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Framing Spaces as (Il)legitimate: “Dirty” Cobalt and the (Mis)uses of Artisanal and Small-scale Mining sites in southeastern Democratic Republic of Congo

I. Introduction

The Democratic Republic of Congo (DRC) is the country in which an estimated 73% of world production of cobalt was extracted in 2022 (Cobalt Institute 2023). Cobalt is used for lithium-ion batteries for electric vehicles (EVs) and mobile phones, “the largest single end-use of cobalt worldwide” (Scheele et al. 2016, 39). The majority of the DRC’s production originates from large-scale mining (LSM) corporations, following the transfer, beginning in the 2000s, of the vast holdings of state-owned copper-and-cobalt mining enterprise Gécamines to foreign investors (Iguma Wakenge 2018). This privatisation process in the former Katanga province led to many public-private partnerships, including 38 involving Gécamines (idem, p. 1). Joint venture contracts signed by Gécamines include, in 2004, the Ruashi mine (with South African firm Metorex) and, in 2005, Tenke Fungurume mine (with American company Phelps Dodge and Canada’s Tenke Mining) (Global Witness 2006, 37). These large-scale mining projects in the DRC have had a major impact on communities in these regions, including through massive displacement of artisanal miners, and more recently attempts to (re)-incorporate miners, on a selective basis, in “responsible cobalt” projects. .

A key contribution of this article is to examine how corporate actors act as (global) knowledge producers in dynamic frontier spaces. Much has been said on the expanding economic and spatial frontiers associated with capitalism, including in mineral-rich areas of Africa. The notion of frontier is a useful metaphor for conceptualizing how large-scale copper-and cobalt-mining companies and other corporate actors have sought to redefine artisanal and small-scale mining (ASM) spaces in cobalt-rich areas of the DRC to set themselves apart from ASM cobalt, and legitimize both their operations on the ground and their increasing efforts to transform small-scale informality into something that more closely resembles large-scale mining. In doing so, LSM and other companies helped forestall a potential boycott of Congolese cobalt, maintained their access to markets and/or artisanally-mined cobalt, and justified their involvement in governing the ASM of cobalt.

15 to 30% of the DRC’s cobalt is extracted through ASM (Panella and De Putter 2022), in which individuals or groups often use basic equipment. Artisanal mining describes activities that are labour intensive and not mechanized, though small-scale mining operations tend to involve techniques of a more advanced nature (Weng & Margules, 2022). LSM, which uses industrial production and processing, is “typically associated with multi-national or multi-site companies, embedded in global capital and finance markets, and part of the international supply of mineral and metals commodities.” (Kemp and Owen 2019, 1092) According to the Cobalt Institute (2022, 90), ASM cobalt output in DRC rose to 14.5 kt in 2021, approximately 12% of the country’s total. It is difficult to ascertain ASM’s exact share, given the sector’s informal nature (Kamo 2020), and factors like international cobalt price and season (OECD 2019, 11). Yet ASM plays a key role in the country’s economy: it has been estimated that the number of artisanal miners in Kolwezi, the capital of Lualaba province, is as high as 150,000 (Jolly 2020). LSM and ASM, while frequently conceptually separated, are closely interconnected; yet corporate due diligence has focused on artisanally-mined cobalt.

In the last five years, the extraction of cobalt in the DRC has become a focus of global attention because of its social implications. These dynamics have strong echoes of the global advocacy on “conflict minerals” (tin, tantalum, tungsten, gold) in eastern DRC (U.S. Securities and Exchange Commission n.d.) more than a decade ago. In January 2016, Amnesty International and Congolese NGO African Resources Watch published *This is What We Die For* on the human rights violations and poor conditions in which artisanally-mined cobalt is extracted in the DRC. The report brought growing attention to the frequency of accidents; the lack of equipment to protect from the health impacts of cobalt exposure; and child labour (Amnesty International and Afreewatch 2016). In 2017 Amnesty evaluated 29 firms’ responses to the report (Amnesty International 2017). In December 2019, it was announced that a ground-breaking legal case had been brought against the world’s biggest technology companies – Apple, Alphabet, Dell, Microsoft, and Tesla – in the U.S., by 14 Congolese families (through NGO International Rights Advocates) whose “children were killed or maimed while mining for cobalt” (the lawsuit was ultimately dismissed) (Kelly 2019).

Due diligence as a form of value chain governance has gained traction globally, with the 2011 OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas “the cornerstone standard for responsible sourcing efforts” for metals and minerals. In turn, “[g]rowing numbers of mining industry initiatives or certification schemes are seeking to align their requirements with the OECD’s recommendations or have stated their intention to do so” (Kumi n.d.-c), while the EU and some of its members are developing mandatory human rights due diligence legislation (Working Group on Responsible Business Conduct 2020).

Drawing on literature on framing, I analyse the implications and negative effects, including for artisanal miners’ livelihoods, of how large-scale mining and commodity-trading companies leveraged NGOs and Western media reporting to frame the DRC’s artisanal cobalt sector as illegitimate and dirty. First, LSM and commodity-trading companies have capitalised on NGOs’ and media actors’ portrayals of ASM as disorganised and abuse-ridden; these firms have positioned their own activities as unproblematic by comparison, including to tech and vehicle purchasers. Secondly, the categorisation of southeastern DRC as a “high-risk” rather than “conflict-affected” area conceals the fact that like in eastern DRC, public and private security forces systematically informally “tax” artisanal miners at LSM and ASM sites. The framing also obscures interlinkages between ASM and LSM: LSM projects are part of broader neoliberal transformation that has put pressure on ASM and resulted in frequent LSM-ASM conflict. ASM itself, in its current informal, “problematic” form, has evolved in a context of massive LSM investment and mine-site appropriation. Finally, corporate actors’ framing of the ASM sector as problematic allows them to extend their influence over these spaces, increasingly engaging in efforts to manage and reshape them, as with recent, small-scale efforts to formalize cobalt ASM through pilot projects.

