LABOUR, INCORPORATED: DEPENDENT CONTRACTING AND WAGELESS WORK IN AFRICA'S "RESPONSIBLE" MINES

Matthieu Bolay, Filipe Calvão

Éditions de l'EHESS | « Cahiers d'études africaines »

2022/1 n° 245-246 | pages 123 à 151

ISSN 0008-0055
ISBN 9782713229268
DOI 10.4000/etudesafricaines.36190

Cahiers d'études africaines

245-246 | 2022
Salariats d'en bas

Labour, Incorporated: Dependent Contracting and Wageless Work in Africa's "Responsible" Mines

Travail, sociétés à responsabilité limitée : Entrepreneuriat dépendant et salariat déguisé dans les mines « responsables » en Afrique

Matthieu Bolay and Filipe Calvão

Electronic version
URL: https://journals.openedition.org/etudesafricaines/36190
DOI: 10.4000/etudesafricaines.36190
ISSN: 1777-5353

Publisher
Éditions de l'EHESS

Printed version
Date of publication: 1 June 2022
Number of pages: 123-151
ISBN: 978-2-7132-2926-8
ISSN: 0008-0055

Electronic reference
Matthieu Bolay and Filipe Calvão, "Labour, Incorporated: Dependent Contracting and Wageless Work in Africa's "Responsible" Mines", *Cahiers d'études africaines* [Online], 245-246 | 2022, Online since 01 January 2025, connection on 10 June 2022. URL: http://journals.openedition.org/etudesafricaines/36190 ; DOI: https://doi.org/10.4000/etudesafricaines.36190

Matthieu Bolay & Filipe Calvão

Labour, Incorporated

Dependent Contracting and Wageless Work in Africa's "Responsible" Mines

Across the African continent, extractive corporations—often in collaboration with cooperatives, refiners, and NGOs—are increasingly expanding the scope of their business by relying on artisanal miners to run part of their operations. By most standards, these workers are like any formal employee of a mining corporation: they don uniforms emblazoned with company logos, their attendance and admission to mining sites are supervised and monitored, and they have to abide by strict management rules on safety, conduct, and access to the workplace. They are recruited for a profit, and their ability to produce is in every respect controlled by the corporate entity. Nevertheless, these miners' income is not mediated by a wage-labour relationship but by the amount of extracted ore, with varying degrees of ore grade estimation. Like in the rising platform economy, these "independent" workers are "free" of risks and charges for mining companies, including obligations to withhold income taxes, guarantee salaries, or contribute toward social pension funds. However, they are otherwise dependent on complying with company regulations to be able to work. This article examines this emergent paradigm in relation to labour and capital in African contexts. By including "independent" artisanal labour into corporate supply chains, this new labour regime reactivates wageless relations that were mainly confined outside the scope of legality[1] and that industry regulations delegitimised, but that now find a renewed legitimacy under the banner of "responsible mining."

According to the guidance on "responsible mineral supply chains" by the Organisation for Economic Cooperation and Development (OECD), artisanal

1. As early as 1992-1993, artisanal miners started extracting copper and cobalt from private leases. These operations were conducted legally in a few instances, such as within the NOUCO project in 2000, a quickly aborted government initiative which aimed to centralise purchases from the artisanal sector. However, in most cases, artisanal operations were clandestine (Rubbers 2004).

Cahiers d'Études africaines, LXII (1-2), 245-246, pp. 123-151.

mining is categorised as a "red flag" given the risks entailed in terms of human rights abuses and conflict financing. Nevertheless, mining corporations and midstream industries are increasingly encouraged to engage with this sector by supporting its formalization and by opening licit routes for the international markets. For artisanal production to be deemed "responsible," companies need to follow the OECD five-step due diligence framework.[2] In turn, artisanally mined cobalt gets access to smelters and refineries accredited on the basis of the OECD standards, such as those of the Responsible Mineral Initiative. While industry actors have long purchased artisanal production at the margins of formality and legality, there is growing pressure in policy, industry, advocacy, and investment spheres (Amnesty International 2016; Köllner 2018; UNPRI 2018; OECD 2019) to differentiate "legitimate," i.e., broadly understood as formalized, from "illegitimate" sources of cobalt. The framework of "responsible sourcing" aims to make artisanal flows that are predominantly informal "legitimate."

In the cases we analyse, mining corporations play a crucial role in formalising artisanal miners and incorporating them through corporate-sponsored cooperatives, but without the rights and benefits of formally employed workers. This formalisation of artisanal miners is akin to a form of "dependent contracting," following the International Labour Organization's 2018 classification as "independent workers employed for profit, who are dependent on another entity that exercises explicit or implicit control over their productive activities and directly benefits from the work performed by them" (ILO 2018: 13). The shift from autonomous miners to corporate contractors under the banner of "responsibility" holds historical significance and augurs a break with contemporary modes of extraction that warrant further attention. Coupled with an expansive definition of extractive frontiers (Mezzadra & Neilson 2019; Arboleda 2021; Calvão & Archer 2021), these transformations evoke new modalities of flexible, precarious, and sub-contracted non-waged labour of the so-called platform economy.

While artisanal miners in the Democratic Republic of Congo (DRC) had been partly integrated as wage workers by junior companies in the past (Rubbers 2013), the current shift to "responsible mining" spurred by major actors such as Trafigura or Glencore does not rely on a salaried workforce but on forms of dependent contracting of artisanal miners. Along with the development of "model mines" put forth by these mining companies, the Congolese

2. According to the OECD guidance (2016: 17-19), companies claiming responsible sourcing must conduct continuous due diligence to (1) identify, (2) assess, and (3) mitigate human rights risks, and enforce robust traceability mechanisms over this product to (4) enable third-party auditing and (5) due-diligence reporting.

State has recently joined the fray by creating the Entreprise générale du cobalt (EGC). In a tentative "responsible partnership" with some of the leading multinational cobalt producers, this new State-owned company seeks to develop a shared monopoly on the purchase of cobalt from artisanal mines, acting as a legal intermediary between corporations and cooperatives employing independent miners. In this article, we examine this expansive condition of work in the DRC's cobalt mines, building upon the scholarship on expulsion and inclusion in Africa's extractive frontier and contributing to debates on dependency (Ferguson 2015) and the "precarious present" of wageless work more broadly (Denning 2010; Millar 2014).

Labour at the Interface of Artisanal and Industrial Mining

The diminishing grade of available ore coupled with rising demand for critical metals and minerals in response to decarbonisation efforts and the growing use of digital technologies and electric battery vehicles has led to a dramatic expansion of mining worldwide. In particular, extractive frontiers—new and old—have (re)emerged across Africa. Currently 65 % of worldwide cobalt, which is used in lithium-ion batteries, is extracted in the DRC. The demand for cobalt tripled in the last ten years and is still expected to double by 2035.[3]

This expansion has been spurred, on the one hand, by capital-intensive foreign mining investments facilitated by generous tax codes for transnational mining companies, reshaping spatial orders and often leading to conflicts over access to land, water, and other resources. On the other hand, structural adjustment plans imposed by the World Bank have led to increased poverty, unemployment, and deagrarianisation, and the accompanying expansion of the artisanal mining sector. Altogether, these processes have fueled the rise of artisanal and small-scale mining (ASM), which is now said to be the second source of income in Sub-Saharan Africa after farming, providing livelihoods for anywhere between 6 and 20 million people.[4] In practice, artisanal miners, also called *"creuseurs"* in the DRC, are independent miners most of whom operate informally and who team up to dig underground tunnels with shovels

3. Faraday Institution, "Lithium, Cobalt and Nickel: The Gold Rush of the 21st Century," *Faraday Insights,* Issue 6, 2020, <https://faraday.ac.uk/wp-content/uploads/2020/12/Faraday_Insights_6_Updated_Dec2020.pdf>.
4. The unreliability of figures speaks to the lack of consistent empirical studies, diverse definitional categories, and ASM shifting, and often temporary working conditions. See Delve, *2020 State of the Artisanal and Small-Scale Mining Sector,* 2020, <https://delvedatabase.org/uploads/resources/Delve-2020-State-of-the-Sector-Report-0504.pdf>.

and chisels as deep as 30 meters down to extract copper and cobalt ore, often in hazardous conditions. The raw material is then manually crushed, washed, and sorted on the surface, mainly by women, before being sold to local traders according to the assessed grade and weight.

This dual expansion of mining—capital-intensive, large-scale mining on concession areas, and labour-intensive, low-tech, small-scale, informal mining at the margins of the law—is an inherent source of conflict in the competition for access to resources (Katz-Lavigne 2020). While the dominant lens in industry and policy debates had long seen these two sectors as impermeable and discrete modes of production, a growing body of research emphasizes the interactions between industrial and artisanal actors, including their "coexistence" (Hilson *et al.* 2020) or "cohabitation" (Pijpers & Eriksen 2019). Industry regulatory bodies, in turn, have responded by raising awareness of the "contamination of sources" and the actual "interconnections" of supply chains (OECD 2019). In line with the observation that social conflicts translate into business costs (Franks *et al.* 2014), companies have been encouraged by the World Bank to incorporate ASM into the corporate fold, provided that they operate within a framework of formality and legality created by or at the service of corporations (World Bank 2009).

However, as demonstrated in other contexts, formality is not necessarily a desired condition from the perspective of artisanal miners. For instance, Di Balme and Lanzano (2013) show that gold diggers in Burkina Faso prefer escaping the costs of formality, while formal buying houses *(comptoirs)* use their ability to master plural normative orders to seize artisanal production at low costs. In Sierra Leone, the tributor-supporter system of the artisanal diamond mines is often preferred to the "wage system" of small-scale mines licensed by the government because it "takes into account the risks, and hierarchies, as well as the economic expectations of each miner" (D'Angelo 2018: 321). While these examples suggest a range of different modes of remuneration and legal statuses, the cases we analyse differ in that major mining companies are the leading protagonists of this push toward formalisation with few options available outside the corporate-led swing saw movement of incorporation and cooption, on the one hand, and expulsion and dispossession, on the other.

Such dynamics are not unique to the extractive sector. Vadot (2014), for instance, showed how the cotton industry in Cameroon reorganised through mechanisms of discharge and control over small-scale producers, which diverted the social and economic risks onto the farmers while allowing a State-based monopoly to seize the value of unpaid labour. Following this scholarship, the profitability of deploying artisanal miners as "extractive peasants" (Lahiri-Dutt 2018) would stem from their ownership of means of production and their sole responsibility in ensuring the reproduction of unpaid, domestic work, kinship obligations, and other informal networks of support. Thus, while the logic depicted in this article has precedents, the mechanisms to achieve it are novel. They rely on a new articulation of labour and capital under the rhetoric of responsibility, yet whose implementation bears the adverse effects of dependent contracting.

Despite recent interest in processes of labour market segmentation in the Copperbelt and previous occurrences of contracting artisanal miners in low capitalised structures in the 1990s (Rubbers 2013, 2019; Deberdt 2021), limited attention has been paid to the second term of the expulsion-integration nexus, that is, how corporate-led "responsible" extraction programs currently enable "new kinds of incorporation and inclusion" (Frederiksen & Himley 2020: 10).[5] Building upon this gap, we examine situations whereby artisanal labourers are expelled from mining sites to become formally reintegrated in corporate extractive structures. We ask: under what conditions are those expelled incorporated in the global production of minerals? How are labour relations reconfigured by the dual logic of expulsion and inclusion amidst expanding mining frontiers?

These miners are not the archetypical "disposable" (Mbembe 2003) or "surplus population" of no use to capital (Li 2010) but a productive force of extraction, opening a new frontier for corporate profits. Drawing from land displacement and eviction in the mining sector, Saskia Sassen (2014: 216-222) suggests that "spaces of expulsions" may be "marked as erasure by incorporation." Building on these findings, Mezzadra and Neilson (2019) describe how the tensions between "expulsion" and "incorporation" are always already present in the systematic movement of capital. Nevertheless, they argue, what counts more today is not the incorporation-expulsion dynamic proposed by Sassen (2014) but the merging and differential inclusions that characterise their deployment. We extend this reflection by studying shifting working conditions in the cobalt mines of the DRC where expelled "illegal" miners must register through mining cooperatives with which major mining corporations have established "partnerships" to work legally. These agreements, proudly emblazoned in corporate social responsibility reports, are designed to offer safe working conditions to artisanal miners within the perimeter of the concession. At the same time, the company retains formal control over the purchase and sale of their product.

5. Some exceptions are worth mentioning, such as Luning's (2014) analysis of artisanal gold diggers in Burkina Faso acting as "pathfinders" for junior mining companies, and Rubbers' (2020) depiction of the purchase of artisanal miners' product by a mining company in the DRC before starting industrial operations.

Our analysis proceeds in three steps. First, we complicate the notion of the extractive frontier by framing labour within the temporal and spatial logics of expulsion common to the history of cobalt and copper mining in the DRC. Secondly, we analyse the expulsion-incorporation nexus through the different technical, financial, and legal rationalities that underpin and constrain the mobility of artisanal miners across formal and informal operations. Finally, we develop the notion of "dependent contracting" in this new frontier of "responsible mining" to account for the mechanisms of labour integration in corporate projects. In so doing, we contribute to scholarly interest on the growing casualisation of work and corporate attempts to seize the value of human labour without incurring the costs of social reproduction, namely in debates surrounding platform capitalism (Guyer 2016; Srnicek 2017). Considering mining cooperatives as labour platforms mediating access to work, we examine their role as brokers alongside the cooption of responsible discourse and the corporate control over local markets to articulate artisanal and industrial modes of production.

The article builds upon research carried out within a larger project on the politics of transparency in the extractive industries, which included regular attendance of industry events, interviews with policy advisors, corporate heads of responsible sourcing programs, technology and compliance providers, and extensive field research in mining producing regions. In this article, we rely on ethnographic field research conducted in the Kolwezi area in the DRC in September and October 2019, including visits to ten artisanal mining sites, both within and outside corporate concessions.[6] We focus specifically on four of these mines, legally recognised as part of company-cooperatives agreements and relying on dependent contracting to recruit their workforces. Data were complemented with interviews with artisanal miners, cooperative managers, compliance officers, companies' executives and corporate social responsibility (CSR) branches, local journalists, and provincial politicians. Finally, we draw from a survey among artisanal miners (n=81), including information on miners' income, choice of mining sites, engagement with cooperatives, and previous instances of expulsion.

6. To include a representative sample of perspectives, we negotiated access to six mines with local operators and NGOs, and access to four other mines through formal channels of companies overseeing "responsible" mining projects.

Making Extractive Frontiers in the Congolese Copperbelt

The provinces of Lualaba and Haut-Katanga in the DRC illustrate the historical dynamics of an extractive frontier. In this region, the mobilisation of internal migrant labour and the enclosure of mineral resources date back to colonial rule. Widespread extraction of minerals started in 1906, with the creation of the Union minière du Haut-Katanga (UMHK) by the Comité spécial du Katanga, a semi-private concessionary company founded in 1900 with Belgian capital. The cooperation between these entities laid the foundation for what would become an institutionalized system of expulsion and dispossession, defining the first phase of extraction lasting for most of the 20th century.

Like most mining projects in development and exploration phases, extraction went hand in hand with the spatial expulsion of those inhabiting concession areas. Given the high demand for labour, Belgium authorities complemented dispossession strategies with the recruitment and disciplining of a migrant workforce to suit UMHK's needs. As demand for copper increased, mining operations expanded with a corresponding hike in the workforce to upwards of 40,000 miners in Katanga on the eve of World War II (Perrings 1979: 251-252). The challenges of ensuring a cheap and stable workforce, as Rubbers (2013) explains, led UMHK to develop a paternalist approach to labour management. This strategy continued with the onset of Congolese independence when La Générale des carrières et des mines (Gécamines) succeeded to UMHK when it was nationalized in 1966. Gécamines' labour force peaked at 32,000 workers in 1991 (Rubbers 2013: 47) and was relatively protected, with the company taking in charge much of the social and sanitary necessities of the population in Katanga.

The second phase of the Copperbelt mining frontier came with liberalisation initiated in the mid-1990 with the progressive privatization of Gécamines and the adoption of a new mining code in 2002, which purposely "deregulated" the sector by allowing foreign investors to seize land and take over heretofore State-owned infrastructures. The role of Gécamines ended up being limited to that of a national agency responsible for allocating land to multinational extractive companies through joint ventures, the new institutional standard of the second phase of this frontier. While Gécamines remained the holder of the largest share of mining titles, mining resources and infrastructural assets were ceded mainly to foreign investors, often in opaque agreements on the threshold of illegality (Mazalto 2008: 59-60). As we were told by a provincial minister of Lualaba in Kolwezi, "Gécamines puts the land, and mining companies bring the money." The 90,000 tons of cobalt estimated to be produced yearly in the DRC—70 % of the world's production—is currently extracted by 12 companies established during this period.[7]

The 2003 liberalization period saw the dismissal of thousands of workers from Gécamines. Although the decline was already underway, the early 2000s marked a significant turning point with the retrenchment of 10,000 additional workers ordered by the World Bank (Rubbers 2013: 49-53), the transfer of Gécamines' industrial assets to private investors, and the subsequent erosion of most social services. The demise of Gécamines as the country's largest employer and provider of social services reoriented large throngs of people to the informal sector to secure subsistence livelihoods. Currently, more than 80 % of the population in Kolwezi is formally unemployed (Nguza & Muland-Katal 2016: 738), most of whom are active in the artisanal mining sector that has become the primary source of income.

The third phase of this extractive frontier, which will concern us in this article, was forged on the ruins of Gécamines by melding liberalization with formalization efforts. New foreign investors accessed public resources, including mining licenses and industrial assets, transforming the supply chain into ever more complex and fragmented networks of production and trade that crisscross the boundaries of the formal and the informal, the legal and the illegal, the artisanal and the industrial. Mining ventures multiplied with leaner workforces, reaching record levels of copper and cobalt production and a concomitant expansion of the informal artisanal sector fueling the cobalt demand.

These complementary overlaps between industrial and artisanal mining did not go unnoticed, with harrowing accounts of child labour, human rights abuses, environmental degradation, and inadequate working conditions making the headlines since 2016.[8] In response, the industry has been under pressure to segregate its industrial sources from the artisanal sector because of its association with higher due diligence risks. This context accelerated the responsible sourcing movement institutionalized by the OECD and the World Bank's support for incorporating segments of ASM into their operations. Over the last decade, policy-makers came to acknowledge that de-risking of not sourcing from ASM was not an option anymore. The closing remarks of the 2019 OECD Forum on Responsible Mineral Supply Chains vigorously stated this idea and urged investors to "stop consider[ing] ASM as a risk and see it

7. These companies concentrate 95 % of industrial cobalt production, 40 % of which by Swiss miner Glencore. Half are Chinese (including China Moly, Huayou, Nanjing Hanrui, Jinchuan), where two-thirds of global cobalt production is refined (VAN DEN BRINK *ET AL.* 2020).
8. These revelations were first brought to the attention of a global audience with the publication of the report "This is what we die for" (AMNESTY INTERNATIONAL 2016).

as an opportunity." While echoing the reputational benefits of long-standing practices of community support by the CSR branch of extractive companies, the adverse inclusion of wageless labour in this final frontier of "responsible mining" represents a novel shift driven primarily, as we will see, by economic benefits to these companies.

Artisanal Labour: Tolerance, Expulsion, Incorporation

With massive unemployment in the formal sector and lack of alternatives to mining, the Kolwezi area is now home to an intense artisanal mining activity which is estimated to occupy seasonally between upwards of 60,000 to 150,000 people in the provinces of former Katanga (Rubbers 2019: 10; Sovacool 2019: 923). *Creuseurs* work "independently," though they are often "sponsored" by local *négociants.* In contrast to industrial employees and day labourers, informal artisanal miners have no social protection or benefits associated with wage labour, be it stable income or pension rights. For many in the region, this activity is a full-time job and their sole source of income. Survey respondents had, on average, seven years of experience as artisanal miners and 93 % said they had no other source of income in their household besides that obtained through the sale of ore, estimated at 4 euros per day.[9]

Artisanal mining activities in the Congolese Copperbelt have been authorized on certain portion of Gécamines leases since its decay in the late 1990s (Rubbers 2013). However, it was only with the 2002 mining code that ASM was legally recognised with a specific license under a new permit called "Zone d'exploitation artisanale" or ZEA. The mining code, subsequently revised in 2018, differentiates three modes of production and tax regimes: a research permit, renewable once for up to four years, a *permis d'exploitation* (PE) for industrial or small-scale mechanized mining, and a *permis d'exploitation des rejets* (PER) for the treatment of tailings, or rejected ore that ends up rewashed in the periphery of most mining sites by upwards of thousands of artisanal miners (see fig. 1). Finally, following a recommendation by the provincial administration, the Ministry of Mines can define zones of artisanal extraction (ZEAS) in areas not economically or technologically suitable for industrial extraction. ZEAS are also given the least profitable areas with poorer ore deposits—a common source of complaint by artisanal miners.

9. To which informal taxes, transportation, and other exploitation costs should be deducted. SOVACOOL (2019) estimates incomes in artisanal cobalt mines to be between 30 and 50 euros per month, or closer to 1.50 to 2 euros per day.

The exponential increase in joint mining ventures has covered the entire area of Kolwezi, including the inner perimeter of the city (Geenen 2020), with a total of 35 PEs, 26 of which were allotted between 2003 and 2008 during a period of rising cobalt prices. Coinciding with a new spike in prices (2016-2018), a new wave of exploration permits was allocated to the remaining available space on the outskirts of Kolwezi. Out of the 10 artisanal mining sites visited in 2019, all but one were located within the perimeter of a PE or PER concession and were in principle illegal unless conducted in partnership with the license holder. In disregard of the actual mining code, artisanal miners' presence depends mainly on the strategic governance options taken by mining companies that oscillate, as in other mining contexts, between "tolerance, expulsion, and interference [through CSR engagement]" (Bolay 2016: 188). These workers are caught in a double bind: they are told to work in dedicated ZEAs but no such areas have been established with viable deposits, all allocated to corporate entities. As evidenced in other regions across Africa, the dominant tendency is to forcibly displace artisanal miners to make way for the construction of new industrial mines (Radley 2020: 1964). These miners are consequently pushed into a realm of *de facto* illegality *vis-à-vis* large-scale mines or otherwise forced to accept the terms of incorporation by mining companies.

Our survey conducted among *creuseurs* in six artisanal mining sites illustrates these expulsion dynamics. Asked why they decided to work in a given location, 19.4 % stressed its comparative economic advantage, and 7.5 % mentioned its proximity to their home. For the great majority (72.5 %), however, the choice of mining site was determined by the fact that access was tolerated in the absence of a legally dedicated location. Their permanence at any given site was relatively fleeting (5 months on average), suggesting frequent shifts between artisanal mining sites. This mobility appears to be mainly driven by their removal from their mining site: 80 % claimed to have experienced a form of expulsion from previous mines, either by private security forces or State police, with 73 % of respondents forcibly removed over the previous year. While these spatial dynamics of labour expulsion are not unique to copper and cobalt mining in the DRC, the speed of forced relocations within a relatively small perimeter is particularly striking.

The question, then, is what determines whether miners are tolerated, expelled, or, as we shall see, eventually incorporated into corporate structures? To answer it, we must briefly consider copper and cobalt extraction's technical and economic rationalities. From a geological standpoint, copper and cobalt deposits are notably close to the surface in the DRC, which makes them accessible without industrial methods. In addition, the ore grade concentration in some mines in the DRC can reach upwards of 2.5 % (Banza Lubaba Nkulu *et al.* 2018: 496), higher than the global average in cobalt mines of 0.5 to 0.8 % and thus suitable for artisanal mining. Besides, cobalt can be found in two different kinds of layered deposits: oxide deposits are close to the surface level and are extractable with artisanal methods, while sulfide deposits are located deeper in the underground (70-150 m) and require large-scale industrial technologies.

This configuration is particularly relevant to understanding how and why *creuseurs* enter a private industrial concession. Miners often have to dig 10 to 30 meter-deep shafts and tunnels to access surface-level deposits, which is time-consuming and physically risky since underground structures are prone to collapse. In large-scale mines (LSM), heavy machinery removes this first layer of gravel—a process known as *"découverture,"* or "uncovering." It stands to reason that LSM concessions tolerate miners' presence to mine "uncovered" oxide deposits to benefit from this production at no cost beyond the *découverture.* Until these surface deposits are depleted, or the company decides to put in place the machinery and infrastructure to tap into deeper sulfide deposits, this provisional tolerance also avoids interferences in other areas within the concession. Finally, discarded tailings with less than 0.5 % cobalt can still be profitable for industrial reprocessing. Large-scale mines often allow artisanal miners to collect and sort out tailing deposits to enrichen the ore *("enrichissment")* by manually separating gravel from copper and cobalt ore. This manual labour, usually led by women, may increase the grade of ore from 0.5 up to 10 % for cobalt, and 30 % for copper for an average income of 1 USD per day of work, once it is sold to local *négociants.*

FIG. 1. — TOLERATED ARTISANAL MINERS COLLECTING COBALT ORE FROM TAILINGS IN COMUS CONCESSION

Source: Filipe Calvão, 28 September 2019.

This reasoning helps account for the growing incorporation of artisanal labourers within industrial mines. Consider the following three partnerships in the context of our research, where the large majority of artisanal miners benefit from legally-sanctioned access to work after being evicted elsewhere. After the massive expulsion of artisanal miners from a neighbouring concession, a partnership was developed by the Chinese company Congo Dongfang International Mining (CDM)[10] in Kamilombe, as part of the Better Cobalt pilot project, now known as the Better Mining assurance and impact program. In this formalized project adjacent to CDM's industrial operations, there was a clear division of labour between men manually extracting close to surface level deposits and women re-washing and enriching tailing deposits. In Tilwezembe, a concession operated by a Lebanese subcontractor for CDM, the advantage of relying on artisanal workers was put very clearly by a manager of the local cooperative in an interview:

> [The company] prefers to work with *creuseurs* than invest in industrial infrastructures because, with machines, there are areas that are difficult to access and not well-suited for industrial extraction. There is also the question of costs: *creuseurs* are cheaper, you don't have to invest, nor ensure the maintenance or pay for diesel… all these things that are quite expensive. […] Also, the grade of the ore is very low [in the concession], so even if you used machines, you would have to mix the product with product extracted and enriched manually to boost the overall grade. With low-grade deposits, the advantage is that *creuseurs* take care of sorting the ores in such a way that they reach a viable grade.

Finally, Kasulo mine stands apart as the only dedicated ZEA out of the three partnerships. It emerged in response to the sudden increase of artisanal mining in a populated area of Kolwezi, with the provincial government giving CDM the mandate to operate the partnership—engaging both the cooperative and the company—and pay a "compensation" to the 600 families evicted from the area (IBGDH 2019: 5). By turning the informal area into a ZEA, CDM benefited from the presence of more than 10,000 miners already working in the area. To continue their operations legally, these workers had to register with the cooperative and transfer the exclusive rights over their production to the company in order to access the mining sites. 14,000 daily workers filled 600 trucks every month at its peak, representing between 15,000 and 25,000 tons of raw material. The relative success of Kasulo in demonstrating the potential of tapping into artisanal mining production—despite harsh working conditions—may explain why this will be the first mine operating under an agreement with EGC, to believe the vague details unveiled about the initiative (Morisho & Lenfant 2021).

10. CDM is a subsidiary of Zhejiang Huayou Cobalt, China's largest cobalt refiner.

While expulsion (from land, home, or the workplace) is an inherent dynamic of mining expansion, these cases remind us that attention should also be paid to the subsequent inclusion of this "surplus population" as it is rendered into a flexible, nearly costless and dispensable workforce. Exploiting this labour force extends the realm of corporate profitability for certain stages and segments of mineral production. This makes plain why ASM and LSM are not only entangled by force of needs in low capital structures, as has been the case in the 1990s, and why the integration of wageless artisanal labour under the banner of "responsible sourcing" by major industry actors opens new horizons for corporate extractivism.

(In)Dependent Contracting in "Responsible" Mines

An increasing number of firms have developed, or are currently initiating, new mining projects under the aegis of responsible sourcing.[11] Companies justify partnering with a cooperative—or the State, through EGC, and NGOs as a monitoring agency—as a way to provide work safety and protective equipment, access to medical care in case of accidents, and the benefits from mechanized *découverture,* which facilitates miners' access to surface-layer deposits. This labour force deploys many attributes of formal wage labour, such as wearing a company uniform, being randomly tested against drug and alcohol consumption in the workplace, filling out daily registers of entry, or following company rules on safety (see fig. 2). However, *creuseurs* affiliated with cooperatives do not benefit from income security or social protection that wage labour would guarantee against prolonged illness, loss of job, or commodity price variations[12].

Labour outsourcing, flexibilisation, and casualisation have been increasingly documented across different sectors. Much of this literature revolves around the notion of "precarious employment" to address the erosion of social protection and labour rights in post-Fordist economies. The limited analytical purchase of precarity in understanding labour relations in the Global South is in part justified for "work [in the Global South] has always already been precarious" (Munck 2013: 752). Nevertheless, this tendency has repositioned the centrality of wageless labour and paved the way to probe further the very paradigm of what is a "proper job" (Ferguson & Li 2018), including in

11. In addition to the partnerships analysed here, in one case (Eurasian Resource Group) we were not granted permission to discuss or visit the mines, and another project—supported by major brands of the automotive industry—was still in its early development stages.
12. For a critical discussion of miner's (in)security, see Calvão *et al.* (2021).

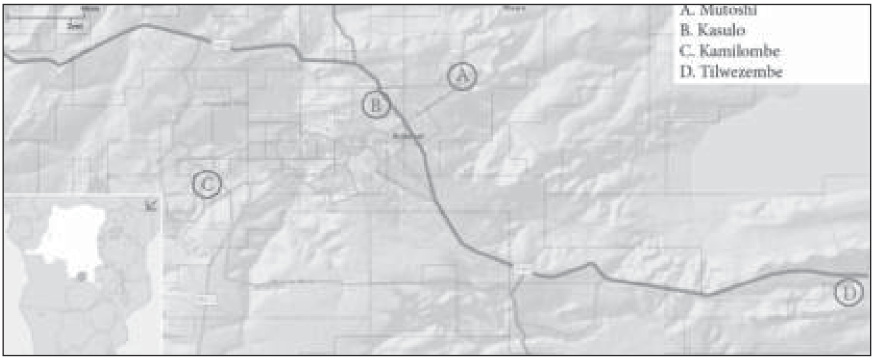
locations perceived to be at the margins of the global economy (Millar 2014). This is precisely the paradox of responsible sourcing partnerships: the inclusion of wageless workers contractually reinforces their unique status as freely dependent and precariously independent (Ferguson 2015) while allowing companies to capture the surplus value of artisanal labour without taking on the costs of its reproduction.

FIG. 2. — MUTOSHI "MODEL MINE"

Source: Mutoshi Pilot Project, © Trafigura, 2019, <https://www.trafigura.com/brochure/the-mutoshi-pilot-project/>.

In what follows, we address the conditions, institutions, and practices enabling the articulation of artisanal labour within corporate-industrial structures. Namely, we focus on cooperatives as labour platforms, the intermediary

FIG. 3 — MAP OF KOLWEZI AREA WITH MINING CADASTRE LANDMARKS



For concessions' ownership, see <http://drclicences.cami.cd/EN/>.
Source: Matthieu Bolay, adapted from DRC Mining Cadastre Portal.

TABL. 1. — OVERVIEW OF COMPANY-COOPERATIVES PARTNERSHIPS

Site	Tilwezembe	Mutoshi	Kasulo	Kamilombe
Concession	KCC	Chemaf	ZEA	Gécamines/ KCC
Company	CMD	Chemaf/ Trafigura	CDM	CDM/Ismael
Cooperative	CMKK	COMIAKOL	COMIKU	CMDS
Year of creation	2009	2018	2018	2018
Traceability and due diligence	No	Yes	Yes	Yes
		PACT	RCS	RCS
Buying scheme	Centralised (direct purchase)	Centralised (direct purchase)	Controlled market (accredited *dépôts*)	Controlled market (accredited *dépôts*)
Type of permit	PE	PE	ZEA	PE
Working cooperative members (max.)	No estimates	5,000 (March 2018)	14,000 (Sept. 2018)	4,000 (Sept. 2018)

role of corporations in accessing markets, and the discursive and ethical regimes deployed to make such schemes licit and legitimate. In addition to the three partnerships alluded to earlier, Tilwezembe, Kasulo, and Kamilombe, we also examine the arrangement between Chemaf and Trafigura in Mutoshi in place by late 2019 (see fig. 3). These mining sites (see tabl. 1) vary in terms of the type of permit (determining the length of operation), cobalt acquisition strategies (varying from a closed market of accredited *dépôts* within the concession to a centralised buying house), the implementation of due diligence protocols (including sanitary and safety regulations), and the scope of traceability technologies.

Cooperatives as Labour Platforms

In 1999, Exploitants miniers artisanaux du Katanga (EMAK) was created as a trade union, and was officially recognized as a cooperative in 2005. It was the first cooperative of its kind—and for several years the only one—conceived as an independent structure from the government and yet mainly controlled by it. During this period of industrial decay coupled with the expansion of the informal artisanal sector, Nouvelle Compagnie (NOUCO) was also established in 2000 by the government of Katanga as an extension of Gécamines to work with EMAK in order to streamline access to ASM material. Though recalling the recent EGC initiative to control the product of artisanal extraction was set up, NOUCO was dissolved three years later after accumulating 1 million USD in debt to EMAK.

If the idea of a single intermediary platform was abandoned with NOUCO, the role of cooperatives was maintained and even reinforced. Indeed, since the adoption of the 2002 mining code, the intermediation of cooperatives has become a prerequisite to access artisanal mining sites legally. Unsurprisingly, this led to a boom in the number of cooperatives in all regions concerned by ASM, be it for gold, copper, cobalt, or the so-called 3Ts (tin, tungsten, and tantalum), whose role may reduce as much as reinforce relations of exploitation (de Haan & Geenen 2016). In the Lualaba province, the first ZEAs were delimited in 2014, and there are currently 37 registered cooperatives with only 14 effectively running operations[13] for a total of 80 artisanal copper and cobalt mining sites.

13. Ministère des mines. République Démocratique du Congo, *Registre des opérateurs du secteurs des mines et carrières 2017,* Kinshasa, 2018, <https://mines-rdc.cd/fr/wp-content/uploads/simple-file-list/operateurs/2017_REPERTOIRE-DES-OPERATEURS-MINIERS.pdf>.

Cooperatives' main task consists of enrolling the miners, registering their presence and reporting work incidents to traceability providers contracted in responsible sourcing schemes. At first sight, most cooperatives may resemble empty shells created for the sole purpose of performing a legal requirement, rather than being motivated by the inclusion of *creuseurs* in decision-making processes or the defence of their interests. To illustrate this point, only five out of 81 respondents had been members of a cooperative before being coopted in a corporate-led formalised scheme. Out of the four corporate partnerships examined here, three were created in 2018 when companies developed their responsible sourcing programs. Only one cooperative (CMKK in CDM's concession) predated the corporate concession, although its initial managers had been allegedly dismissed and replaced soon after the creation of the partnership. In theory, cooperatives are responsible for the supervision, healthcare provision, and training of their members (art. 110-115 of the Mining Code). In practice, however, their role in the partnerships under study is mainly limited to maintaining records of membership and, in a second moment, to act as labour brokers towards the companies that sponsor them.[14] Cooperative managers are in charge of communicating companies' rules and requirements to the workers, such as informing which areas within the concession are accessible or not. Conversely, they are supposed to represent the artisanal workforce by making their demands heard, such as ensuring that *découverture* is conducted as planned. One cooperative manager summarized to us, "our mandate is to supervise the *creuseurs*. If the *creuseurs* are unsatisfied,[15] they can easily turn against the company and burn their stuff and infrastructure." Additional operational tasks are outsourced to other entities, such as accredited *dépôts* in charge of buying miners' production on behalf of the company, NGOs responsible for conducting due diligence at the mining sites, or the provincial Assistance and Support Service for Small Scale Mining leading the safety assessment of shafts and tunnels dug by the *creuseurs.* This fragmentation of governance roles to outsourced entities consequently leaves cooperatives with little room to legitimise their roles towards the miners.

During our research, most miners were adamant in expressing to us antagonistic feelings towards cooperatives. The most common trope in our discussions and survey data was that "cooperatives don't do anything but get money from the companies." The overall perception was that *creuseurs*

14. Although some cooperatives finance themselves by taxing a share of the revenues generated by artisanal miners (usually between 10-20 %) (BGR 2019), within corporate partnerships, salaries are paid to the management team directly by the corporate partner.
15. For instance with *découverture* or the use of scales and gradation devices used by accredited buyers.

performed the work while companies paid salaries to the heads of cooperatives but not to its "independent" members. Cooperatives take on the role of extracting rent and validating the authority of the partner companies, and become a political instrument for those with the right political connections or the financial prowess to establish a cooperative. For example, the cooperative with whom CDM signed the partnership for the exploitation of Kasulo, COMIKU, is led by the son of the governor's province, who assumed the mandate to formalise the mine (IBGDH 2019: 6). For their part, *creuseurs* working in the informal sector stated that they did not want to join a cooperative for three main reasons: "there was no advantage" (provided they could access mining sites in informality), the "lack of trust" in cooperatives, and the "harmful" role of cooperatives (restricting sales in the open market and miners' ability to secure loans or other support from buyers).

It may be worthwhile asking, then, what brings miners to register with cooperatives as part of these responsible mining partnerships? Rather than seeking the benefits highlighted in companies' responsibility reports (e.g., work safety or expert guidance), these miners—whose presence systematically predates the concession—were left with few other options but to pursue their work under a formalized regime after being originally expelled, as described earlier in this article. In turn, the partnerships with the newly created cooperatives ensured that companies had the monopoly or control over the sale of cobalt against granting miners access to work.

In its broadest definition, as understood by Guyer (2016: 8), cooperatives act as "platforms" in "articulating different modes of production." As in the cases examined here, cooperatives would link up an artisanal and labour-intensive mode of production with capital-intensive, large-scale industrial mining. In its contemporary usage, cooperatives also recall digitally-mediated labour platforms that "organize workers and asset holders [and] engage earners as independent contractors, without the protections of employment" (Shor & Atwood-Charles 2017: 1). This definition of a labour platform also applies to the working condition of "freely" members of artisanal mining cooperatives, namely the "flexibility for workers to choose hours" and "worker provided tools and assets necessary to do the job" (*ibid.:* 3). Like other companies in the platform economy where dependent contracting prevails, these workers are responsible for their equipment while depending on the brokerage of these companies to access the sites of labour and production (Calvão & Thara 2019). This approach denotes the ambiguous status of what the International Labour Organization (ILO 2018: 1) calls "dependent contractors" to classify independent workers (i.e., "not integrated into the firm" as employees) that remain entirely dependent on the firm's decisions and policies, even if mediated by cooperatives as staffing and labour agencies. The following two sections extend this form of dependency to the corporate control over the sale of the extracted product and the compliance with international standards that ultimately govern this modality of production.

Corporate Control over Local Markets

Cobalt mining is a dynamic sector, with new actors and institutional arrangements being currently developed, namely through the announced creation of new partnerships between EGC and mining companies. Despite these changes and the State's attempt to recover a modicum of control over the mining and sourcing process, the principle of corporate control over cooperatives and purchasing companies will likely remain intact, with an added intermediary played by EGC. What follows is the structure in place for the extant production and acquisition schemes in Kolwezi.

Miners who work informally sell the product of their labour directly to small and medium buyers, called *négociants* or traders. The sale occurs at the mines or, more frequently, in buying warehouses located at the periphery of Kolwezi in Musompo, where dozens of *dépôts* line up on both sides of the main road. With few exceptions, Chinese traders own the *dépôts* and employ Congolese workers for security, transportation, and direct purchase.

Warehouse fronts exhibit handwritten charts with prices for cobalt and copper according to grade quality, often with increasing prices or "bonuses" for larger quantities. Most established warehouses start promotions at 1,000 kg, with rewards including plasma TVs and refrigerators. Many rely on "marketeers" to travel directly to the artisanal sites to announce deals and acquire production on-site. Despite claiming to compare prices and bonuses, as well as the weight and grade estimations of their product at different *dépôts* to avoid being cheated by buyers, the possibility of obtaining monetary advances and loans to allow for continued production was of the utmost importance for most *creuseurs* we interviewed. Given miners' precarious situations, such agreements reinforced moral economies of support towards *négociants* and buying houses, which provide monetary relief in exchange for their customers' loyalty in future deals.

In contrast, miners working for companies on behalf of cooperatives sell their production at a price dictated by the corporate partner, either directly to the firm, as in Mutoshi or Tilwezembe, or to one of the company-accredited *dépôts* located inside the concession, as in the case of Kamilombe or Kasulo. For the companies, these arrangements undergird the pragmatics of segregating sources—to the exclusion of "contaminated" ore unsupervised by the companies or from outside the concession—and ensure product traceability in their supply chains, compliant with OECD guidelines. Our comparative overview of pricing tables between the concession partnerships and the open market at Musompo revealed that the price obtained through sale directly to the firm was usually lower. A cooperative manager justified this price differential based on "not hav[ing] to pay transportation to Musompo or informal taxes [bribes to the *police des mines* or other entities controlling roads and access to mines]." On the other hand, this meant that trading had to occur outside the open market and without the ability of consignment until reaching large enough quantities necessary to obtain "bonuses" or cash advances.

In addition, by granting accredited buying houses the monopoly over trading, mining companies establish direct economic control over them, and by extension, over miners themselves. This hinders miners' ability to negotiate prices by restricting sales to accredited buying houses. Abundant evidence of systematic deception in the use of weight scales and Metorex—an electronic device used to estimate the grade of the ore—and growing resentment against Chinese-owned firms perceived to be monopolising the position of subsidiary operators led to frequent conflicts between miners and buying houses. Maintaining the intermediary role of *dépôts* within the perimeter of mining concessions creates a protective buffer for the companies, who avoid being held accountable for market quarrels while exerting control over buying and selling.

This was not a significant issue at a time of high cobalt prices when most responsible sourcing partnerships were established. Nevertheless, the economic grip maintained by mining corporations over markets becomes more visible in periods of decline. At Mutoshi, for instance, the price of cobalt had been agreed upon with miners to offer a modicum of income stability. However, when prices started to fall in 2019, the agreement was unilaterally revoked by Chemaf, effectively passing on the risk of price fluctuations down to the miners. On the flip side, the number of daily workers at Mutoshi decreased from 5,000 in March 2018 to 1,800 in April 2019, and down to 1,000 in September 2019. In Kasulo, CDM pledged to invest in local health and educational infrastructures at an estimated cost of 225,000 USD. This protocol was also revoked with the drop in global market prices. Here again, the number of dependent miners decreased from 14,000 in September 2018 to 800 workers in September 2019. Bearing the brunt of these price fluctuations as "independent workers," registered *creuseurs* stopped presenting themselves at the corporate mining concessions, opting to mine for copper—whose price had remained stable—in informal mining sites. The companies, for their part, avoided oversupply and did not have to retrench any workers nor pay compensation for job loss had these workers been formally contracted as employees, implicitly assuming that (in)dependent cooperative miners would provide for their subsistence and return once prices rose again.

Discursive and Ethical Regimes: Responsibility and Traceability

In a review of the anthropology of extraction, Gilberthorpe and Rajak (2017) call our attention to the effects of ethical regimes and disciplinary technologies associated with the growing apparatus of CSR corporate-community partnerships. Insidiously, if unchecked, these processes would contain the "productive power to re-inscribe relations of authority and dependence between both extractive companies and national governments, as well as development donors, and the localities in which they operate" (*ibid.:* 200). Importantly, the "responsible" partnerships examined in this article also build upon a discursive trope endowed with the power to shape practices and normative values, defining what is legal or not, inasmuch as it reshapes labour regimes and generates new forms of dependency. Since the properties of ethicality or responsibility are not intrinsic to the commodity proper, as Mutersbaugh and Lyon (2010) recall, companies require certifications to render these qualities visible and legible to consumers and business partners. Except for Tilwezembe, these partnerships were set up as part of companies' CSR engagement alongside OECD's guidance, which offers a replicable framework for making due diligence legible in certification schemes.

According to interviews with agents in charge of implementing due diligence in these "responsible" mines in Kolwezi, the "management of risks" consists of preventing access to children and pregnant women, averting conflicts between miners, and ensuring safe working conditions. Conversely, these due diligence mechanisms are mute on the problem of financial and income insecurity or the lack of social protection predicted in the Congolese Labour Code for formal employment (Law 16/010 2016, art. 8, 10, 62). Techniques for implementing due diligence vary greatly from basic delimitation of areas for artisanal mining in Tilwezembe, monthly reports of accidents by the accredited NGO at Mutoshi, or the more systematic and synchronous record of incidents onto an online platform planned to be used for blockchain-based certification at Kamilombe and Kasulo. In all cases, it is up to the respective company to decide whether and how to "manage," report and mitigate these incidents.

Despite these discrepancies, these partnerships share the traceability mechanisms to physically segregate minerals produced within "responsible" mines from those extracted outside the scope of formality. Trucks are loaded and sealed at mining sites with a digital tag indicating their provenance before being sent to smelters and refineries in Lubumbashi for processing. As we were shown by one agent in charge of the due diligence process, the continuous work of collecting data (e.g., incidents and their possible mitigation, socio-demographic data on miners, total production over time) is used to "daily monitor the mine" and reduce the "burden of the audit."[16] It also comes at a high cost for companies: while investments in mining infrastructure are limited to the strictly necessary—fencing the concession perimeter or conducting the *découverture*—companies saved no expenses in traceability and compliance instruments to render artisanal sourcing legitimate and licit.

Beyond the reputational benefits of CSR programs, competing due diligence and traceability providers have become unavoidable interlocutors in this emergent frontier of "responsible mining." More generally, responsibility, due diligence, or traceability are concepts imbued with the power to shape the agency of these actors and have become privileged instruments to enhance corporate power under the veil of benevolence (Rajak 2011). At the same time, there is a strong case for the economic rationale of these programs, often overlooked in studies of CSR and corporate-community partnerships. In the area of Kolwezi, they enable formerly expelled labour to be reincorporated under a work regime akin to dependent contracting for as long as it remains profitable given mineral prices fluctuation and compliance costs. To be sure, although comparative estimates on the cost of production between artisanal and industrial extraction are difficult to obtain, all companies' representatives we met agreed that economic viability was the *sine qua non* condition to source from the artisanal sector.

❖

Expanding Dependent Contracting in Africa's Extractive Frontiers?

As we have shown, the adverse inclusion of artisanal miners into licit circuits of production and exchange relies on the combination of three interrelated processes: the formalization of artisanal miners under the legal framework of cooperatives as intermediary labour platforms; corporate control on local

16. Head of compliance, interview conducted in Kolwezi, 27th September 2019.

markets through centralised buying schemes or the establishment of a market simulacrum under corporate monopoly; and the discursive and technological investment in responsibility and due diligence traceability to legitimise artisanal production by complying with voluntary industry standards.

This emergent condition of wageless, dependent contract labour is not unique to the DRC or cobalt and copper mining but partakes in a broader trend that may signal seismic changes across other mining frontiers in Sub-Saharan Africa. In Sierra Leone, for example, diamond industry leader De Beers launched the programme Gemfair in April 2018 with the aim of "supporting formalization efforts" and providing "ASM miners access to formal markets to sell [their] production" (Gemfair 2019: 1), fostering the "inclusion" of miners as a way to secure licit exports and avoid protracted conflicts with local communities. Indeed, the programme relies on a formal entity—the license holder and the mine manager instead of a cooperative—to monitor labour practices at the mines; a centralized buying office that isolates production from the open market; and traceability mechanisms to distinguish Gemfair diamonds from other producers. Deploying the trope of responsible sourcing, Gemfair enhances its control over autonomous artisanal mines, thereby seizing an important share of the country's production directly from self-sustained "independent" partner miners. Although the biggest challenge remains Gemfair's ability to "incentivize the miners to join," as we were told by the head of the program in early 2019[17], these workers will likely remain unprotected against price fluctuations, work accidents, or job loss, and increasingly dependent on Gemfair's grasp over Sierra Leone's diamond market.

We do not mean to suggest that cobalt mines in the DRC provide an image of the future of wageless labour in responsible mines across Africa or that decent work conditions can only be achieved in a wage system. Recent developments at the time of writing remind us that these issues are never settled. As seen earlier, the November 2019 national decree establishing the new national company Entreprise générale du cobalt (EGC) is meant to take over all buying houses through a State monopoly on the purchases of cobalt from artisanal mines and by putting in place a price floor to protect artisanal miners from price fluctuations. One year later, it was announced that EGC had signed a five-year marketing deal with Trafigura, which would prefinance the purchase of 45,000 tons of cobalt against a five-year option over 50 % of the production. It is too early to speculate to what extent this new trade regime will affect miners' livelihoods. However, some observers point to questions that reverberate with our analysis (Umpula *et al.* 2021: 12) and draw the comparison between EGC and the unsuccessful experiment of the previous

17. Interview conducted in London, 11th March 2020.

acquisition partnership with EMAK (Deberdt 2021: 5). Will prices be stabilized or decrease in comparison to the free market? To what extent will this new formalisation effort exacerbate the exclusion of those who cannot meet formality requirements? More broadly, this newly established monopoly echoes our analysis whereby the DRC's success in enrolling miners via cooperatives builds upon a historically specific backdrop of expulsions meant to restrict their ability to work.

This article sought to problematise the so-called incentives undergirding responsible or sustainable mining to illuminate the new forms of corporate dependency and control over artisanal labour and markets. Unlike the crudest forms of adverse integration of unfree labour exploitation, often presumed to occur within small-scale or non-market economies (Phillips 2013: 181), it is precisely the ambiguous role of these companies—asserting the combat of exploitative working conditions while imposing the "freedom" of flexible, wageless labour—that warrants further scrutiny. Contrary to a longer tradition of day labourers, these schemes capitalize on the trope of responsibility to enforce a long-term engagement with artisanal workforces, deemed integral for corporations but easily disposable at the whim of price fluctuations. From this perspective, the arrangements established between cooperatives and mining companies are telling of the limits of formalisation efforts, especially when work is not associated with salaries or social protection. The seemingly ever-growing reliance on artisanal wageless labourers across African extractive operations should invite us to critically reflect on the possibilities of reimagining work and livelihoods beyond the fraught promises of waged labour, ethical discourses, or a future of worker-less, automated mines espoused by the very same industry actors implicated in responsible sourcing programs.

Institute of Social Anthropology, University of Bern, Switzerland ;
The Graduate Institute of International and Development Studies, Geneva, Switzerland.

BIBLIOGRAPHY

Amnesty International, 2016, *"This Is What We Die for." Human Rights Abuses in the Democratic Republic of the Congo Power the Global Trade in Cobalt*, London, <https://www.amnesty.org/fr/wp-content/uploads/2021/05/AFR6231832016ENGLISH.pdf>.

Banza Lubaba Nkulu C., Casas L., Haufroid V. *et al.,* 2018, "Sustainability of Artisanal Mining of Cobalt in DR Congo," *Nature Sustainability* 1 (9): 495-504.

bgr, 2019*, Cartographie de l'exploitation minière artisanale du cuivre et du cobalt dans les provinces du Haut-Katanga et du Lualaba en République démocratique du Congo* (Hannover: BGR).

Bolay M., 2016, "Artisanal Gold Miners Encountering Large-Scale Mining in Guinea: Expulsion, Tolerance and Interference," in T. Niederberger *et al.* (eds.), *The Open Cut: Mining, Transnational Corporations and Local Populations* (Zurich: LIT Verlag): 187-204.

van den Brink S., Kleijn R., Sprecher B. & Tukker A., 2020, "Identifying Supply Risks by Mapping the Cobalt Supply Chain," *Resources, Conservation and Recycling* 156, <https://doi.org/10.1016/j.resconrec.2020.104743>.

Calvão F. & Thara K., 2019, "Working Futures: The ILO, Automation and Digital Work in India," *International Development Policy* 11: 223-247.

Calvão F. & Archer M., 2021, "Digital Extraction: Blockchain Traceability in Mineral Supply Chains," *Political Geography* 87, <https://doi.org/10.1016/j.polgeo.2021.102381>.

Calvão F., McDonald C. E. A. & Bolay M., 2021, "Cobalt Mining and the Corporate Outsourcing of Responsibility in the Democratic Republic of Congo," *The Extractive Industries and Society* 8 (4), <100884. https://doi.org/10.1016/j.exis.2021.02.004>.

D'Angelo L., 2018, "From Traces to Carpets: Unravelling Labour Practices in the Mines of Sierra Leone," in C. De Vito & A. Gerritsen (eds.), *Micro-Spatial Histories of Global Labour* (London: Palgrave Macmillan): 313-342.

Deberdt R., 2021, "The Democratic Republic of the Congo (DRC)'s Response to Artisanal Cobalt Mining: The Entreprise Générale du Cobalt (EGC)," *The Extractive Industries and Society* 8 (4), <https://doi.org/10.1016/j.exis.2021.101013>.

Denning M., 2010, "Wageless Life," *New Left Review* 66: 79-97.

Di Balme L. A. & Lanzano C., 2013, "'Entrepreneurs de la frontière': le rôle des comptoirs privés dans les sites d'extraction artisanale de l'or au Burkina Faso," *Politique africaine* 3: 27-49.

Ferguson J., 2015, *Give a Man a Fish: Reflections on the New Politics of Distribution* (Durham: Duke University Press).

Ferguson J. & Li T. M., 2018, "Beyond the 'Proper Job': Political-Economic Analysis after the Century of Labouring Man," *Institute for Poverty, Land and Agrarian Studies (PLAAS) Working Papers* 51 (Cape Town: PLAAS), <https://media.africaportal.org/documents/WP_51_Beyond_the_proper_job_12_Apr_2tl2_FINAL.pdf>.

Franks D. M., Davis R., Bebbington, A. J., Ali S. H., Kemp D. & Scurrah M., 2014, "Conflict Translates Environmental and Social Risk into Business Costs," *Proceedings of the National Academy of Sciences* 111 (21): 7576-7581.

Frederiksen T. & Himley M., 2020, "Tactics of Dispossession: Access, Power, and Subjectivity at the Extractive Frontier," *Transactions of the Institute of British Geographers* 45 (1): 50-64.

Geenen K., 2020, "Gnawing Away at the City: Narratives of Domestic Precarity in a Congolese Mining Town," *African Studies Review* 64 (2): 412-433.

Gemfair, 2019, *The Gemfair Way. Annual Report 2018-2019,* <https://gemfair.com/static/files/The_GemFair_Way_2019.pdf>.

Gilberthorpe E. & Rajak D., 2017, "The Anthropology of Extraction: Critical Perspectives on the Resource Curse," *The Journal of Development Studies* 53 (2): 186-204.

Guyer J. I., 2016, *Legacies, Logics, Logistics: Essays in the Anthropology of the Platform Economy* (Chicago: The University of Chicago Press).

de Haan J. & Geenen S., 2016, "Mining Cooperatives in Eastern DRC. The Interplay Between Historical Power Relations and Formal Institutions," *The Extractive Industries and Society* 3 (3): 823-831, <https://doi.org/10.1016/j.exis.2016.05.003>.

Hilson G., Sauerwein T. & Owen J., 2020, "Large and Artisanal Scale Mine Development: The Case for Autonomous Co-Existence," *World Development* 130, <https://doi.org/10.1016/j.worlddev.2020.104919>.

ibgdh, 2019, *Rapport d'enquête sur la contribution de l'entreprise Congo Dongfang International Mining au développement local de Kasulo* (Kolwezi: IBGDH), <https://congomines.org/reports/1781-rapport-d-enquete-sur-la-contribution-de-l-entreprise-cdm-au-developpement-local-de-kasulo>.

ilo, 2018, "Statistical Definition and Measurement of Dependent 'Self-Employed' Workers. Rationale for the Proposal for a Statistical Category of Dependent Contractors," Proceedings of the 20th International Conference of Labour Statisticians Geneva, 10-19 October 2018.

Katz-Lavigne S., 2020, "Distributional Impact of Corporate Extraction and (Un)Authorised Clandestine Mining at and around Large-Scale Copper- and Cobalt-Mining Sites in DR Congo," *Resources Policy* 65, <https://doi.org/10.1016/j.resourpol.2020.101584 >.

Köllner C., 2018, "The Dark Side of Our Raw-Materials Supply Chain," *ATZelektronics worldwide* 13 (2): 8-13, <https://www.springerprofessional.de/en/the-dark-side-of-our-raw-materials-supply-chain/15598642>.

Li T. M., 2010, "To Make Live or Let Die? Rural Dispossession and the Protection of Surplus Populations," *Antipode* 41 (1): 66-93.

Luning S., 2014, "The Future of Artisanal Miners from a Large-Scale Perspective: From Valued Pathfinders to Disposable Illegals?," *Futures* 62: 67-74.

Mazalto M., 2008, "La réforme du secteur minier en République démocratique du Congo: enjeux de gouvernance et perspectives de reconstruction," *Afrique contemporaine* 227: 53-80.

Mbembe J. A., 2003, "Necropolitics," *Public Culture* 15 (1): 11-40.

Mezzadra S. & Neilson B., 2019, *The Politics of Operations: Excavating Contemporary Capitalism* (Durham: Duke University Press).

Millar K. M., 2014, "The Precarious Present: Wageless Labor and Disrupted Life in Rio de Janeiro, Brazil," *Cultural Anthropology* 29 (1): 32-53.

Morisho N. & Lenfant F., 2021, *Socio-Economic Baseline Study of Kasulo, Kolwezi, Democratic Republic of the Congo,* Commissioned by EGC Technical Committee, <https://www.securityhumanrightshub.org/sites/default/files/2021-10/Baseline+Study+Cobalt+ASM+Mining+-+7.28.2021.pdf>.

Munck R., 2013, "The Precariat: A View from the South," *Third World Quarterly* 34 (5): 747-762.

Mutersbaugh T. & Lyon S., 2010, "Transparency & Social Action in Certified & Ethical Commodity Networks," *Geoforum* 41 (1): 27-129.

Nguza E. I. & Muland-Katal J. M., 2016, "L'exploitation minière et la protection de la main-d'œuvre locale à Kolwezi," *KAS African Law Study Library* 2 (3): 737-758.

oecd, 2016, *OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas: Third Edition* (Paris: OECD), <https://www.oecd.org/daf/inv/mne/OECD-Due-Diligence-Guidance-Minerals-Edition3.pdf>.

oecd, 2019, *Interconnected Supply Chains: A Comprehensive Look at Due Diligence Challenges and Opportunities Sourcing Cobalt and Copper from the DRC* (Paris: OECD), <https://mneguidelines.oecd.org/Interconnected-supply-chains-a-comprehensive-look-at-due-diligence-challenges-and-opportunities-sourcing-cobalt-and-copper-from-the-DRC.pdf>.

Perrings C., 1979, *Black Mineworkers in Central Africa: Industrial Strategies and the Evolution of an African Proletariat in the Copperbelt, 1911-41* (London: Heinemann Publishers).

Phillips N., 2013, “Unfree Labour and Adverse Incorporation in the Global Economy: Comparative Perspectives on Brazil and India,” *Economy and Society* 42 (2): 171-196.

Pijpers R. J. & Eriksen T. H. (eds.), 2019, *Mining Encounters: Extractive Industries in an Overheated World* (London: Pluto Press).

Rajak D., 2011, *In Good Company: An Anatomy of Corporate Social Responsibility* (Stanford: Stanford University Press).

Rubbers B., 2004, “La dislocation du secteur minier au Katanga (RDC),” *Politique africaine* 93 (1): 21-41.

Rubbers B., 2013, *Le paternalisme en question. Les anciens ouvriers de la Gécamines face à la libéralisation du secteur minier katangais (RD Congo)* (Paris: L’Harmattan).

Rubbers B., 2019, “Mining Boom, Labour Market Segmentation and Social Inequality in the Congolese Copperbelt,” *Development and Change* 51 (6): 1555-1578, <DOI: 10.1111/dech.12531>.

Rubbers B., 2020, “Governing New Mining Projects in DR Congo. A View from the HR Department of a Chinese Company,” *The Extractive Industries and Society* 7 (1): 191-198.

Sassen S., 2014, *Expulsions: Brutality and Complexity in the Global Economy* (Cambridge, Mass.: Harvard University Press).

Sovacool B. K., 2019, “The Precarious Political Economy of Cobalt: Balancing Prosperity, Poverty, and Brutality in Artisanal and Industrial Mining in the Democratic Republic of the Congo,” *The Extractive Industries and Society* 6 (3): 915-939, <https://doi.org/10.1016/j.exis.2019.05.018>.

Srnicek, N., 2017, *Platform Capitalism* (Cambridge: Polity).

Umpula E., Buxton A. & Schwartz B., 2021, *Islands of Responsibility? Corporate Sourcing of Artisanal Cobalt in the Democratic Republic of Congo* (London: IIED).

unpri (UN Principles for Responsible Investment), 2018, *Human Rights Risks in the Cobalt Supply Chain*, 18 April 2018, <https://www.unpri.org/social-issues/how-investors-can-promote-responsible-cobalt-sourcing-practices/2975.article>.

Vadot G., 2014, “Un travail de pros. Réforme de la Sodecoton et redéploiement des formes de mobilisation du travail paysan en zone cotonnière dans l’Extrême-Nord au Cameroun,” *Politique africaine* 133: 45-67.

World Bank, 2009, *Mining Together: Large-Scale Mining Meets Artisanal Mining: A Guide for Action* (Washington, DC: World Bank), <https://openknowledge.worldbank.org/handle/10986/12458>.

Abstract

This article examines the growing corporate reliance on artisanal labour in the cobalt mines of the Democratic Republic of Congo. This shift from autonomous miners to corporate contractors, we suggest, holds historical significance and augurs a radical break with contemporary modes of extractive production. Under the banner of "responsible mining," this form of dependent contracting fosters wageless relations in exchange for legal access to mining sites and corporate monopoly over artisanal production. By analysing the roots and mechanisms underlying these cooperative-corporate partnerships, we describe this emergent relation between labour and capital around three key features: the role of cooperatives as labour platforms, corporate control over local markets, and the deployment of discursive and technological regimes of responsibility and traceability.

Keywords: Democratic Republic of Congo, artisanal mining, cobalt, cooperatives, labour platforms, responsible mining, wageless work.

Résumé

Travail, sociétés à responsabilité limitée : Entrepreneuriat dépendant et salariat déguisé dans les mines « responsables » en Afrique. — Cet article examine le recours croissant à la main-d'œuvre artisanale par les sociétés minières dans les mines de cobalt en République démocratique du Congo. Il suggère que le passage du statut de mineurs autonomes à celui de travailleurs indépendants présage d'une rupture radicale dans les modes de production extractifs contemporains. Sous la bannière de « l'exploitation minière responsable », cette forme de contractualisation dépendante favorise des relations de travail sans salaire (salariat déguisé) par un accès légal aux sites miniers en contrepartie du monopole des entreprises sur la production artisanale. En décrivant les racines et les mécanismes qui sous-tendent ces partenariats entre coopératives et sociétés minières, nous analysons la reconfiguration des relations entre travail et capital autour de trois caractéristiques clés : le rôle des coopératives en tant que plateformes de travail ; le contrôle des entreprises extractives sur les marchés locaux et le déploiement des régimes discursifs et technologiques de responsabilité et de traçabilité.

Mots-clés : République démocratique du Congo, cobalt, coopératives, exploitation minière responsable, mines artisanales, plateformes de travail, salariat déguisé.