

‘YOU HAVE HANDS, MAKE USE OF THEM!’ CHILD LABOUR IN ARTISANAL AND SMALL-SCALE MINING IN TANZANIA

CUZ POTTER^{1*} and ALEXANDER CONSTANTINE LUPILYA²

¹*Division of International Studies, Korea University, Seongbuk-gu, Seoul, Korea*

²*Graduate School of International Studies, Korea University, Seongbuk-gu, Seoul, Korea*

Abstract: This paper examines child labour in artisanal mining through ethnographic research in Tanzania. The poverty hypothesis argues that households send children to work to bolster household income. The sociocultural approach suggests that child mining offers valuable vocational training. This paper builds on a growing literature that complicates these approaches’ straightforward claims by illustrating how household fragmentation is generated through the encounter of traditional cultural practices with mining’s culture of consumption. This encounter exacerbates household fragmentation, which in turn increases child poverty and labour. These findings suggest that policy interventions should also address these mediating factors rather than poverty *per se*. Copyright © 2016 John Wiley & Sons, Ltd.

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1 INTRODUCTION

Artisanal and small-scale mining (ASM) has been singled out as contributing to the ‘worst form of child labour’ because of children’s exposure to dangerous working conditions, including working with mercury and crawling into tiny, unreinforced tunnels (International Labour Organization, 2004). There are estimates that there are over one million child mine workers around the world, and in sub-Saharan Africa, the problem is particularly acute. Efforts to eliminate child labour in ASM—as in many other industries—have focused on getting children into schools and have blamed the get-rich-quick allure of ASM for children’s movement into mining activities.

Although the complexity of the problem is recognised (International Labour Organization, 1998b; Groves, 2004; Jennings, 1999a, 1999b; Thorsen, 2012), studies have

*Correspondence to: Cuz Potter, Division of International Studies, Korea University, Seongbuk-gu, Seoul, Korea.
E-mail: cuzpotter@korea.ac.kr

tended to focus on factual conditions rather than causal explanations (Hilson, 2010a). Some studies (e.g. Bass, 2004; Basu & Van, 1998; Hope, 2005; Mwami *et al.*, 2002) have attributed the endemic problem of child labour among ASM communities largely to poverty, claiming that household financial situations have forced children into the labour market, but these studies, too, offer only a partial understanding, overlooking the intra-household and sociocultural mechanisms that impoverish mining community households.

While international organisations and national governments may take a dim view of child labour in ASM, it is not clear that those living in ASM communities feel the same. In many rural communities throughout Africa, there is a cultural acceptance of children 'going to farm' (Kielland & Tovo, 2006). Oloko (1993), for example, emphasises that children typically engaged in household activities such as farming and business for their vocational and social development (see also, International Labour Organization, 1998a).

This paper seeks to build on a growing literature that looks more closely at ground-level social factors that drive child labour in ASM. In particular, it examines the ways in which the organisation of ASM introduces new cultural practices, like conspicuous consumption and migration, and how these practices interact with traditional practices to fragment households and increase child poverty in rural Tanzania.

2 SOCIALISATION VERSUS THE POVERTY HYPOTHESIS

As suggested by Togunde and Carter (2006), most arguments explaining the engagement of children in ASM activities can be divided into two broad categories: the poverty hypothesis and the sociocultural (or social learning) approach. In most cases, however, these two factors have been treated separately.

The majority of scholars and organisations (e.g. Hentschel *et al.*, 2003; UNICEF, 2002) employ an economic analysis, identifying poverty as the cause of children's engagement in ASM (see also, Maconachie & Hilson, 2011). In particular, this 'poverty hypothesis' argues that child labour participation forms an essential part of household or individual survival strategies, thus positioning child labour as an unavoidable effect of poverty (Aryal, 2005; Basu & Van, 1998; Hope, 2005; ILO/IPEC & MINERCOL, 2001; Kielland & Tovo, 2006). Analysts from this economic perspective presume that, given their dire economic situation, parents understandably view and treat their children as economic assets and therefore increase the family's income by sending them to work. For example, Mwami *et al.* (2002) found that the main contributing factor to child labour in Tanzania was extreme poverty and that a large number of children engaged in mining activities came from female-headed households and disintegrated extended families. Thus, for some (White, 1996), the solution is not to exclude children from the labour market but to combat their exploitation.

The sociocultural view, on the other hand, views child labour in artisanal mining as one component of broader socialisation processes. In this view, mining communities have developed complex systems of gender-specific and age-specific social roles that structure the community as a whole. An ILO study (2002), for instance, found that the sociocultural construction of childhood and work in the context of household organisation, gender, sexual division of labour and kinship plays a fundamental role in determining whether a child works or not in any economic sector, including the mining sector. Thus, child labour in mines is perceived by some communities as a natural stage in the development from child to adult, and well-rooted traditions tend to consolidate values that justify and

rationalise the formative values that people attribute to child labour (e.g. caste systems in South Asia, Aryal, 2005; D'Avolio, 2004).

The sociocultural perspective offers two fundamental explanations for children's involvement in mining. The first explanation is that such work is considered to be household help rather than work, in the same way that other activities done by children are not valued by their parents as work *per se*, such as caring for animals, woodcutting, farming activities, caring for younger siblings and household chores (Bakia, 2014; ILO, 2004; Kim, 2011). The second explanation is that early participation in mining activities offers valuable vocational training. In South America, for example, children in mining communities are initiated into mining activities at an early age of 6- or 7-years-old and become actively involved in mining activities after they are familiar with mining processes. Alternately, in Colombia where many mines are operated as independent family businesses, child mining serves as a means of learning how to carry on the family business (ILO, 2004). Similarly, in a baseline survey of child labour in ASM in Ghana, Hilson (2007) found that parents willingly allowed their children to apprentice in the mining sector so that their children could learn mining skills.

Thus, a fuller understanding of the problem of child labour in ASM requires an exploration of how these two approaches interact on the ground in specific places and times. The poverty hypothesis, while certainly not without merit, tends to homogenise and simplify our understanding of child participation in artisanal mining by reducing it to a strategy for maximising household income. Similarly, the social learning approach tends to focus on career trajectories and overlook economic and other social drivers of child labour. As a consequence, the contextual relevance of new survival strategies (livelihood diversification) and social relationships is rarely illuminated, leading to narrow, incomplete policies.

3 COMPLICATING CHILD MINING

Over the past decade or so, a literature has emerged that strives to illuminate the concrete ways in which the socialisation and poverty hypothesis approaches complement and shape each other. In doing so, these authors simultaneously complicate and clarify our understanding of what happens on the ground in specific places at specific times.

The poverty hypothesis tends to overlook the more fundamental drivers of that poverty and the more nuanced ways in which individuals participate in mining. The growth of ASM in sub-Saharan Africa has been driven by two broad forces. First, mining sector reforms pushed by the World Bank and other international agencies have turned large tracts of land over to large mining firms rather than to smaller scale outfits (Bakia, 2014; Hilson & McQuilken, 2014; Mawowa, 2013). The latter are compelled to extralegally mine tracts that have proved unfeasible for the large firms' capital-intensive techniques (Banchirigah, 2006; Siegel & Veiga, 2009). Second, returns on small holder agricultural production no longer appear to be sufficient to meaningfully sustain households, leading households to pursue livelihood diversification strategies. Mining can be a natural choice, as such work can be effectively conducted outside of the planting and harvesting seasons (Hilson & Pardie, 2006; Maconachie & Binns, 2007) or alongside agriculture (Hilson & Bockstael, 2011, 2012; Pijpers, 2014).

A growing literature suggests that for many mining is an auxiliary activity employed to support other ends, rather than an attempt to 'get rich quick' (Hilson, 2010b). Although little evidence of this has been found in some areas, like Cameroon (Bakia, 2014; Weng *et al.*, 2015), for some farmers in areas with mines, mining and mining-related activities generate income for agricultural inputs that will increase the value of their harvest (Cartier & Bürge, 2011; Maconachie & Binns, 2007). Others see mining as a means to accumulate capital to enter other—less physically risky—commercial ventures (Bryceson & Jønsson, 2010; Jønsson & Bryceson, 2009; Perks, 2011) or return to school (Cartier & Bürge, 2011). Similarly, some children work in mines outside of school hours to cover school-related expenses (André & Godin, 2014; Hilson, 2010a, 2012). This literature suggests that children are not giving up education to mine but are rather mining in order to get educated.

When children do get involved in ASM, contemporary findings indicate that they do not necessarily engage in the most dangerous aspects of mining and that mining incorporates a wide range of skills and jobs (Bakia, 2014; Banchirigah, 2008; Maconachie & Hilson, 2011; Mwami *et al.*, 2002). Rather, children are most often restricted to work activities that are more widely considered 'women's work'. Children typically do not go underground, where conditions are particularly risky. Instead, they stay on the surface, carrying ore from the mine to the processing site, breaking rocks or preparing food (Mwami *et al.*, 2002), although some of these activities, like amalgamation, are dangerous (Human Rights Watch, 2013). Hilson (2010a) has suggested that these activities are homologous with activities that the children would be expected to perform on a farm and thus do not represent a genuine shift in cultural practice.

It is also becoming clear that children also exercise their own agency in deciding to work at mines or not. It is not always a case of children being pushed into mining by their parents. André and Godin (2014) offer examples from the Democratic Republic of Congo (DRC) in which the children entered mining against their parents' wishes or without their knowledge. Similarly, Maconachie (2014) claims that young people's motives for getting involved in mining varies with socio-economic status and generation.

Together such findings imply that child labour in ASM is not a one-dimensional problem of poverty-stricken parents forcing their dependents into life-threatening work nor simple vocational training. Thus, any discussion of this social problem that excludes a community's sociocultural practices does little to reveal why child labour persists within the sector and less to indicate appropriate policy interventions. Through a study of child labour in ASM in Tanzania, this study seeks to build on the aforementioned efforts to evaluate and harmonise the two most common approaches.

4 METHODOLOGY

This study adopts an ethnographic approach built on in-depth interviews with more than 40 respondents in Mgusu Village in the Geita district of the Mwanza region in Tanzania. The major economic activities in this small village of 7598 inhabitants in 1520 households are artisanal mining and small-scale farming. Since the discovery of gold, immigrant ethnic groups have come to dominate the population of Mgusu (Mwaipopo *et al.*, 2005; NBS, 2002). As the village is situated in the heart of the Geita Forest Reserve, where there is little free arable land, most farming takes place

on rented land in surrounding villages. Fisher *et al.* (2009) found that at the time almost 70 per cent of the population was involved directly in mining activities.

Mining started in 1988 when gold was discovered, and there are currently about 2400 gold pits located around the village. Although ASM miners had received claims previously, in 1984 the government granted a prospecting license for the area to Dar Tardine Tanzania and the artisanal miners were compelled to sell their gold to the firm. For this violation of its license, the firm was expelled in 1990, and artisanal miners functioned as independent prospectors for more than a decade. In 2003, Shanta Gold was awarded licenses to mine the area free of ASM miners, but ongoing conflict between Shanta and long-term miners led ultimately to an out of court settlement in 2012 that saw Shanta leave the region. Pits are currently managed by small owners who typically pay 30 to 40 per cent of their earnings to claim holders (Mwaipopo *et al.*, 2005).

Although woefully under-resourced, education in Mgusu has improved significantly in the last decade. Government programmes have tripled the number of primary school teachers since 2003, abolished school fees and supported construction. However, compulsory fees are still collected for physical improvements, pit latrine construction, school uniforms and desks. Also, classes can be as large as 200 students and are regularly conducted outdoors. Although enrolment enforcement appears to be lacking, a door-to-door awareness campaign to promote education has engendered a strong desire for education. As a result, current enrolment at the village primary school has increased to roughly 1200 students.

The Geita District has worked actively to curb child labour, including a massive 2010 educational campaign to raise awareness of the dangers of child labour, especially in mining, and providing basic and educational assistance to some children. The regional government subsequently issued a decree against employing children and encouraged district governments to include child labour in their district development plans. In practice, this has meant a district-level budget line for combating child labour and the creation and strengthening of district and village child labour committees that can identify at-risk children and refer them to social services. Although these efforts demonstrated high levels of success at the beginning, budget constraints have crippled both enforcement and labour committee interventions.

A number of NGOs and donor agencies have also been involved in the district as well. Aidenvironment has worked to establish Fairtrade Gold certification in the district (Kessler *et al.*, 2015). Also, a project funded by the European Union and the French Agency for International Development and implemented by Plan International Tanzania, NELICO and CODERT has succeeded (at least temporarily) in withdrawing more than 12 000 children from gold mining in Geita and Nyag'hwale districts by supporting families in establishing farms, fostering alternative livelihoods, supporting local government workers and facilitating the payment of school fees through financial services.

The study population consisted of villagers in Mgusu and those involved in mining activities. A total of 41 respondents participated in semi-structured interviews both in person and via ICT in February 2012: six boys and six girls children who worked at the mines, 14 parents, six gold mine pit owners, three primary school teachers, three local leaders, two mining officers and one administrative officer from the district office. Respondents were selected using purposeful sampling that aimed to cover a range of key perspectives on the factors that engender child labour in ASM.

5 FINDINGS: POVERTY VERSUS TRADITION

5.1 Respondent Characteristics

The interviewees, reflecting the village's composition, were heterogeneous in terms of ethnic background and place of origin. The socio-economic activities of adult respondents who participated in the study revolve around two main activities: small-scale farming and artisanal mining. On the one hand, male respondents were mainly miners, although a few managed pits (pit owners). On the other hand, most female respondents combined both mining and farming activities. With the exception of those few respondents who were teachers, local leaders and government officials, the majority of respondents were illiterate. The majority of the mature respondents were married men and women between 24- and 66-years-old. Most had between three and eight children. The majority of their children were also involved in artisanal mining activities either as part-time or as full-time workers.

The children interviewed ranged in aged between 10- and 15-years-old. Boys were involved in supporting activities, like carrying, washing and amalgamating ore, while girls crushed tailings and worked in food services and bars. Some of these children were still attending school, while the majority had dropped out and were working in the mines full time. Those who were still attending schools were all in primary school. Most lived with their parents or guardians, although a few children lived alone. Some of these children had come independently from distant villages in order to engage in mining activities in Mgusu, reinforcing the notion of children's agency in participating in the ASM sector (André & Godin, 2014). Others came in the company of older people who were either parents, relatives or neighbours who work in mining-related activities.

5.2 RECOGNITION OF EXPLOITATION AND NEGATIVE IMPACTS

The residents of Mgusu are generally aware that the involvement of children in mining activities represents an exploitative relationship and can have negative impacts on children's health, reflecting the success of the Geita District's awareness campaigns implemented as part of Tanzania's National Action Plan for the Elimination of Child Labour in 2010. First, the study found that pit owners preferred employing children to adults because it is easier for employers to make them work longer hours and to pay them less than adults. 'Our wage is small compared to what adults are paid, even though we are working together,' said one 14-year-old boy. Regardless of the activities they perform, Mgusu children claim to earn from US\$0.30 to 1.80 per day, while adults claim to earn from US\$ 6.00 to 12.00 per day. The logic employed by pit owners is apparent in this statement by a 15-year-old: 'We have tried without success to negotiate with pit owners about raising wages. For them, they claim that they are already helping us by risking their business to employ us in their pits. But we all know that it is just a lie. They like employing children because they are making huge profits' (cf. Fisher, 2007).

Additionally, local residents do not harbour any illusions about the dangers associated with mining and its particularly acute impact on children. 'One thing for sure, most parents don't like seeing their children involved in these odious jobs in the mines...These children are given hard work and also come into contact with chemicals that have negative implication to their health', said one 52-year-old mother. A father agreed, 'It is certainly not proper for children to be involved in mining

activities. Despite their tender age, children are doing work that has several side effects on their health'.

5.3 POVERTY IS THE BASELINE DRIVER

Even though Mgusu residents know that child mining is exploitative and hazardous, children continue to work in the mines instead of attending school. Why? It is clear from our interviews that poverty is the fundamental driver behind children's transition into mining work. Most interviewees, especially the children, placed a strong emphasis on the importance of education and expressed a desire to send children to school rather than to work in the mines, suggesting that mining is a means to realise more ambitious dreams (Bonnet, 1993; Pijpers, 2014). However, because of insufficient funds for mandatory school contributions and supplies, children and their parents opt either to abandon education in favour of mining work or to earn school contributions by working in the mines. One 10-year-old holds such ambitions, 'I, for instance, want to become an educated person like the people I usually see on TV. I work hard in the mines to pay for my school requirements and to support the family income, because without food at home I cannot survive—let alone go to school'. Parents also value education. One 53-year-old mother detailed her strategy, 'I do not have sufficient money to send all my children to school. I am working hard to make sure that my boy completes his studies, because he is my hope for the future, and he is the one who will take care of me in my old age'.

The strong desire for education is further reflected in the fact that most of the children interviewed initially worked part time in the mines after school and on days off in order to earn money for school contributions. 'After being admitted to school', one 14-year-old boy stated, 'I worked in the mines only in the evening, and in the morning I was busy at school. This helped me to pay for my school requirements, because my mother, who raised me alone as a single parent, was unable to pay for all my school requirements'. Another interviewee stated, 'I decided to work in the mines, following the footsteps of my brothers who met all of their school requirements by engaging in mining activities as part-time child miners...Definitely, quitting the mines...would put an end to my education career'.

Thus, our findings support claims that children are forced to abandon education (Hilson, 2010a; Mwami *et al.*, 2002). This research indicates that in Mgusu school absence is driven not by a lack of interest in obtaining an education but by an inability to afford school contributions. Poverty drives children to labour in the area's dominant industry, mining. In fact, it does so in two ways. The first is that common to several of the children quoted earlier: they enter mining to cover education costs. The second way is a two-step process, in which the household is first unable to afford to send its children to school and then guides the subsequently idle child into activities that contribute the household's overall economic well-being. The 53-year-old mother summarises this pragmatic logic, 'If someone is unable to send his or her child to school, do you think he or she will allow the child to stay idle at home, knowing that he or she can also contribute to the family income?' Or, as one 14-year-old worker was told by his father, "'You have hands, make use of them!'"

5.4 SOCIOCULTURAL PERSPECTIVE

The sociocultural perspective suggests that traditional values and socialisation explain the presence of children in the mines. In the case of Mgusu, there is also support for this view. Although most individuals appear to prefer education over mining, there is also a widespread belief that work in the mines provides valuable vocational training for children's probable livelihood diversification strategies and possible future careers.

Mining can be a career. Work by Bryceson and Jønsson, (2010, 2009) in Tanzania illustrates that for some mining offers an 'onward and upward' career trajectory. Starting perhaps with providing supporting services, some individuals, typically young men, become miners and then hope to acquire enough capital to become pit holders and even claim holders. Bryceson and Jønsson (2010) make it clear that miners develop tacit knowledge of mining techniques and the business environment through extended involvement in mining. They also suggest that an increasing number of young men view mining as a vehicle for earning capital to return to school or start post-mining careers in business (see also, Cartier & Bürge, 2011).

Thus, many adults and children themselves view learning mining-related skills as natural and essential life training. For instance, one 52-year-old father compared mining to farming: 'The involvement of children in mining activities in this village is viewed as a normal thing. Children participate in mining activities in a way similar to their participation in farming' (cf. Hilson, 2012). Another 52-year-old father emphasised the importance of mining skills relative to formal education: 'Involving children in mining activities is crucial for their future lives. Education may be necessary but not everything a child wants from his parent'. The explanation lies in the common belief that young people are destined to work in the mines, confirming the findings of Mwami *et al.* (2002). One 13-year-old boy stated that, 'There is no other employment opportunity here; that is why some parents see it as a waste of limited family resources to send their children to school... No matter how hard their children study, they end up working in the mines. And sometimes they perform poorly compared to those who did not go to school'.

Opportunities for young women appear to be even narrower and to emphasise vocational training. By and large, involving female children in mining activities is perceived by the mining community as an appropriate way of inculcating social roles in their children. One 42-year-old mother pointed out that 'the main responsibility of a female child is to be by the side of her mother learning what it means to be a house wife. If she cannot learn from her mother, where do you think she will learn these things? At school or in college? No!' A 53-year-old mother echoed these sentiments: 'I don't feel bad about my daughters not going to school. In fact, I am preparing them for their future life as housewives by giving them skills and techniques'. From these interviews, it appears that even women accept and inculcate strong gender-based social roles in the community's young women.

Thus, ASM is woven into the socialisation of many children in Mgusu. Pragmatic calculations about children's probable lifetime trajectory appear to have two impacts. First, it leads some families to eschew education altogether. Second, it would appear to increase the acceptance of a shift into mining when financial difficulties make education difficult.

6 FINDINGS: MEDIATING FACTORS

While this research confirms poverty as the base driver that pushes children out of education and into mining in Mgusu and identifies sociocultural factors as facilitating such transitions, it also adds a new wrinkle to recent discussions that engage historic-geographical specificity. As summarised in Figure 1, this case study suggests that the encounter between traditional practices and the new economic activity of mining is fragmenting households and exacerbating the child poverty that drives the children into the mines. In particular, the nature of artisanal mining increases mobility and encourages a culture of consumption. These interact with traditional local values with regard to the number of children, polygamy and inheritance to fragment households, impoverishing children and motivating them to work in the mines. The tradition of collective community responsibility, in turn, motivates pit owners to hire the children. The result is the perpetuation of child labour.

6.1 Mobility

Household fragmentation begins with the nature of work in artisanal mines. Working underground detaches miners from their families because they spend several days working steadily without seeing their families or sending them money. This initial fragmentation potentially lays the groundwork for more enduring detachment and fragmentation. Career miners tend to migrate from one mine to another in search of greener pastures as old mines are depleted and new ones opened (Banchirigah, 2008; Bryceson & Jønsson, 2010; Hilson, 2010a). This mobility increases child labour by discouraging education and by fragmenting households.

While migration to new opportunities is generally good for parents, it disadvantages children. Perversely, it can be particularly disadvantageous when miners decide to move with their families. Enrolment in local schools after moving requires a transfer letter, which

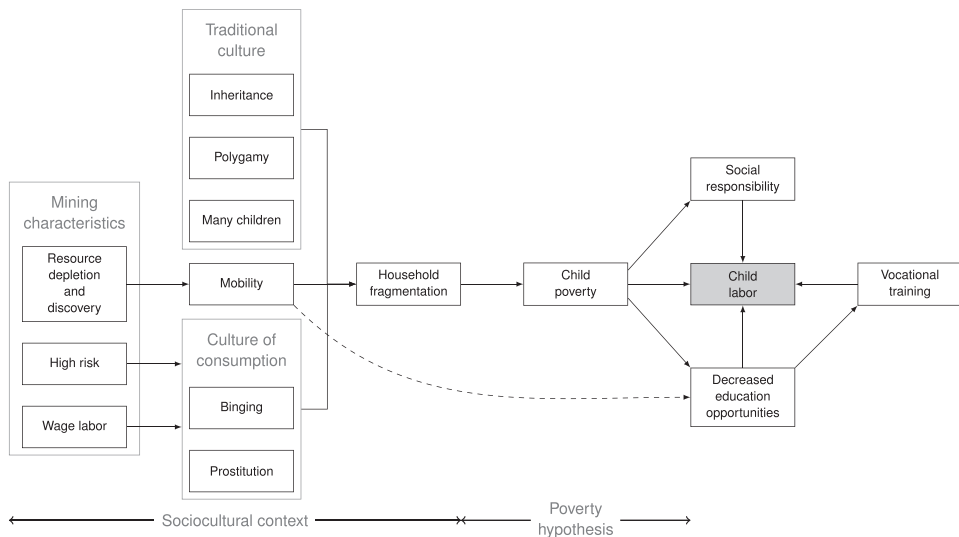


Figure 1. Position of household fragmentation in the generation of child labour in artisanal mining

can be difficult to obtain, leading many children to fail to enrol in their new village's schools. And, instead of remaining idle at home while waiting for their parents to solve these problems, these children engage in mining activities to accumulate some money to meet some of their basic needs, including school requirements. Those children who do not successfully secure transfer letters often work full time in mining.

Leaving their children behind, thereby dividing up the household, can also create difficulties. Although miners sometimes leave their families and go to nearby villages to try their luck, promising to return in a short time, it does not always work out that way. Interviews reveal that parents, particularly men, may cut ties with their families for 2 to 5 months or more without remitting any material support. According to one female informant, under such circumstances, children have to assist their mothers in shouldering household responsibilities by working at the mines.

Under an alternative arrangement, both parents leave the family under the care of the older children and go to a different village to mine, returning infrequently to visit. As a consequence, the older children assume full responsibility for supporting the younger ones through mining. According to our key informants, if the parents send remittances, these children work in the mines part time to top-up their parents' remittances while attending school. Children who receive nothing from their parents are forced to drop out of school and work full time in the mines to make ends meet.

In some cases, parents, especially men, may not return at all, abandoning their families and marrying women whom they met in the new mines (cf. Bryceson & Jønsson, 2010, 383). One key informant pointed out that the miners live a complex social life and that whenever they move to a new mining area to work, they forge new relationships. He summarised his argument as follows: 'Underground miners are good at initiating social affairs with women, but are poor in taking care of the children who are the product of that affair. Thus, children born under such circumstances rarely receive support from their parents, and thus engage in mining activities to make ends meet'.

6.2 Culture of Consumption

Following the expansion of mining activities, comparatively abundant flows of money and goods have facilitated a new culture of spending among miners that revolves around prostitution, alcohol and conspicuous consumption, as has been described in other cases (Bryceson & Jønsson, 2010; Fernandes, 2007; ILO, 1999; Mwami *et al.*, 2002). Miners consider such spending a reward for their hard work. As one miner argued, 'Our work is very hard and dangerous. People are dying in the mines without enjoying the fruits of their labour. After toiling day and night for several days, refreshing ourselves to regain our strength is necessary, especially when we have money' (cf. Mwaipopo *et al.*, 2005, 55–56).

This attitude has led to a common behaviour among the miners: they leave their families when they have money and come back after they have spent all the money with their friends. In fact, once miners obtain money, many do not return to work until the money has been extravagantly and completely spent, leaving them with no money until they work again (Rothenberg, 2014). This common impulse effectively fragments the household, shifting the burden of paying for and raising children to the mothers of their children, who have fewer and more poorly paid options for work, raising the likelihood that children will also be compelled to work.

The household fluidity created by financial bonds has combined with the growing culture of consumption to increase the incidence of prostitution. The exchange of intimacy for money ranges from straightforward prostitution to a woman of the village 'who is pretty well known for her behaviour in confiscating other women's husbands, especially when they have money'. One interviewee made a direct link between prostitution in the village and the rate of marital failure. As marriages break down, children are typically left with their mothers and end up relying on mining to survive.

6.3 Traditional Practices

The mobility and culture of consumption that are produced by the nature of mining work combines with several traditional practices and beliefs to increase household fragmentation and thus child poverty. In particular, the practice of polygamy, the practice of having many children and cultural strictures regarding inheritance dissipate resources and households.

Polygamous marriages, in which men have more than one wife, have long been common in the study area. According to one informant, in traditional polygamous marriages in the area, the husband was responsible for providing each wife with a plot of land that she could farm together with her children to make ends meet. However, with the introduction of mines and wage relations, many families no longer depend on family farming and are bound together through shared finances rather than land. This eliminates a fundamental physical asset from women, leaving them in a more precarious position. Also, because financial bonds are weaker, some male parents abandon their families when they encounter economic hardship, leaving their families with few or no assets. Consequently, households fragment and children are raised in female-headed households that rely on child labour simply to meet basic needs.

Direct observation and an interview with the Village Executive Officer revealed that large family sizes place significant financial stress on some parents. Although this does not represent household fragmentation *per se*, it does exacerbate the impact of household fragmentation by dissipating resources and driving the children into mining. A typical family in the region has from three to eight children. On one hand, large family sizes reflect a rational risk aversion developed in the face of high-child mortality rates, as reported by the Village Executive Officer (cf. UNICEF, 2002). One 52-year-old female interviewee summarises the logic thus: 'It is very risky for parents to have one or two children in our environment where diseases and superstition are common. The probability of ending up childless is very high, and if that happens, who will take care of you in your old age?'

This rational calculus is complemented by several traditional beliefs. First, there is a belief that every child born has his or her own fortune independent of the parents, which lead parents to pay little attention to the number of children they bear. There is also a local belief that every parent must have a male child to continue the clan, take care of his parents in their dotage and inherit his parents' properties. Therefore, some parents will continue bearing children until they have a male child, which biases family size upward.

Even as polygamy and the preference for large families dissipate resources, most of these resources stay under the control of men. Not only do they earn the highest wages but—because of cultural restrictions against women inheriting anything from their biological parents—men also inherit any remaining material assets when their parents die.

The community is thus left in a situation where the intensity and danger of mining encourages men to consume in binges that deplete the bulk of their earnings and to

abandon their families in times of difficulty. This leaves large female-headed households without assets and with the necessity of struggling for survival on the basis of the lower wages women and their children can earn in and around the mines (Fisher *et al.*, 2009; Fisher & Mwaipopo, 2014, cf.).

6.4 Economy of Affection

One traditional practice has the counter-intuitive effect of aggravating child labour: the *economy of affection*, which ‘denotes a network of support, communications and interaction among structurally defined groups connected by blood, kin, community or other affinities’. (Hydén, 1983, 8). In this region, one expression of this economy of affection is the consideration of children as belonging to the whole community, which requires every member of the community to protect any child living in the community, a practice that protected children from harm even when they were orphaned. The extended family network played a major role in this aspect, as the household head took responsibility for the whole family.

However, the situation has changed (Mwami *et al.*, 2002). On the one hand, the economy of affection has weakened, and families only care for themselves and their immediate families. As one 40-year-old woman informant pointed out, ‘Because of growing individualism, the traditional values and norms that kept us together have been significantly weakened. Thus, it is hard for someone to support a person to whom one is not closely related’. This leaves disadvantaged children, like orphans and abandoned children, to fend for themselves. Even those few children who are fortunate enough to be taken in by their relatives generally receive food and shelter only and have to meet other needs by themselves. One informant suggested that ‘due to socio-economic hardships, parents tend to consider children who are not his or her own as a burden, and therefore force them to engage in mining activities to contribute to the family grain basket’.

Perversely, vestiges of the economy of affection also contribute to child mining. Pit owners say they feel a responsibility to employ local children so as to sustain good relations with their parents, as they believe that the parents send these children to the mines to support their families. Therefore, denying them the opportunity to work not only exposes the children’s family to starvation but also creates social tension. One 54-year-old respondent pointed out that, ‘It is hard to prevent children from my neighbourhood to work in my pit, because the community will not understand me. In case I am gone (dead) and I am not generous to others’ children, my children too will be treated badly’.

In sum, the traditional social capital networks that characterise the economy of affection have a counter-intuitive impact. The breakdown of these networks of mutual aid leaves many children vulnerable and with few options outside of mining. At the same time, surviving practice exacerbates child mining, because mining employment is one of the few forms of assistance that pit owners can contribute.

7 CONCLUSION

This article has sought to contribute to the development of a more nuanced understanding of the drivers of child labour in ASM and thus to the identification of grounded solutions to the negative aspects of this practice. To do so, it has found it necessary to build on the

narrow hypotheses that poverty drives child labour and that child labour is a form of socialisation. Rather, policymakers must consider the unique matrix of sociocultural factors that emerge as new mining practices encounter more traditional practices in conditions of generalised poverty and target interventions at mitigating the negative impacts, including that of household fragmentation. In the case of Mgusu in the Geita District of Tanzania, the article has revealed that the social relations formed through engagement in ASM combine with traditional cultural practices to fragment households and drive children from education to the mines.

Consequently, this paper indicates two strategies for reducing child labour in ASM beyond broader efforts to reduce poverty by fostering 'alternative' or 'complementary' livelihoods as suggested by Banchirigah (2008); Banchirigah and Hilson (2010); Cartier and Bürge (2011) and Maconachie and Hilson (2011).

Although such efforts would reduce the vocational drivers associated with the social learning approach, more immediate interventions should be made to sustain school attendance. This paper has shown that for most children and their parents, education is a priority, and that ASM labour is considered a backup plan. The main problem, therefore, lies in the obstacles to accessing educational opportunities, primarily costs. Intervention should focus on eliminating residual school contributions through increased budgets and by redirecting calls for greater enforcement from inhibiting child labour at mining sites to eliminating additional school contributions, thereby reducing the costs of school attendance the consequent need for children to mine. Additionally, as mobility can disrupt school enrolment, administrative procedures also need to be streamlined to keep children from dropping out because of temporary lapses in enrolment status. Overall, consistent with the poverty hypothesis, one approach would be to reduce or eliminate the financial burden that children place upon their households, perhaps through conditional cash transfers or similar interventions (cf. Banerjee & Duflo, 2011; Rawlings & Rubio, 2005).

Second, rather than adopting an abolitionist approach (Orkin, 2010), this study indicates that one overlooked avenue for reducing child labour in artisanal mining is to address the causes of household fragmentation. The necessity for women to seek their own long-term welfare through large families can be offset by addressing the traditional cultural practices of polygamy and patrilineal inheritance through legal changes and family planning. The culture of consumption might be addressed in two ways. First, mitigating the dangerous nature of mining work through education in safer practices may encourage adult men to think longer term and thus cut down on consumption. Second, district and village labour committees should receive increased support from the national and regional government as well as non-governmental actors, especially around newly emerging sites. This would allow for an extension of social work practices in mining communities that could help at-risk children receive necessary support.

Although such interventions as these will obviously not produce improvements overnight, they are likely to build healthier mining communities over the long term. Children and their parents generally want education. The problem of child participation in artisanal gold mining is not driven by a lack of desire for schooling but by child poverty in the context of a social transformation from affective agrarian practices to capitalist mining practices. This paper has shown that this slow process tends to fragment households, thereby exacerbating child poverty and the need to mine. It thus argues that governments and NGOs should focus less on regulating the practice of child mining itself and more on mitigating the mediating factors that drive it.

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REFERENCES

- André G, Godin M. 2014. Child labour, agency and family dynamics: the case of mining in Katanga (DRC). *Childhood* **21**(2): 161–174.
- Aryal BR. 2005. *Child labor in the Mines of Nepal*. His Majesty's Government of Nepal, Department of Mines and Geology: Kathmandu.
- Bakia M. 2014. East Cameroon's artisanal and small-scale mining bonanza: how long will it last? *Futures* **62**(A): 40–50. DOI:10.1016/j.futures.2013.10.22
- Banchirigah SM. 2006. How have reforms fuelled the expansion of artisanal mining? Evidence from sub-Saharan Africa. *Resources Policy* **31**(3): 165–171.
- Banchirigah SM. 2008. Challenges with eradicating illegal mining in Ghana: a perspective from the grassroots. *Resources Policy* **33**(1): 29–38. DOI:10.1016/j.resourpol.2007.11.001
- Banchirigah SM, Hilson G. 2010. De-agrarianization, re-agrarianization and local economic development: re-orientating livelihoods in African artisanal mining communities. *Policy Sciences* **43**(2): 157–180.
- Banerjee AV, Duflo E. 2011. *Poor Economics: A Radical Rethinking of the Way to Fight Global Poverty*. Public Affairs: New York.
- Bass LE. 2004. *Child Labor in Sub-Saharan Africa*. Lynne Rienner Publishers: London.
- Basu K, Van PH. 1998. The economics of child labor. *American Economic Review* **88**(3): 412–427.
- Bonnet M. 1993. Child labour in Africa. *International Labour Review* **132**(3): 371–389.
- Bryceson DF, Jønsson JB. 2010. Gold digging careers in rural East Africa: small-scale miners' livelihood choices. *World Development* **38**(3): 379–392. DOI:10.1016/j.worlddev.2009.09.003
- Cartier LE, Bürge M. 2011. Agriculture and artisanal gold mining in Sierra Leone: alternatives or complements? **23**(8): 1080–1099.
- D'Avolio M. 2004. Child labor and cultural relativism: from 19th century America to 21st century Nepal. *Pace International Law Review* **16**(1): 109–145.
- Fernandes W. 2007. Mines, mining and displacement in India. In *Managing the Social and Environmental Consequences of Coal Mining in India*, Singh G, Laurence D, Lahiri-Dutt K (eds). The Indian School of Mines University: Dhanbad; 333–344.
- Fisher E. 2007. Occupying the margins: labour integration and social exclusion in artisanal mining in tanzania. *Development and Change* **38**(4): 735–760.
- Fisher E, Mwaipopo R. 2014. The creativity of action: property, kin and the social in African artisanal mining. In *Mining and Social Transformation in Africa: Mineralizing and Democratizing Trends in Artisanal Production*, Bryceson DF, Fisher E, Jnsson JB, Mwaipopo R (eds). Routledge Studies in Development and Society: Routledge; 79–94.
- Fisher E, Mwaipopo R, Mutagwaba W, Nyange D, Yaron G. 2009. "The ladder that sends us to wealth": artisanal mining and poverty reduction in Tanzania. *Resources Policy* **34**(1–2): 32–38.
- Groves L. 2004. Implementing ILO child labour convention 182: lessons from Honduras. *The Journal of Development Practice* **14**(1–2): 171–182.
- Hentschel T, Hruschka F, Priester M. 2003. *Artisanal and Small-scale Mining: Challenges and Opportunities*. Russell Press Ltd.: Nottingham.

- Hilson G. 2007. "Challenges with eradicating child labour in the artisanal mining sector: a case study of the Talensi-Nabdam District, Upper East Region of Ghana." <http://www.yorku.ca/cerlac/EI/papers/Hilson.pdf>
- Hilson G. 2010a. Child labour in african artisanal mining communities: experiences from northern Ghana. *Development and Change* **41**(3): 445–473.
- Hilson G. 2010b. 'Once a miner, always a miner': poverty and livelihood diversification in Akwatia, Ghana. *Journal of Rural Studies* **26**(3): 296–307.
- Hilson G. 2012. Family hardship and cultural values: child labor in Malian small-scale gold mining communities. *World Development* **40**(8): 1663–1674.
- Hilson G, Bockstael SV. 2011. Diamond mining, rice farming and a 'maggi cube': a viable survival strategy in rural Liberia? *Journal of International Development* **23**(8): 1042–1053.
- Hilson G, Bockstael SV. 2012. Poverty and livelihood diversification in rural Liberia: exploring the linkages between artisanal diamond mining and smallholder rice production. *Journal of Development Studies* **48**(3(March)): 413–428. DOI:10.1080/00220388.2011.604414
- Hilson G, McQuilken J. 2014. Four decades of support for artisanal and small-scale mining in sub-Saharan Africa: a critical review. *The Extractive Industries and Society* **1**(1): 104–118.
- Hilson G, Pardie S. 2006. Mercury: an agent of poverty in Ghana's small-scale gold-mining sector? *Resources Policy* **31**(2): 106–116.
- Hope KR. 2005. Child survival, poverty and labor in Africa. *Journal of Children and Poverty* **11**(1): 19–42.
- Human Rights Watch. 2013. Toxic toil: child labor and mercury exposure in Tanzania's small-scale gold mines. Technical report, Human Rights Watch, USA.
- Hydén G. 1983. *No Shortcut to Progress: African Development Management in Perspective*. University of California Press: Berkeley.
- ILO/IPEC and MINERCOL. 2001. The boys and girls who work in Colombia's small-scale mining: socio-cultural economic and legislative diagnosis.
- International Labour Organization. 1998a. *Combating Child Labour: A Handbook for Labour Inspectors*. ILO: Geneva.
- International Labour Organization. 1998b. *The Child Labor Policy Memorandum*. ILO: Geneva.
- International Labour Organization. 1999. *Social and Labour Issues in Small-scale Mines. Report for discussion at the Tripartite Meeting on Social and Labour Issues in Small-scale Mines*. International Labour Office: Geneva.
- International Labour Organization. 2002. *Child Labor Common in Zanzibar Island, Tanzania*. ILO: Geneva.
- International Labour Organization. 2004. *Action Against Child Labor in Small-Scale Mining and Quarrying: A Thematic Evaluation*. ILO: Geneva.
- Jennings NS. 1999a. *Child Labour in Small-scale Mining: Examples from Niger, Peru, and Philippines*. ILO: Geneva.
- Jennings NS. 1999b. *Small-Scale Gold Mining: Examples from Bolivia, Philippines and Zimbabwe*. ILO: Geneva.
- Jønsson JB, Bryceson DF. 2009. Rushing for gold: mobility and small-scale mining in East Africa. *Development and Change* **40**(2): 249–279.
- Kessler JJ, Ndaluka TJ, Fisher E. 2015. External evaluation of extending fair-trade gold to Africa project. AidEnvironment. http://www.aidenvironment.org/wpcontent/uploads/2016/01/201509_Final_report_Evaluation_of_Fairtrade_Gold_to_Africa_Project.pdf%7D
- Kielland A, Tovo M. 2006. *Children at Work: Child Labor Practice in Africa*. Lynne Rienner Publishers: London.
- Kim C-Y. 2011. Children's work and the life skills education policy in Cambodia. *Journal of International Development* **23**: 262–273.

- Maconachie R. 2014. Dispossession, exploitation or employment? Youth livelihoods and extractive industry investment in Sierra Leone. *Futures* **62**: 75–82. DOI:10.1016/j.futures.2013.08.003
- Maconachie R, Binns T. 2007. ‘Farming miners’ or ‘mining farmers’?: diamond mining and rural development in post-conflict Sierra Leone. *Journal of Rural Studies* **23**(3): 367–380.
- Maconachie R, Hilson G. 2011. Artisanal gold mining: a new frontier in post-conflict Sierra Leone? *The Journal of Development Studies* **47**(4): 595–616.
- Mawowa S. 2013. The political economy of artisanal and small-scale gold mining in. *Central Zimbabwe* **39**(4): 921–936. DOI:10.1080/03057070.2013.858540
- Mwaipopo R, Mutagwaba W, Nyange D, Fisher E. 2005. Increasing the contribution of artisanal and small-scale mining to poverty reduction in Tanzania. Technical report, Department for International Development, London. <http://r4d.dfid.gov.uk/pdf/outputs/C393.pdf>.
- Mwami A, Sanga A, Nyoni J. 2002. Tanzania child labor in mining: a rapid assessment. Investigating the Worst Forms of Child Labor 15, International Labour Organization.
- National Bureau of Statistics. 2002. *Geita District Profile*. : Dar es Salaam.
- Oloko G. 1993. *Education for Prevention of Child Labor*. Masola Publishers: Nairobi.
- Orkin K. 2010. In the child’s best interests? Legislation on children’s work in Ethiopia. *Journal of International Development* **22**: 1102–1114. DOI:10.1002/jid.1749
- Perks R. 2011. ‘Can I Go?’—Exiting the artisanal mining sector in the Democratic Republic of Congo. *Journal of International Development* **23**: 1115—1127. Doi: 10.1002/jid.
- Pijpers R. 2014. Crops and carats: exploring the interconnectedness of mining and agriculture in Sub-Saharan Africa. *Futures* **62**(A): 32–39.
- Rawlings LB, Rubio GM. 2005. Evaluating the impact of conditional cash transfer programs. *The World Bank Research Observer* **20**(1): 29–55. DOI:10.1093/wbro/lki001
- Rothenberg D. 2014. “Selected oral histories from the artisanal mining industry in North Kivu and South Kivu.” http://www.heartlandalliance.org/international/research/rothenberg_2014_selected-oral-historiesfrom-the-artisanal-mining-industry-in-north-kivu-and-south-kivu.pdf.
- Siegel S, Veiga MM. 2009. Artisanal and small-scale mining as an extralegal economy: de Soto and the redefinition of “formalization”. *Resources Policy* **34**(1–2): 51–56.
- Thorsen D. 2012. *Children Working in Mines and Quarries: Evidence from West and Central Africa*. UNICEF: Dakar-Yoff.
- Togunde D, Carter A. 2006. Socioeconomic causes of child labor in urban Nigeria. *Journal of Children and Poverty* **12**(1): 73–89. DOI:10.1080/10796120500502201
- UNICEF. 2002. *Report on the Status of Children*. UNICEF: Dar es Salaam.
- Weng L, Endamana D, Levang AKBP, Margules CR, Sayer JA. 2015. Asian investment at artisanal and small-scale mines in rural Cameroon. *The Extractive Industries and Society* **2**: 64–72. DOI:10.1016/j.exis.2014.07.011
- White B. 1996. Globalization and the child labor problem. *Journal of International Development* **8**(6): 829–839.