Methodologically, this article is based on 7.5 months of qualitative research in Haut-Katanga and Lualaba provinces in 2016-2017 on ASM-LSM conflict and “clandestine” mining (the small- or large-scale extraction of minerals from LSM sites without company authorisation, including by artisanal miners, often with the involvement of security forces and other official actors). I carried out over 200 interviews in Lubumbashi (the capital of Haut-Katanga) as well as at and around two smaller LSM sites in the Lubumbashi region, and one much larger LSM concession in Lualaba. I interviewed Congolese academics and civil society; government officials; mining-company officials; private security company representatives and staffers; Mine

Police; and more. My questions pertained to conflict and conflict management, and to the organisation and functioning of “clandestine” artisanal mining within LSM concessions. Ethical approval was granted by Carleton University’s Research Ethics Boards. I further visited Lubumbashi for several weeks in October 2022 and early 2023, and Kolwezi for several weeks in early 2023. This article also draws insights from desk-based research: Western news media coverage of the DRC’s cobalt sector from 2016 to 2020 (and, less systematically, from 2020 to 2023); a review of scholarly and NGO publications; and the websites and corporate reporting of the five biggest mining companies by production in southeastern DRC according to 2018 estimates: Mutanda (Glencore), Tenke Fungurume Mining (China Moly), Kamoto Copper, Katanga Mining (Glencore), Congo DongFang, Mikas (Huayou), and Chemaf (Shalina) (OECD 2019, 12). I used the Gale OneFile database to check the number and nature of DRC cobalt-related news articles in the years prior to and after the 2016 Amnesty and AFREWATCH report was published. Broad search terms – “Congo cobalt” and “ethical cobalt Congo” – helped capture all relevant available articles. While Gale OneFile is centered on Western, especially American, publications, its use is appropriate given the focus of the paper, though further (Chinese language) research on Chinese investor narratives is needed. The reliance on publicly available corporate material is a limitation of the research, which would benefit from examining company practices and documentation that are not publicly disclosed.

In what follows I develop the theoretical framework by reviewing literature relevant to the framing of ASM in LSM-heavy contexts. I discuss how LSM companies capitalised on the framing of ASM as plagued by human rights abuses, poor working conditions, and child labour to make their activities appear “clean” in comparison. In turn, public and private security forces’ illicit activities at LSM sites, including abuses of ASM miners’ human rights, are overlooked. Next, I point out the problematic erasure of the multiple linkages between LSM and ASM, including the frequently concealed impact of industrial mining’s vast economic footprint on artisanal miners’ livelihoods. Finally, I discuss LSM companies’ increasing involvement in governing ASM directly and indirectly, including by seeking to remake ASM in LSM’s image through formalization projects, and propose areas for further research.

II. Framing mining areas as problematic, ungoverned “frontier” areas

Rasmussen and Lund (2018, 388) describe “the discursive, political, and physical production of frontiers as ‘vacant’, ‘ungoverned’, ‘natural’, or ‘uninhabited’ spaces”. When new resources become available, “new acts of frontier making are brought to bear to undo established territorial orders.” (ibid, 388-389) The frontier is “a political fact, a matter of a political definition of geographical space.” (Kopytoff 1987, 11) Framing approaches in the scholarly literature help make sense of rapidly-shifting dynamics in resource frontier areas, where domestic and outside actors espouse different conceptual and ontological frameworks (Smith 2022). Frames have been defined as “schemas social actors draw on to interpret the world, define problems, and justify and motivate action.” (Kojola and McMillan Lequieu 2020, 3) and define “who or what aspects are in line with a frame, and are hence ‘in frame’, and which ones are excluded and thus ‘out of frame’.” (Joachim and Schneiker 2012, 375)

The frontier concept has been applied to natural resource extraction in post-colonial areas where there is significant competition for minerals (Verbrugge and Geenen 2019; Côte and Korf 2018; Vela Almeida 2020). Moore (2000, 411) points to the role played by commodities, namely their production and distribution, in restructuring geographical space in areas marginal to the

global economic system, in a manner that makes further expansion necessary – a commodity frontier. Commodity frontiers tend to have “an expansionary and environmentally transformative logic” (Moore 2000, 413). The “frontier” metaphor is often used to talk about African economic development: since 2008 many have proclaimed Africa to be capitalism’s last frontier (Ouma 2020). Yet “many postcolonial scholars critiqued the universalist assumptions of historical materialism which claimed that colonial capitalism would expand from Europe to the rest of the world and function uniformly worldwide” (Dhawan 2018), which highlights the nuances in how, when, and through what means these processes take place. Mining boom areas can be viewed “in a spatial, social and metaphorical sense” as frontiers. Industrial and artisanal mining frontiers in the region (Werthmann 2012) are dynamic and often overlap, expand, and contract. I argue that in such areas, framing strategies are a key part of corporate responses to high resource demand and scrutiny in the context of a maturing frontier, albeit one still undergoing contestation and reworking.

As demand for cobalt and other minerals has increased rapidly in a context of technological change and the so-called “green transition” (for similar dynamics in gold, see Verbrugge and Geenen 2019), different actors have begun to (re)define artisanal-mining areas as chaotic spaces (Kopytoff 1987, 56; Geenen 2012; Côte and Korf 2018) riddled with human rights abuses, though these areas are often highly organized and structured (Geenen 2012). I term this *accumulation by redefinition*. Framing practices to (re)define ASM zones allow corporate actors not only to portray themselves in a positive light, but also lend legitimacy to a growing number of formalization pilot projects and regulatory frameworks through which they seek to (re)shape existing social orders – particularly when competing modes of production like ASM are robust and cannot be easily eliminated (Rasmussen and Lund 2018, 389). ASM formalization aims to “facilitate the implementation of legislation that clearly regulates the property rights of working areas and to monitor access to the resources that are exploited” Kamundala Byemba (2020, p. 421). In addition, formalization seeks to increase the state’s ability to bolster the legal framework; manage mine sites’ production; and offer training and technical support to miners (ibid). Therefore, it is important to unpack the discursive practices through which frontiers are (re)made in areas of LSM investment.

Media reporting, communications, and social exchanges play a key role in the definition and diffusion of social actors’ frames. The wielding of certain frames holds power when it comes to influencing “policies, interventions, and beliefs” (j Siguru Wahutu 2017, 60-61). Social movements identify and link injustices, building broader frames of significance that reverberate with the population’s cultural inclinations, and conveying a consistent message to actors who hold power. These “collective action frames” reclassify social realities as unfair, with the goal of rallying others (Schneiker 2019).

Research on transnational NGOs (TNGOs) helps to situate these actors’ global framing activities. TNGOs are strategic actors who must inspire joint action and rally advocates, portraying problems as a tidy story or chain of causality that assigns blame, making it possible for the actors responsible to be “named and shamed.” To spark action of a collective nature, the representation of issues has to present them as urgent, with dramatic messaging, and provide realistic solutions (Schneiker 2019). Frames have to have resonance for the audiences, through the use of symbols and language that draw on emotions. Their resonance depends on the extent to which the principles promoted are a central part of the bigger system of belief (Joachim and Schneiker 2012). Frames have to be accessibly disseminated, typically online and through social media, which means images have grown in importance for TNGOs (Schneiker 2019). Wahutu

(2017) argues that the kinds of frames employed have an impact on how audiences comprehend suffering and victimization. He notes that “the news is an organizational product” that journalists package and construct. Framing in the media has particular salience for Africa, where the world often focuses on violent and chaotic events. Wahutu’s discussion of “converging media practices at the global level” (2017, 46) provides insight into the similar depiction, across Western news outlets, of Congolese cobalt, highlighting the importance of “global forces in affecting how knowledge is constructed at the national and subnational levels through the generation of global scripts” (j. Siguru Wahutu 2018, 465). Wahutu points to the “homogenizing effects of a limited framing repertoire, which lead to a convergence of media narratives.” (j. Siguru Wahutu 2018, 472) A central element when it comes to the framing of Africa is Western media groups’ usage of colonial clichés, and how they decontextualise and depoliticise atrocities in Africa (j. Siguru Wahutu 2018, 472).

According to Gould, “the ability to frame violence, and have that frame accepted by a broader audience, is closely related to power. Certain agents simply have more ‘power to define’ than others” (2014, 209). The rise in corporate authority is at least in part related to the decrease in power of African governments due to structural adjustment processes that retrenched the state. Several waves of revisions of African governments’ mining codes reduced these states’ ability to regulate the mining sector (Campbell 2010).

Finally, a subset of the framing literature looks at actors’ selective appropriation of humanitarian or human rights NGOs’ frames (“frame appropriation”). Joachim and Schneiker demonstrate that private military security companies (PMSCs) have portrayed themselves as legitimate, presenting themselves as new humanitarian actors and using naming approaches. Naming can include defining problems, also referred to as “diagnostic framing”. This practice sends a signal about who is “affected” and who is competent to assist (Joachim and Schneiker 2012). Companies can choose components of the frame in line with their interests and commercial nature: PMSCs thereby “(re)define the humanitarian frame ‘from within’.” (Joachim and Schneiker 2012, 368).

I now turn to how the artisanal cobalt-mining sector has been framed in southeastern DRC.

III. The framing of the cobalt-mining sector in southeastern DRC

Framing is a useful lens for understanding cobalt mining in the DRC because in a context of (global) campaigns aimed at addressing human rights abuses in mineral supply chains, the frontiers and interactions between large-scale and small-scale mining are not only governed by material/geological factors, but also conceptual/definitional processes. Given the long-standing presence of mining, especially large-scale mining, in southeastern DRC, the area is not a traditional “frontier” zone but one in which LSM and ASM have coexisted for decades (though new sites of extraction have recently been opened, particularly in Kolwezi). As such, there is no true frontier on the ground. Yet given the extent to which LSM and ASM are intertwined, the framing discussed in this section deliberately creates an artificial “frontier”/divide for commercial advantage.¹ Developments in the Congolese cobalt sector are reminiscent of how incoming foreign actors that approach the frontier “bring with them pre-existing conceptions of social order” (Kopytoff 1987, 33), namely “a cultural inventory of symbols and practices” (Kopytoff 1987, 34). Yet ASM – including artisanal mining carried out in “clandestine” fashion

¹ I thank Tomaso Ferrando for this insight.

at industrial-mining concessions – has proven robust and resilient. ASM constitutes a vital source of revenue for a large population of miners and service providers, and their dependents, and is intricately intertwined with officialdom and politically and/or economically powerful individuals. ASM therefore represents a force to be reckoned with while competing economic actors seek to redefine – and, increasingly, reshape through formalization – ASM spaces.

Given the large number of artisanal miners; high-level involvement in “clandestine” mining (Katz-Lavigne 2019); and significant international scrutiny, companies have not been able to eliminate ASM, despite years of working with public and private security forces to “defend” their concessions from ASM miners. In a 2019 Trafigura (a commodity-trading company)-commissioned report on the Mutoshi Pilot Project in Lualaba, Head of Corporate Responsibility James Nicholson explained that ASM “can be illegal in some cases but [...] it cannot be wished away.” (Silva, Tove Strauss, and Morisho 2019) Some firms now favour working with ASM rather than attempting to eliminate it, given concerns about local livelihoods. The focus is increasingly on redefining and, ultimately, reshaping ASM rather than attempting to eliminate it altogether.

(New) frontiers of extraction are not just economic, physical, or geographical, but also definitional and conceptual. As mining companies, commodity traders, and other actors seek to ensure a continued international market for cobalt and/or to identify sources of “clean cobalt” (Verbrugge and Geenen 2019), they redefine artisanal-mining zones in a selective manner. In southeastern DRC, this redefinition has involved framing ASM areas in Haut-Katanga and Lualaba as chaotic, ungoverned spaces riddled with hazardous working conditions, child labour, and other human rights abuses. Just as investment capital flows into new resource frontiers to access high-value minerals, global norms like the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas and the European Union (EU) Conflict Minerals Regulation “flow” into these areas alongside capital, albeit in a manner manipulated, contested, and/or resisted by local actors (Gould 2014). To flexibly cope with and respond to emerging calls for due diligence in mining supply chains, companies pick and choose from available repertoires (Joachim and Schneiker 2012). Corporations adapt existing narratives to their advantage in a context of growing cobalt demand. Yet companies are not unitary actors with a single purpose. I concentrate on official, high-level company policy, while recognising that some corporate actors, including mid-level company representatives and contractors as well as “frontline” security staffers, have a complex, nuanced, often reciprocal relationship with ASM, as demonstrated by company employees’ involvement in “clandestine” mining (Katz-Lavigne 2020b).

The spotlight on southeastern DRC points to a conceptual progression from “conflict minerals” in eastern DRC to so-called “Conflict-Affected and High-Risk Areas” (CAHRAs), and a shift in focus from the relatively narrow definition of “conflict minerals”, to a broadened definition of “risks” (OECD 2016). The prominent, widely used OECD Due Diligence Guidance applies to companies sourcing minerals from CAHRAs, which the OECD identifies “*by the presence of armed conflict, widespread violence or other risks of harm to people [...] High-risk areas may include areas of political instability or repression, institutional weakness, insecurity, collapse of civil infrastructure and widespread violence.*” (Kumi n.d.-b) “Due diligence” measures have expanded to cover not just minerals that may contribute to armed conflict, but a range of human rights and working conditions-related issues, including child labour. Artisanal mining being framed as associated with a multitude of human rights problems is not new or specific to this context (Huggins, Buss, and Rutherford 2017). Smith (2022, 295) illuminates

how externally-imposed supply-chain auditing and traceability fostered, in the view of people in eastern DRC, the exclusion of those considered to be unclean: ASM *creuseurs* working in life-threatening conditions and thereby “tainting” the minerals with their blood in a way unacceptable to foreign buyers. Traceability took on quasi-religious meaning for many Congolese observers, “a kind of cosmology of transparency and disclosure.” Smith highlights how traceability was anchored in “enduring colonial ideas of light and darkness, the pure and impure” that have long characterized Congolese interactions with whites. Smith (2022, 65) draws attention to “a culturally resonant Euro-American narrative around the bleeding heart of darkness”.

The 2016 report by Amnesty and AFREWATCH describes dust exposure and lung disease; physical consequences of carrying heavy sacks; mine collapses; child labour; physical violence against children at LSM concessions; and financial exploitation. Artisanal cobalt-mining sites become in this framing negative and ungoverned compared to (supposedly) orderly, efficient, and controllable LSM sites. The Amnesty and AFREWATCH report did not initially spark the level of Western media interest it would generate once demand for cobalt, and the price, spiked due to “investor enthusiasm for the potential of new generation batteries” for electric vehicles (see Fig. 1 below). In 2017 and 2018, the price of cobalt soared due to the possibility of long-term scarcity, then fell as a result of oversupply (Kavanagh 2020). A 2018 BBC article referred to the cobalt boom as “a new gold rush” (Sherman 2018). Comments by a BGR (Germany’s Federal Institute for Geosciences and Natural Resources) representative show the report’s impact:

in 2013 we actually looked into expanding the CTC [Certified Trading Chains] system into the copper-cobalt sector but our Congolese counterparts” preferred them to continue focusing on the 3TGs. Yet in 2016 everything changed however with the Amnesty International report and in 2017 we organized a big field trip with GIZ, Fairphone, Promines, some industry representatives, and of course Congolese counterparts from the ministries provincial and national into the Lualaba and Haut-Katanga provinces, who visited mine sites and smelters. (DRC Mining Week, ESI Africa, and Mining Review Africa 2020).

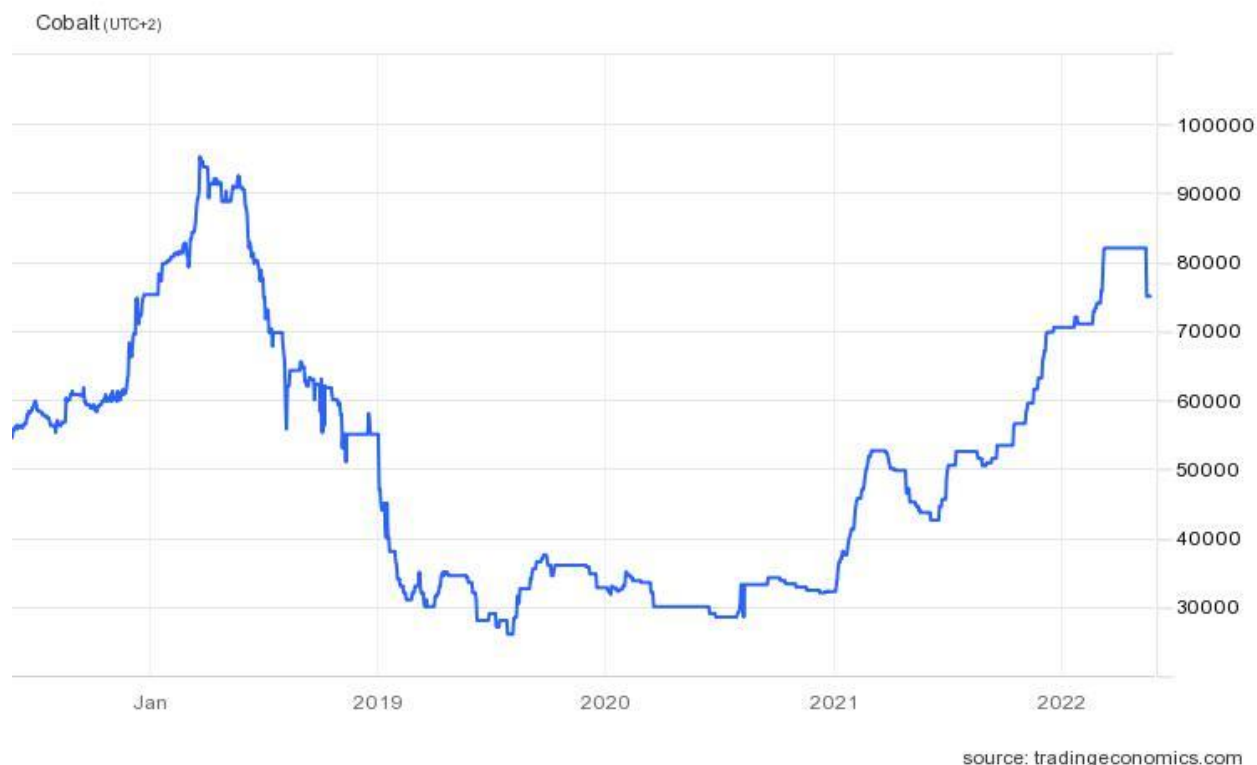


Fig. 1: Cobalt price trends

The growing demand for cobalt led to interest in the conditions under which cobalt is extracted in the DRC, resulting in an increasing number of news stories in mainstream, Western media outlets like the Washington Post (Frankel 2017), Wall Street Journal (Patterson and Wexler 2018), Financial Times (Sanderson 2020), BBC News (Sherman 2018), Guardian (Pattison 2021), and New York Times (Niarchos 2021; Lipton, Searcey, and Forsythe 2021). As with “conflict minerals” in previous years, dramatic headlines linked suffering in the DRC to Western consumer goods. The articles typically described the terrible circumstances in which an (underage) male or female miner works; the context surrounding cobalt; its use in electric vehicles; and problems with the artisanal supply chain. The more nuanced articles mention that industrial extraction can also be problematic, but only briefly.

How do companies frame ASM in their reporting? Glencore, the top cobalt-producing company worldwide (Warner 2019) on its website described ASM as “often dangerous, particularly as women and children sometimes take part” (Glencore 2019), and highlighted the company’s vision for a post-ASM scenario, including promoting

alternative sources of employment through supporting cooperatives that offer a range of activities, including agriculture and farming, welding, dairy products, sewing and carpentry. Half of those taking part in the cooperatives are ex-miners [...] We also work with local NGOs and churches to deliver holiday camps for school children to help discourage their participation in ASM’. Camp activities include ‘discussions on the risks of ASM and the importance of education. (Glencore 2019)

Glencore’s 2020 report “Our commitment to addressing modern slavery” was more ambiguous:

we also source some [cobalt] from a select group of third-party suppliers. Recognising the specific supply chain risks for cobalt, such as ASM, we prioritised rolling-out our enhanced supply chain due diligence process to our cobalt purchasing activities during 2020 and identified no significant adverse human rights impacts. (Glencore 2022)

Belgian technology and recycling firm Umicore² (Umicore n.d.-b) is one of Apple's suppliers. In May 2019 Umicore entered into a partnership to process cobalt from Glencore, which it would sell on to other companies (Gras 2019). Umicore noted that its "cobalt supply is exempted from any artisanally or small-scale mined materials (ASM), in 2018, more than 75% of the cobalt raw materials entering our battery material supply chain originated from" LSM in the DRC (Umicore n.d.-a).

CMOC Group Limited is the DRC's second-biggest cobalt producer (Warner 2019). According to an April 2021 announcement that CMOC and its trading arm IXM had joined the RCS Global Group-implemented Better Mining: "As a large industrial miner that maintains strict product control and custody procedures, ASM sits outside of our own cobalt supply chain but we recognize that ASM, and those communities reliant on it, should not be neglected." (RCS Global 2021) Like CMOC, Chemical of Africa (Chemaf) also draws a line between ASM and LSM. Their website described how "[c]onscious of stakeholder concerns about ASM material, we introduced controls to ensure that any material received from the pilot ASM project at Mutoshi would be handled and processed separately from material originating from our mechanised mines." (Chemaf n.d.)

A clear opposition between "clean LSM" and "dirty ASM" comes from Eurasian Resources Group (ERG) in Lualaba, one of the DRC's biggest cobalt producers (ERG 2018). The Kazakh government has 40% ownership of ERG (Eurasian Resources Group n.d.-a) and is headquartered in Luxembourg (Eurasian Resources Group n.d.-b). ERG's Clean Cobalt Framework for its Metalkol RTR project states that "[c]hild labour is commonly associated with ASM so by excluding ASM material from our supply chain and through the implementation of our Chain of Custody we also mitigate the risk of child labour." (ERG 2018) In pointing to itself as playing a role in returning the environment to its previous state, given its tailings processing activities, ERG's framework flips a common criticism of LSM operations – its negative environmental impact – on its head. ERG notes that it "designed the clean cobalt initiative to ensure that customers can purchase cobalt with confidence" (ERG 2018).

Non-LSM, downstream companies also responded to increased scrutiny of artisanal cobalt and working conditions in their supply chains. Volvo Cars, Kumi Consulting, and tech firm Circular came together for a pilot project "to test the implementation of an end-to-end traceability system for recycled cobalt and provide assurance to Volvo Cars that no cobalt of unknown origin enters its supply chain" (Kumi n.d.-a). Apple announced in March 2017 that it had "temporarily stopped buying cobalt mined by hand in Congo while it continues to deal with problems with child labor and harsh work conditions." (Frankel 2017) In May 2020, Huayou Cobalt announced that it would stop buying from artisanal miners in the DRC (Sanderson 2020) – though ultimately, Congo Dongfang International Mining SARL (CDM), of which Huayou is the parent, continued to operate at the artisanal Kasulo site. Some companies took steps to invest in cobalt outside the DRC, including North America (Sherman 2018), in response to [perceived]

² Umicore is also a present-day descendant of colonial-era Belgian mining company Union Minière du Haut Katanga (UMHK) in the DRC.

political risk (Bochove 2017). South Korean firms SK Innovation and LG Chem, and British Johnson Matthey worked on taking cobalt out of electric-vehicle batteries. EV firm Tesla initially planned to stop using cobalt for reasons including the “reputational cost of a metal associated with child labour and poor safety conditions” (Home 2020). Instead, Tesla signed a long-term cobalt-supply deal with Swiss mining company Glencore – demonstrating that Congolese LSM is still seen as acceptable. BMW also went with Glencore to secure part of its supply. Despite efforts to cut down on cobalt, Tesla’s deal with Glencore indicated that cobalt will remain an important component of batteries for the foreseeable future (Home 2020); world demand for cobalt continues to grow (Jolly 2020).

Companies with an interest in buying, rather than selling, ASM cobalt have (predictably) taken a less rigid stance: Trafigura, already a purchaser of artisanally-extracted Congolese cobalt, funded a pilot project with the goal of formalising ASM at the Mutoshi mine operated by Chemaf, through “semi-mechanised small-scale mining activities” (Kavanagh 2020). Yet for Trafigura the choice is not between boycott and laissez-faire: “We can either isolate and shun ASM workers, or we can roll-up our sleeves and improve the situation.” (Silva, Tove Strauss, and Morisho 2019, 5) Trafigura’s engagement with artisanal mining therefore, I argue, involves not just engagement with ASM but financing to actively (re)shape it along more globally palatable lines. Huayou Cobalt (mentioned above) with Congolese subsidiary CDM has similarly focused on the creation of a “responsible” ASM site at Kasulo in Kolwezi (Huayou Cobalt n.d.). Companies’ positioning in the supply chain therefore has an impact on the way in which they frame ASM.

Therefore, companies are active participants in how ASM is framed, an example of the evolution of frames after other actors appropriate them (Joachim and Schneiker 2012, 368). I now move to a discussion of the *consequences* of how ASM has been framed, including eliding the often-negative human rights impacts of LSM sites.

IV. The consequences and (mis)uses of framing ASM cobalt

Here, I draw attention to the outcomes and uses of the way ASM cobalt has been framed by large, well-resourced corporate actors. First, the framing has allowed these actors to position themselves as “clean” compared to ASM, despite the widespread presence of security forces, which engage in “taxation” and coercive practices against artisanal miners, at LSM sites. Next, the way influential external actors have framed ASM has concealed the wider structural dynamics and deep interconnectedness of ASM and LSM. This allows LSM firms and other corporate actors to burnish their image by constructing an ahistorical, inaccurate narrative of separateness. Finally, and relatedly, the negative framing of ASM and positioning of LSM as “uncontaminated” has empowered capitalist actors to lay claim to ASM spaces to (re)shape them and gain reputational benefits.

A. “Clean” by comparison

As noted, LSM companies and other supply-chain actors cultivate an identity-based opposition between their “clean” mining activities and ASM as dirty and illegitimate. ASM, though it represents only approximately one fifth (or less) of total cobalt production in the DRC, becomes synonymous with all that is problematic and negative about cobalt mining *as a whole*.

In the DRC, ASM has long been viewed as disorderly and/or “illegal” – in contrast with orderly, “legal” LSM – and as needing to be formalized. During my research in Haut-Katanga and Lualaba, some respondents emphasized artisanal miners’ unpredictability and violent behaviour, though several were sympathetic to miners’ difficulties. Makori argues that society in Katanga has a tendency “to label *creusage* as a job for hooligans, thereby depoliticizing it and minimizing its socio-historical complexity.” (2017, 798) He adds that

many *creuseurs* are the “children” of former industrial workers [...] *creusage* as a social practice is a contemporary sign of compounded generational disenfranchisement in the neoliberal present. Although *creuseurs* engage with the market in meaningful ways as petty traders, consumers, tax-paying citizens, parents, husbands and working youth, polite society in Katanga still views them as “bad, crazy, uncivil, and dull-minded” [...] these views [...] unfortunately play into the interests of global capital, for they support the misguided view that *creusage* is a dispensable practice in the inevitable march of capitalism in Congo. The more than 200,000 artisanal miners in Katanga alone suggest that this is far from true. (Makori 2017, 798)

While the problems affecting ASM call for solutions, the current “diagnosis” rests on a biased picture. ASM in DRC is highly structured, organised, and adapted to its environment (Geenen 2012). Geenen (2015) provides a more nuanced account of supposed negative cultural aspects of artisanal mining in eastern DRC, like excessive spending, including for alcohol. Recent findings also suggest that mainstream reporting vastly overestimates the number of children working in ASM cobalt (BGR 2019, 25).

It’s no coincidence that the “dirty cobalt” framing capitalises on negative perceptions of artisanal and small-scale mining at a time when cobalt is under increased scrutiny. The framing of ASM in corporate due diligence efforts has drawn attention away from serious problems in LSM (OECD 2019, 35). Building the other as dirty and illegitimate casts LSM operations as clean and legitimate by comparison. Yet in the DRC, large-scale extraction has had well-documented negative impacts including human rights abuses, environmental damage, and corporate bribery (RAID 2020; OECD 2019) As Titeca and Edmond (2019) documented for the Congolese oil sector, companies must pay large illicit “bonuses” to the government. NGOs have drawn attention to physical violence and arbitrary arrest by private security companies contracted by LSM companies (RAID 2020; Afrewatch 2021); environmental damage; and corruption (RAID 2020, 2021). Mining companies in the region are responsible for pollution and property damage; human rights abuses by public and private security forces; and the forcible relocation of artisanal miners and communities without sufficient or any compensation (Katz-Lavigne 2020b).

Corporate bribery, and its negative consequences for the Congolese treasury, have also received NGO attention and media coverage. In December 2019, the UK’s Serious Fraud Office (SFO) launched an investigation into Glencore for alleged bribery (Maggs 2020). In November 2022, Glencore received the UK’s biggest-ever legal penalty (281 million pounds), for bribery in African countries (The Guardian 2022). Previously, Dan Gertler, an important business associate for Glencore and the ruling Congolese elite, was the target of American sanctions for corruption (ibid). In July 2020 it was reported that the Tesla deal with Glencore, which will involve as much as 6000 tonnes of cobalt per year, would financially benefit Gertler (Clowes, Wild, and Kavanagh 2020). In May 2020 it was announced that Trafigura was under investigation by the Commodities and Futures Trading Commission (CFTC) in the US for engaging in corrupt practices and manipulating the market with respect to oil. The American probe came almost 18

months after the Guardian reported that Trafigura was named in a major corruption probe in Brazil (Davies, 2020). Meanwhile, Glencore, also named by the Brazilian probe, “last year became the focus of a CFTC investigation into alleged corrupt practices.” (ibid) While the OECD Due Diligence Guidance includes references to corruption (OECD 2016), the focus of attention with Congolese cobalt has been ASM. As the OECD argues, “claims that supply chains are ‘clean’, sustainable, or responsible simply because they do not source ASM material, without providing evidence of comprehensive due diligence should be viewed with scepticism” (OECD 2019). It would be inaccurate, however, to view concerns about conditions in ASM as only externally imposed. Congolese people have drawn attention to these issues at great personal risk (Kelly 2020).

B. Overlooking the presence of security forces at LSM sites

The framing of LSM as “cleaner” than ASM obscures, in policy discourse, the presence of public and private security forces, contracted by LSM companies to guard mining concessions in Haut-Katanga and Lualaba, where these public and private actors systematically engage in “taxation.” In eastern DRC, as highlighted by the “conflict minerals” campaign, armed actors (Congolese soldiers or non-state armed groups) “profit from artisanal mining through illegal taxation, but also by monopolizing the sale of certain commodities [...], forcing artisanal miners to work for them” (Verpoorten, Stoop, and van der Windt 2019). Before the pandemic, 50% of the mine sites were characterised by the presence of armed actors, including the Mine Police and Congolese army (FARDC) (de Brier 2020).

Paradoxically, due diligence approaches and efforts have largely overlooked the pervasive involvement of security forces at LSM sites in southeastern DRC (Katz-Lavigne 2019, 2020a). Since southeastern DRC is (currently) much less affected by armed conflict and non-state armed groups than eastern DRC., the focus in NGO, media, and corporate reporting has been on human rights abuses and working conditions in artisanal mining, rather than conflict. Yet the presence of “public or private security forces” is listed as a risk in the OECD Due Diligence Guidance (Mancini et al. 2021). Moreover, the OECD Guidance grants significant coverage to risks related to security forces at mines, such as human rights abuses (Kumi n.d.-c). The 2016 Amnesty International and AFREWATCH report did highlight that several children “had been beaten, or seen other children beaten, by security guards employed by mining companies when they trespassed on those companies’ mining concessions. Security guards also demanded money” (Amnesty International and Afrewatch 2016, 6).

The picking and choosing of elements of a given narrative or framing when it comes to (ASM) cobalt helps explain why the presence of security forces at LSM sites in southeastern DRC has received little scrutiny during the recent cobalt boom. Unsurprisingly, LSM companies and other actors have not focused on this aspect of the 2016 report, which would invite unwanted attention to their security practices. This framing overlooks the systematic presence and involvement of state and other security forces at LSM *and* ASM sites, focusing instead on (perceived) less problematically political human rights abuses: poor working conditions, child labour, and mine collapses. Yet informal taxation by public and private security actors, and other state bodies, is systemic in artisanal *and* industrial mining: the security forces help organise the clandestine trade and according to one interviewee are local “big bosses.” Actors involved include the Congolese National Police (PNC), its Mine Police unit, and its intelligence service (Bureau 2); LSM company security and other employees; private security companies; Congolese

intelligence (ANR); customary chiefs; local government and judicial officials; FARDC; and the Republican Guard (Katz-Lavigne 2020b). Similarly to eastern DRC, some of these actors engage in taxation at the point of production (or along transport routes) in exchange for protection, frequently from their own coercion and at times violence (Sierra 2020). These dynamics are an example of how actors on the receiving end of media reporting might “arrive at an understanding of these frames that is different from that intended by the communicator” (j Siguru Wahutu 2017, 47).

Recent developments at LSM mine sites highlight the often toxic mix of corporate security, militarization, and informal taxation at and around LSM sites, including violent removal of artisanal miners from TFM and Glencore sites in the summer of 2019, casting doubt on the extent to which international standards like the OECD Due Diligence Guidance are applied (Deberdt, 2021).

Alarming, this selective framing and perception of child labour as a pressing issue has likely increased the influence of the security services tasked with enforcing child labour provisions, and the opportunity to engage in additional informal “taxation”. The lack of consideration of security forces’ presence goes along with lack of reflection on possible consequences of enforcement of child labour restrictions at mines – including physical abuse and extortion – for children.

It is important to note the local (albeit uneven and fluctuating) *legitimacy* of clandestine extraction from LSM sites – which involves the Mine Police and other actors allowing informal access in exchange for payment – at least in the sense that it gives some miners access to sites they consider to be legitimately theirs (Katz-Lavigne 2019). It would be an error to view these locally legitimate practices solely through the lens of supply-chain “risks” for downstream actors. Due diligence approaches should not overlook the legitimacy of the “routine workings” (Kopytoff 1987, 7) of ASM, which among other social functions ensure some redistribution and help to manage conflict (Katz-Lavigne 2020b).

C. Obscuring broader structural dynamics that link the two sectors

While the 2016 Amnesty and Afreewatch report places responsibility on a range of corporate actors that purchase artisanally-mined cobalt, the framing of ASM in the report itself and the one that followed in the wake of the report obscured the significant interconnections between LSM, which provides an estimated 80% of the national supply of cobalt, and ASM. ASM and LSM in the region are deeply intertwined, despite companies’ efforts to differentiate themselves and ASM, distance themselves from the ASM sector, and emphasize that ASM is not part of their supply chain. Some of the biggest LSM actors purchase ASM products for commercial and technical reasons (OECD 2019, 20), and most Congolese cobalt originates from informal ASM at LSM concessions (OECD 2019, 26-27).

Companies’ due diligence measures were often enacted in response to civil society and media pressure, thereby focusing corporate attention on single concerns (Kumi n.d.-d) and overlooking the fact that both LSM and ASM are deeply embedded in the region’s broader structural and historical dynamics of mining liberalization and privatization. International actors and the global mining industry have contributed to the expansion of artisanal mining as well as ASM miners’ persistent precarity. In Katanga, World Bank and International Monetary Fund-led “structural adjustment came in the form of the liberalization of the mining sector in 2002 and led to the wholesale loss of tens of thousands of industrial jobs and the evaporation of many of the welfare

supports” (Makori 2017, 786). Over 12,000 Gécamines workers were fired, obliging their descendants to mine artisanally (ibid, 2017, 781-782). The power imbalance between international investors and artisanal miners leads on a regular basis to privatization of ASM mines, with approval and direct involvement by the state (Makori 2017, 787). I spoke to artisanal miners expelled from site after site after companies took over. Artisanal miners and others whose livelihoods depend on ASM live in fear that their work sites may be closed down or taken over (Makori 2017). Expulsions are regularly repeated at LSM sites. In July 2019, about 10,000 artisanal miners were pushed out, by force, of a site owned by Glencore (Kouassi 2019).

The fact that ASM and LSM are typically not viewed as part of a broader and evolving political economy but conceptualised as two distinct entities ignores clandestine mining and ASM-LSM conflict, including human rights abuses by public and private security forces. Deaths and injuries of miners within LSM concessions, including as a result of mine collapses, are also masked by the artificial distinction between ASM and LSM. ASM-LSM tensions and clashes (Katz-Lavigne 2020a) also receive little consideration despite their periodic appearance in the news. In June 2019 artisanal miners at LSM concessions became highly visible when a mine collapse killed at least 43 miners at Glencore’s Kamoto Copper Company (KCC) in Kolwezi. During the same period, several hundred FARDC soldiers with military weapons were ordered by the government to evict ASM miners from China Molybdenum Company Limited-owned Tenke Fungurume Mining, and destroyed shelters and housing. On July 4th, 2019, the army dispersed miners at KCC (Amnesty International 2019).

Criminalization of ASM in a context of heavy LSM investment may hinder the formalization of ASM miners, undermining the objectives that NGO, LSM, and other actors purport to embrace. Cooperatives and government agencies cannot legally represent the thousands of artisanal miners who carry out their activities at LSM concessions, which points to a much larger process of informalization having taken place alongside attempted ASM formalization at pilot sites.

D. Making it possible for capitalist actors to claim these spaces in order to “organize” them and “whitewash” corporate activities

The framing of ASM has regulatory implications in addition to reputational ones. A related effect of the framing of artisanal cobalt is that, as noted, LSM companies have positioned themselves as unproblematic and “clean” by comparison, pointing to their child-labour-free and ostensibly safer workforces as a selling point. This framing leads to consequences for ASM suppliers, including costs of becoming “clean” as well (OECD 2019) These dynamics reinforce LSM companies’ already significant presence in the economy, society, and politics of southeastern DRC.

Increased scrutiny of ASM and calls for better standards and practices have created an opening for expanding involvement in the ASM cobalt-mining sector by transnational corporations and other private actors seeking to make their sourcing more “responsible”. The framing of ASM spaces as problematic or “illegitimate” paves the way for capitalist actors to claim these spaces to “organize” and “order” them, while ensuring their access to resources. The Mutoshi pilot project is one example of an ASM cobalt-mining formalization project in the DRC. Attention is then (re)focused on these tiny model mines – what Umpula et al. (2021) refer to as “islands of responsibility” – which further burnishes the reputation of LSM actors and draws attention away from human rights issues within their own concessions. Mancini et al. (2021, 12) argue that the limited implementation of such projects at corporate actors’ sites could ultimately

“whitewash” their entire cobalt supply. Finally, the resources corporate actors have allocated, and continue to allocate, to such efforts – including funding NGOs and consulting firms to implement responsible sourcing programs – further reinforce the selective emphasis on specific negative aspects of ASM.

V. Conclusion

This article examined the role of corporate actors in (re)producing (global) knowledge in dynamic spaces at the cobalt frontier. I drew on literature on framing, and the expansion of global capitalist frontiers, particularly in mining areas, to analyse a pervasive framing of ASM in LSM-dominated areas of southeastern DRC. I discussed how large-scale mining and other companies operating in international cobalt supply chains have produced a specific narrative of artisanal-mining spaces as “dirty” and illegitimate in order to protect their own reputational value and avoid a boycott of Congolese cobalt. In turn, they make themselves appear to be reliable and sustainable players with the authority to regulate and operate. This is particularly the case when small-scale competing actors are well entrenched, with high-level involvement, and cannot simply be displaced. These findings support the assertion that “[m]arginalization [...] is not only produced by material disadvantages, but also by discursive violence” (Schetter and Müller-Koné 2021, 3).

Following on NGO reporting describing ASM as plagued by abuses of human rights and poor working conditions, LSM companies have sought to pre-empt critiques about the whole cobalt sector by distancing themselves from ASM. LSM companies drew selectively on this reporting, focusing on the negative aspects of artisanal cobalt to present their own activities as “clean.” This framing, first, turns ASM into the focus of negative attention, yet cobalt mined artisanally accounts for a minority of total production. Second, it seeks to erase the problems with LSM to which Congolese civil society and international NGOs have drawn attention. Whereas the focus is on informality and child labor, public and private security forces’ illicit activities at LSM sites (including abuses of ASM miners’ rights) are overlooked. Moreover, multiple linkages between LSM and ASM are erased, including industrial mining’s vast economic footprint that exacerbates artisanal miners’ struggles. