



# Mining and Social Transformation in Africa

Mineralizing and democratizing trends in artisanal production

Edited by Deborah Fahy Bryceson, Eleanor Fisher,  
Jesper Bosse Jønsson and Rosemarie Mwaipopo



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After more than three decades of economic malaise, many African countries are experiencing an upsurge in their economic fortunes linked to the booming international market for minerals. Spurred by the shrinking viability of peasant agriculture, rural dwellers have been engaged in a massive search for alternative livelihoods, one of the most lucrative being artisanal mining.

While an expanding literature has documented the economic expansion of artisanal mining, this book is the first to probe its societal impact, demonstrating that artisanal mining has the potential to be far more democratic and emancipating than preceding modes.

Delineating the paradoxes of artisanal miners working alongside the expansion of large-scale mining investment in Africa, *Mining and Social Transformation in Africa* concentrates on the Tanzanian experience. Written by authors with fresh research insights, focus is placed on how artisanal mining is configured in relation to local, regional and national mining investments and social class differentiation. The work lives and associated lifestyles of miners and residents of mining settlements are brought to the fore, asking where this historical interlude is taking them and their communities in the future. The questions of value transfers out of the artisanal mining sector, value capture by elites, and changing configurations of gender, age and class differentiation all arise.

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Mineralizing and democratizing trends in artisanal production  
*Deborah Bryceson, Eleanor Fisher, Jesper Bosse Jønsson and Rosemarie Mwaipopo*

# **Mining and Social Transformation in Africa**

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artisanal production

**Edited by Deborah Fahy Bryceson,  
Eleanor Fisher, Jesper Bosse Jønsson  
and Rosemarie Mwaipopo**



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# 1 Mineralizing Africa and artisanal mining's democratizing influence

*Deborah Fahy Bryceson and Jesper Bosse Jønsson*

The twenty-first century has witnessed Sub-Saharan Africa's re-emergence on the world stage of commodity export. A dramatic surge in mining is catalyzing fundamental change with the potential to transform or trammel personal and national destinies. As the continental economy expands, virtually everyone is affected in one way or another, most of all mineworkers and residents of mining settlements who are riding the crest of opportunity and risk associated with a global commodity boom. They are at the vortex of profound social transformation.

At present, juxtaposed to decades of entrenched economic recession, the current exploitation of Sub-Saharan Africa's rich mineral wealth is generating increased prosperity for some and impoverishment for others. Rape or redemption? There is an extensive literature on mineral booms of this nature discussing the so-called resource curse, Dutch disease and a paradox of plenty (Sachs and Warner 2001; Robinson *et al.* 2006). For better or worse, foreign direct investment has been on an upward trajectory, spurred by rising prices for gold and other valuable metals, along with diamonds and other precious stones (Bush 2008).

This volume, however, extends well beyond the world of foreign investment and corporate mining to an exploration of the artisanal mining sector, especially its core, the excavation of minerals by African mine claim owners, pit holders and diggers and its effects on local settlements. In several respects, artisanal mining averts the pitfalls of the mineral resource curse that has preoccupied economists, boosting labour absorption in national economies, raising purchasing power and enhancing the multiplier effect in local economies of mineral resource-rich areas.

We define artisanal mining as individual or collective labour-intensive mineral extraction with limited capital investment using basic tools, manual devices or simple portable machinery. Overwhelmingly, artisanal mining pits constitute a male domain but women are close at hand, engaged in panning, mineral processing and service sector activities. We use the term 'mineralizing' to denote the alteration in both the form and content of the African continent's social, political and cultural foundations arising from the growing importance of mining in national, local and household economies. The word mineralization used in biology, geology and soil science refers to chemical processes altering the organic or inorganic composition of original base substances. The analogy is apt for the continent's political economy and society. Over the past thirty years, a swathe of

African countries have experienced deepening agricultural malaise, most apparent in smallholder commercial crop production, leading to marked deterioration in the productive and exporting capacity of nation-states and rural households (Bryceson 2002).

