly debated. Brought to public attention, they can herald the fundamental shift in thinking about the mining industry as an employer of women. Indeed, Pattenden and others' longitudinal study of women's career progress from 1997 to 2011 in the Australian resources industry might be useful in exploring this terrain.⁷ However, merely enacting Equal Employment Opportunity laws does not resolve workplace gender imbalance: Bice (2011) has argued that one cannot expect change unless gender issues are mandatory in sustainability reporting—a measure that might redress persisting gross inequities in the industry.⁸

In contrast to the richer mining nations, the large-scale mines that are being established in countries of the Global South tend to be more aggressive in preserving gender inequities based on two protective conventions of the ILO, namely, the C89 Night Work (Women) Convention (Revised) and the C45 Underground Work (Women) Convention (Lahiri-Dutt, 2012; Politakis, 2001). Out of step with anti-discrimination laws, these conventions discriminate, on the basis of women's reproductive function, against their equal status as employees in mines. Although the ILO has attempted to address the inconsistency between conventions, member states have been slow to dismiss laws based on these conventions to recognise women's rights to work in mining (Lahiri-Dutt & Robinson, 2008; Politakis, 2001).

Continuing male dominance in the workforce tends to ghettoise women's interests within the mining industry as a whole, perpetuating the neglect of gender in its work within local communities as part of Corporate Social Responsibility (CSR). This is why the question of gender balance in community negotiations with mining corporations becomes fraught with tension: (Keenan et al., 2014; O'Faircheallaigh, 2011). Evidence demonstrates improved outcomes when women are given opportunities to manage procurement supply chains (Esteves, 2011), or to attend skills development training (Lahiri-Dutt, 2011). Gibson and Kemp (2008, p. 118) argue that corporate engagement with marginalised groups of women, such as aboriginal women, remains under-theorised and that further investigations can allow space in which to understand when and how women mobilise, resist and engage with the industry. Nonetheless, Kemp et al. (2010) argue that CSR has shifted its focus from 'women as workers' to a perspective that seeks to enhance women's overall interests in large-scale mining by invoking the need to mainstream gender in the community development activities of mining corporations (Pearson, 2007). An example of this is the funding of research projects such as 'Empowering Communities: Gender and Sustainable Livelihoods', which attempted to integrate gender elements in community development activities conducted by industry (Mahy, 2012). Other initiatives include Keenan and Kemp's (2014) commissioned study on gender and agreement-making, which investigated women's involvement in negotiation in Australian resource development projects.

Although specific to a country or issue, the cumulative effect of these initiatives has magnified the visibility of gender in formal, large-scale mining, as evident from the websites of most multinational mining corporations, the media, policy literature and in policy-making domains. These do not any longer present women either as sex-workers following male mineworkers, or as secretaries or wives.⁹ Large-scale mining industry's professed intention to incorporate women in its professional processes has, however, been critiqued by Mayes and Pini (2010) as empty rhetoric intended to maintain an idealised perception of woman. Yet, not all these initiatives should be summarily dismissed as empty: geographies of labour have illuminated women's multiple roles in building the mining industry and constructing coherent mining communities in areas where women have secured functional roles (Jenkins, 2014a; Murray and Peetz, 2008).

In summing up, I note that, irrespective of geographic region, if one considers the mining industry as a broad-spectrum human endeavour, three factors prevent the full consideration of gender in the new economic spaces of mining: the lasting legacy of ILO Conventions in mining work and the hesitation in global initiatives to include gender in sustainability reporting within the formal industry have been noted earlier; thirdly, the exclusion of informal mining and the field of ASM from policy debates on gender remains a critical gap.

As yet, informal mining still awaits due recognition within the literature on mining; it remains a difficult terrain due to the complex issues of property rights that contribute shades of illegitimacy to this livelihood. It is important to remember that most often, women are being forced into labour-intensive, low-wage, insecure and risky jobs in informal mining by global processes of change unleashed by economic policies adopted by developing countries. Providing a source of cheap labour, women do not own land and productive capital; their poor social and economic status lock women at the lowest level of the informal mining economy as the most vulnerable workers. That is why global policy-making bodies generally remain silent on gender in informal mining.¹⁰

Globally, a number of transformations are evident: a slightly higher activity rate in industrialised mining and informal mining; a heightened visibility of women; some increase in the number of women and in mining-related decision-making by women. The entire body of knowledge on gender roles and relations in large-scale mining is divided between studies of the professional, internal functions of the industry, on the one hand, and on the other, the social

and related professional aspects occurring outside the pits, in communities living around mine sites. Placed against these developments, far more compelling and significant is the increase in women working in informal mining, either singly as entrepreneurs, or in family units or clan/village groups, or as wage workers. These women, moving out of rural livelihoods and taking up informal mining are redefining the problem of gender in mining. We have little knowledge of how this impacts, for better or worse, on the lives of these women physically, economically or socially in relation to men. What is now required is sustained attention on this area of mining in order to understand the transformation of the industry associated with the transition of rural livelihoods, and to view both the rural and the industrial through the lens of gender.

4. Future Research Directions

Geography and feminism are no longer two wholly different worlds on a collision path nor are feminists seen as foreign invaders seeking to destroy the disciplinary tranquillity of Geography (Hanson, 1992, p. 569). Nonetheless, the continuing mutual neglect of the issues of mining women by feminists and the extractive industries poses a difficult and uneasy question inviting introspection: Why have feminist geographers in recent years not contributed more extensively to our understanding of gender within the mining industry and mining communities?

Tentative reasons are that most geographers regard mining as antithetical to the natural environment, preferring to research processes unaffected by large-scale human intervention and which yield easily to process modelling. More significantly, this lack of knowledge may also result from the post-industrial subjectivities of Western feminist geographers, for whom mining has become an unredeemable part of history.

In thinking about contemporary mining in these countries, some feminist geographers have put aside historical understandings of race, class and gender, finding it easier in researching political ecology to demonstrate that poor women protesting mining operations undercut the basis of their own survival. While these contributions remain significant to the geographical study of extractive industries, by ignoring gendered livelihoods in informal mining, they accept existing gender inequities and construe women as either victims or agents, reaffirming women as the 'Other' of mining and male miners.

The ability to influence this research area from the marginal position of a feminist subaltern in geography is limited: from this relatively new and less than firm ground, it is possible only to indicate directions of future research on gender in mining. Feminist research would benefit from engagement with four foundational sets of theories: postcolonial feminist perspectives that critically reflect on power relations; intersectionality; feminist political ecology and gender and development (GAD) theory. This would enable exploration into how mining impacts not merely all women as a homogeneous group but also how gender selectively creates advantages and disadvantages. Such knowledge would assist with means of integrating gender within the mining project cycle, that is, from the stage of exploration to that of closure; by engaging with mining communities, companies and policy-makers, feminist researchers could offer new solutions to the continuing invisibility of women and gender. It would also illustrate how the new working classes made possible in developing nations by capitalised mining projects differ from past Western processes of industrialisation—for instance, in new flexible work arrangements such as Fly In Fly Out (FIFO)—and how gender is renegotiated in the fluid spaces and selves created by these arrangements. It would reveal what race and age mean for women and men in mining camps and towns, how gendered bodies perform certain kinds of work, how masculinity and femininity is conveyed in these communities and their gendered social lives as well as the implications of intricate sexually based divisions of labour within mining organisations.

As neoliberal economic policies cause an increasing number of women to suffer low-paid, insecure and precarious employment, one can expect the numbers of women in informal mining to increase. The full consequences of this process are yet to be completely understood, including how women's roles in mineral production systems will change. Feminist geographers will hopefully study the factors behind contemporary feminisation: the twin processes of mining's informalisation and the growing involvement of women in informal mining. Their task now is to locate women within a changing industry—often at its lowest level and as its cheapest labour—and problematise such location in view of the gendered political economy of these transformations.

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Short Biography

Kuntala Lahiri-Dutt is a Senior Fellow at the Resource, Environment and Development Program at the Crawford School of Public Policy, The Australian National University (<http://crawford.anu.edu.au/staff/rmap/klahiridutt.php>). Kuntala is a leading researcher on gender in extractive industries. Her work spans the entire range of mining, from the gendered impacts of large-scale mining and the masculine culture of the industry, to the livelihoods of marginalised women affected by such mining, and to those who are making a living by digging for minerals. Kuntala has published widely in a number of journals, including *Gender, Place and Culture, South Asia: The Journal of South Asian Studies of Australia, South Asian History and Culture* and *South Asian Survey* on women and mining. She has also published books on various aspects of gender in mining: *Women Miners in Developing Countries: Pit Women and Others* (edited jointly with Martha MacIntyre and published from Ashgate, 2006); *Gendering the Field: Towards Sustainable Livelihoods in Mining Communities* (ANU Press, 2011); and *The Coal Nation* (Ashgate, 2014).

Notes

* Correspondence address: Kuntala Lahiri-Dutt, Resources, Environment and Development Program, Crawford School of Public Policy, College of Asia and the Pacific, The Australian National University. E-mail: Kuntala.lahiri-dutt@anu.edu.au

¹ Deere's (2009) work on the feminisation of agriculture uses such a multi-pronged interpretation.

² I use this term throughout the paper to imply a large range of artisanal and small-scale mining practices that may or may not be licenced but are essentially a part of the informal economy of these countries. The term is often wrongly demonised as illegal, but I hope that a broader political economic interpretation demands a rethinking of the nomenclature.

³ For instance, ten per cent of all new jobs in the mines of South Africa are marked for the recruitment of women (Bloomberg 2014).

⁴ This argument has been made convincingly in Mohanty's (1988) influential work.

⁵ Cambodia, Indonesia, Lao PDR and Mongolia are all examples of countries that have opened their doors to foreign capital investment in mining.

⁶ Throughout the developing world, informal employment is generally a larger source of employment for women than formal employment and generally a larger source of employment for women than for men.

⁷ See http://www.minerals.org.au/file_upload/files/publications/career_pathways_project_flyer.pdf for more.

- ⁸ The latest version of the GRI Sustainability Reporting Guidelines have included women's equal remuneration in the good practices
- ⁹ See a news video in national media http://blogs.abc.net.au/queensland/2012/06/women-in-mining-survey.html?site=capricornia&program=capricornia_breakfast.
- ¹⁰ World Bank's approach to highlight women's interests in informal mining is embodied in a toolkit (Eftimie et al., 2012) whose efficacy remained limited in absence of these discussions. Also see the assessment of women's status in Mongolian ASM (Heemskerck, 2014).

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