Artisanal mining has appeared as one potentially lucrative alternative to agriculture, gaining in momentum over the last two decades (e.g. *Benin*: Grätz 2002; *Burkina Faso*: Luning 2006; *Democratic Republic of Congo*: De Boeck 1999; *Ghana*: Hilson and Potter 2005; *Madagascar*: Walsh 2003; *Sierra Leone*: Richards 1996; Maconachie and Binns 2007; *Zimbabwe*: Mabheba 2012; *Continental*: Jönsson and Fold 2011; Werthmann and Grätz 2012). Wherever it commences in the African countryside, artisanal mining is transformative and organizationally distinct from the economic principles and social ties that pervade smallholder agriculture and pastoralism.

Five salient and interrelated themes have emerged in the African artisanal mining literature: first, debate about the significance of artisanal mining livelihoods for poverty alleviation; second, contentious relations between artisanal and large-scale mining with regards to land, mineral rights and labour; third, artisanal miners' extraction of so-called conflict minerals; fourth, legal aspects of artisanal mining production and exchange; and fifth, the environmental hazards associated with artisanal mining.

Our edited collection probes the largely undocumented social and cultural dimensions of African artisanal mining, which are altering the form and content of relations within the household, local community and nation-state, using Tanzanian case study material for illustration. At the centre of this trajectory is the emergence of new occupations and lifestyles within the mining settlements. We draw inspiration from Sennett's (2008) analytical insights into the evolution of artisanal craftsmanship and its reverberations for the wider society. His focus is on those who work primarily with their hands and hand-held tools through world history. Sennett's depiction of their visceral relationship to their materials and tools in the process of craft production and trade, the changing nature of skill acquisition, relationships with their work colleagues and not least their motivation and professional commitment directed at accomplished work performance and valued product output provides conceptual insight for comprehending African artisanal miners.

Tanzania, a country that typifies the current movement of primarily agrarian national economies towards mineral-driven political economies taking place across the African continent, affords us a panoptic view of the social transformation and the ensuing tangled web of cultural innovations reconfiguring social dynamics at local, regional and national levels. The Tanzanian experience is indicative of the circumstances of many mineral-endowed African countries spurred by the dramatic ascent of global mineral prices. The early stages of mineralization have represented enormous opportunities for people, mostly men, to enter artisanal mining as mineral extractors, generally producing interdependently in association with one another rather than working on their own. As artisanal mining takes shape, both democratic and autocratic tendencies may

surface. The chapters in this book interrogate opposing tendencies in the artisanal labour process and more widely in the daily lives of mining settlement residents, and at the national level as states become increasingly involved in channelling mining revenues in the larger economy.

Throughout this book, we are seeking to advance a new theoretical understanding of the role of artisanal miners in society, which may be generalizable to several countries in Sub-Saharan Africa. We have chosen to provide a detailed concrete example of the nature of artisanal mining in Tanzania to demonstrate the multi-faceted complexity of artisanal mining's impact on social transformation. By way of contextualization, the next section of this chapter reviews the broad historical trajectories of Sub-Saharan Africa's colonial and post-colonial mining, followed by the basic outline of our conceptualization of the embryonic democratic character of artisanal mining in current African mineralization. Thereafter, we move to Tanzania's historical background to illustrate the present nature of mineralizing and democratizing processes in preparation for the case study chapters that follow.

The final chapter of the book will return to these themes to review the significance of the Tanzanian case study findings, taking into account the creeping inequalities, injustice and autocratic tendencies revealed in the case study chapters and the reality of mineralization's non-renewable mineral resource base. In the conclusion, we reiterate our question as to whether a democratizing trend is generalizable to Sub-Saharan Africa.

## **Mining eras in Africa**

Before embarking on an in-depth interrogation of African artisanal mining it is useful to review twentieth century history of African mining more generally, precisely because African mining narratives have tended to dramatize the themes of authoritarianism, on the one hand, and anarchy and violence, on the other. Both narratives are inclined to distract attention from alternative histories where mining was instrumental to economic development and social change in post-colonial transition, as exemplified by Ghana and Zambia.

The African continent's known mineral wealth was a significant lure for European colonial annexation during the scramble for Africa in the late nineteenth century. Subsequently, most of the colonial economies of Southern Africa, as well as the Belgian Congo and the Gold Coast (now Ghana), were dominated by large-scale mining, while artisanal mining was relatively rare and in most cases illegal. The following sub-sections outline the dominant patterns of African mining during the twentieth century to the present.

### ***Apartheid mining in Southern Africa***

South African construction of the infamous apartheid regime centred on a racist division of labour that enhanced profits in the mining sector at the expense of the black labour force's wages, housing and rights of residence in urban areas and

was influential throughout Southern Africa. European colonial governments and mine corporations fine-tuned a production system that relied on temporary African mine labourers and the creation of labour reserves. Most workers were rural recruits who were housed in mining compounds and obliged to return to their home areas at the completion of their work contracts (Wolpe 1972; Jeeves 1985; Moodie 1994). Coercive control and a racist ideology removed the possibility of collective politics (Gordon 1977; Crush 1994).

The separation of men from their wives and children had deleterious effects on home life. Over the latter half of the twentieth century, the South African labour reserve was characterized by increasing reliance on foreign labour from neighbouring countries, declining numbers of recruited labourers, amidst continued racist labour stratification. Rising public concern over the societal effects of circular migration, surging political protest against the fiction of an agrarian fall-back in the miners' rural homelands and the indignities of apartheid permeated South Africa and spread new norms that affected the policies of neighbouring countries (Crush *et al.* 1991; Moodie 1994; Wilson 2001).

On the Copperbelt of Northern Rhodesia (later Zambia), the mining economy acted as a melting pot for rapid social change and urbanization. With markedly different labour organization from the racist stratification dominating mining compounds in South Africa and Namibia, trade union activism and organized politics challenged tribal identities, generating a politics of class that stimulated nationalist and pan-African thinking (Epstein 1958; Bates 1971; Burawoy 1972; Kapferer 1976).

Elsewhere political transition and its relationship to mining took a more violent turn. In the 1970s, the growing momentum of African nationalist resistance transformed into armed struggle bent on overthrowing the racist regimes of Anglophone Zimbabwe and Namibia and Lusophone Mozambique and Angola. Since the European colonial governments of these countries were aligned with mining industry interests, the armed struggles were inevitably confronting the economic order of large-scale mining as well as colonial state power (Phimister 1988; Pearce 2004, 2005; Larmer 2011). After years of protracted conflict, African national rule was achieved in one country after another, culminating in the downfall of apartheid in South Africa and introduction of black majority rule in 1994.

### ***Conflict mineral mining***

National independence did not always ensure peace as demonstrated in Angola where contestation over national leadership led to continuation of armed struggle between the MPLA ruling party and UNITA rebel movement led by Jonas Savimbi. So too the Democratic Republic of Congo's (DRC) and Sierra Leone's weak governing regimes, were unable to stem political and economic breakdown arising from contending rebel factions. In each of these cases, mineral wealth became pivotal to the war.

The rebel armies operating in mineral-rich areas increasingly resorted to financing their armed struggle on the basis of illegal artisanal mining of

diamonds, gold and other valuable minerals that took on the appellation of ‘conflict minerals’. This term surfaced after the Cold War during the 1990s, as external financing for African political secessionist movements by rival super-powers, the Soviet Union, China and the United States ebbed away. Seeking alternative sources of funding, some rebel armies succeeded in gaining access to mineral wealth through infiltration of trade channels and direct production. Besides local populations participating in the mining activities, labour recruitment was sourced from: i) men, often youth, seized in war-affected areas and coerced by soldiers to work as artisanal miners, or ii) alternatively people from cross-border areas, attracted to potential diamond or gold earnings, who developed business ties with the rebel army or private military companies, as was the case of Congolese diamond miners, as well as traders associated with UNITA in Angola (De Boeck 1999; Dietrich 2000; Pearce 2005; Rodrigues and Tavares 2012).<sup>1</sup>

Artisanal mining of conflict minerals remains relatively undocumented given the remote locations and typically dangerous conditions under which it has been conducted (Campbell 2004; Gilmore *et al.* 2005; Le Billon 2008; Pearce 2004; Bleischwitz *et al.* 2012). Angola’s and Sierra Leone’s conflict mineral production has ended with the cessation of war, although intimidation and exploitation of artisanal miners by the state army and private military companies in Angola’s Lundas continues. What remains most salient at present is the export of conflict minerals including gold, cobalt and tantalum from parts of the Eastern DRC (Raeymakers 2010; Geenen 2012; Global Witness 2012).

### *New era of mineralization*

Against the historical background of apartheid-influenced large-scale mining in Southern Africa and rebel-imposed artisanal mining dotted around the continent, the twenty-first century is witnessing a distinctly new mining era, marking a reprieve from exploitative conditions and inhumane labour control. The primary catalyst for change is the global market. China’s hyperactive quest for raw materials to fuel its economic ascent is unfolding in tandem with western countries’ recessionary slide (Brautigam 2009; Alder *et al.* 2009). Global mineral prices, notably for gold and copper, have risen to unprecedented heights, triggering the mineralization of many African countries, several having never previously been known for mineral production (Bryceson and MacKinnon 2012). In this context, both artisanal and large-scale mining have surged over the past decade. Corporate investment from Chinese and western countries has imparted dynamism to African economies that have been slumbering since the late 1970s global oil crisis. Most of the investment has been directed to the extractive industry.

[Appendix 1.1](#) lists African countries by their rating in a ‘metallic mining contribution index’, which refers to metallic mineral-producing countries with economies where metallic mineral production and export constitute a large and expanding part of the national economy. African countries account for over a third of the index’s top 50 countries. An equivalent global index for diamond-producing

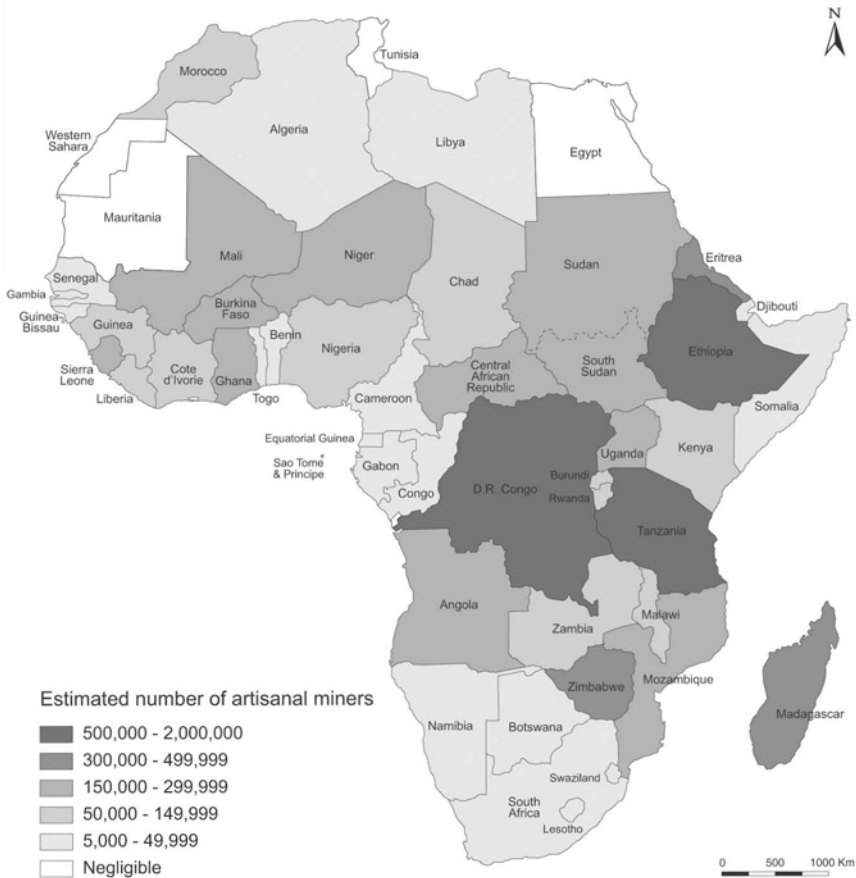
countries does not exist. However, in 2010, out of the 20 largest diamond producers, African countries constituted 60 per cent of the total and produced 62 per cent of the recorded carats ([Appendix 1.2](#)). This is remarkable amidst the decline of South Africa as a major mineral exporter. It should be borne in mind that the above statistics relate to officially recorded production of metals and diamonds, which primarily emanate from large-scale production. Artisanal mining output, on the other hand, is usually exported through informal channels and inevitably goes under-counted.

While total recorded industrialized mineral exports supersede recorded artisanal exports by an enormous margin, the reverse is the case for labour absorption and livelihood generation. Artisanal mining offers income-earning opportunities to vast numbers of people. The African continent has an estimated 9 million people engaged in artisanal mining and another 54 million who depend on the sector as an indirect livelihood source (Hayes 2008). Statistical estimates of total employment in African large-scale mining do not exist.<sup>2</sup> Furthermore, the common observation that the extractive industries makes only a small direct contribution to employment creation only takes statistics on large-scale mining into account (e.g. UNCTAD 2007: 133). Country-level comparison suggests a vast differential between the numbers of people employed in large-scale as opposed to artisanal mining, given significant employment creation in the latter. In Tanzania, approximately 685,000<sup>3</sup> people worked in artisanal mining in 2012 (roughly two-thirds in gold) whereas the estimated directly employed operational labour force at the country's four major large-scale gold mines numbered 3,100, a number only likely to double when formal sub-contractors are counted (Roe and Essex 2009)<sup>4</sup> ([Figure 1.1](#) and [Appendix 1.3](#)).

Artisanal mining's enhanced purchasing power has dynamized the surrounding countryside, creating employment opportunities for hundreds of thousands in easy-entry service sector and trade activities. The economic stimulus to resident populations in the mining regions is readily observable. Given these circumstances, African artisanal mining warrants careful consideration, both as a form of livelihood and a catalyst for democratizing tendencies, as discussed in the next two sections.

### **The artisanal mining labour process**

Although most current mining literature refers to 'small-scale miners', we have chosen to avoid that label, given that scale of operation criteria limits perception of the fundamentally different nature of artisanal mining relative to large-scale production. The concept of 'artisanal miners' affords more analytical insight by drawing attention to the nature of workers' social interaction and their specialized performance of transformative processes on specified minerals using hand-held tools. Sennett's (2008) treatise on craftsmen refers to the artisan's work as that of 'hand and head', we extend this term to encompass miners' coordination of 'hand, head and heart' in their mining excavation, refining and marketing of mineral output. In other words, we are concerned with the integration of the miners' work



*Figure 1.1* Map of estimated numbers of artisanal miners

Source: CASM 2008; Hayes 2008. See [Appendix 1.3](#) for the country listing of estimated numbers, which predates the establishment of Southern Sudan, hence, the perforated boundary line

motivation and decision-making as well as the associational social ties of occupation, community and conjugal relations that congeal in the mining settlement and beyond, binding mining activities as an economic livelihood with a distinctive cultural way of life.

The artisanal miner is a largely self-propelled agent from the initial decision to migrate to a mineral site and throughout the course of his career to retirement. His work life begins with an informal, on-site apprenticeship ([Chapter 2](#)). From the outset, the miner must weigh the opportunity for financial gain and the identity and pride he has in being a miner against the challenges of acquiring the requisite skills, enduring physical hardship and taking on financial and physical risk



(Chapter 3). As *Homo faber*, man as maker of work with a moral life in common with others, the artisanal miner exercises autotelic agency in what Sennett (2008: 6) describes as ‘becoming and being a craftsman’. In the African artisanal mining context, this generally necessitates the individual breaking out of the labour ascription of his agrarian origins. In becoming a miner the term ‘occupationality’ is relevant, defined as a ‘process of skill acquisition, economic exchange, psychological orientation and social positioning through which an individual becomes actively engaged in specific work and identifies with it as an extension of his or her social being’ (Bryceson 2010: 4).

The autotelic journey of becoming self-made miners, takes place largely independent of government, NGOs, aid agencies and other developmental institutions. But the journey is a social rather than solitary experience (Chapter 5). As their numbers grow throughout the continent, artisanal miners have been reflexively forming shared economic and social norms among themselves and in relation to mining settlement residents, thereby creating their own sense of mining identity and accomplishment. Occupying a frontier setting, they are devising a social etiquette and economic customs that suit their daily lives and reflect current global and local market demands, mineral supply availability and state impositions on their activities.

The social and financial risks of artisanal mining are high. Many fail in terms of their original expectations and objectives and for some failure extends to being unable to achieve a basic subsistence. They may be forced to look for another location or occupation to survive or return to their home areas with embarrassment. Others, however, succeed as miners, some earning large sums of money, albeit erratically, and gaining respect and power, upon which they consolidate their social position (Chapter 3).

In contrast, miners in large-scale corporate mines work as wage labourers under standard capitalist contractual conditions and under a management chain of command which leaves little scope for independent decision-making about how they work, or even where and how they live if company housing is provided for them. Their working lives are likely to be more regularized and secure, whilst in the employment of the mining company.

Large-scale mine workers tend to have a higher level of formal education and be engaged in machine-facilitated labour in which they do not exercise the same ‘hand, head, heart’ decision-making as artisanal miners. Their sense of being miners is contingent on conforming to the mining company’s work regime. Less self-made and more a cog in the wheel of the global mining industry, they represent the mechanized, industrialized face of African mining. The contrast is stark, skilled workers are employed by large-scale companies on a salaried basis, subject to corporate production plans versus artisanal miners who face uncertain daily returns. As craft producers, they use their hands, heads and hearts, inadvertently fashioning a new local economy and society as they work.

This book is centred on African artisanal miners whose evolving lifestyles and work trajectories have been barely documented, an ironic and regrettable situation given their far greater numbers relative to those employed in large-scale

mining and their pivotal political significance to the mineralization of the continent at present. The next section focuses on their social freedom and political assertiveness as autotelic craftsmen and advances our argument for the recognition of democratic tendencies in African artisanal mining.

### Democratizing artisanal miners

Almost a half-century ago, Barrington Moore (1991 [1966]) in his book *Social Origins of Dictatorship and Democracy*, ambitiously traced the role of rural peasantries and landlord classes in the transition from agrarian feudalism to industrial capitalism, showing how democracy and dictatorship are both possible outcomes of a complex, contingent history of transformation. This collection is far less ambitious in scale but is nonetheless interested in similar contradictory historical processes at local and regional levels. The book's case study chapters focus on artisanal miners as 'autotelic agents', who have coalesced in specific circumstances, and are becoming and being miners with an internalized *raison d'être* individually and collectively. Constituting an artisanal mining fraternity, they evince strong democratic leanings related to the nature of their labour process, migration histories and the opportunity to create new settlements and occupational norms in a mineralizing context.

Democracy, derived from the Greek word *demos* (translated: the people), commonly refers to popularly elected representative government embedded in the ideals of freedom and equality (Robinson 2004: 3). We have adopted a related but far broader meaning suitable for exploring the social dynamics of artisanal mining. We define democratization as a process of occupational and residential community formation around the principles of freedom of movement, egalitarian opportunity and representative governance. At the local level, this takes the form of an effervescent amalgam of socially aspirant associational relations, emergent egalitarian-leaning occupational work practices and tendencies towards collective self-governance. At the national level, democracy is evidenced in free and fair elections, the rule of law embedded with principles of justice, state commitment to its citizenry's equality of opportunity, and the performance of bureaucratically impartial state agents. In effect the chapters that follow can be considered as baseline snapshots of a rapidly changing frontier generating a new potentially democratic narrative, not unlike De Tocqueville's (2003 [1835]) early observations about frontier America's democratizing tendencies.

Physical labour exertion and skill acquisition, rather than formal educational qualifications and privileged birth, are key to artisanal mining proficiency. A putative ethos of equality of opportunity pervades most mining sites. While there is generally a hierarchical division of labour (Chapters 3 and 7), the pit has a levelling egalitarian influence since everyone is subjected to the same uncertainty and danger. Throughout Africa, diggers generally share the mineral output on an agreed basis. Most operations are organized as two- to four-tier hierarchies, which involve some or all of what we term financiers, claim owners (formal and informal), pit holders, and diggers (Hilson and Potter 2005; Jönsson and Fold 2011).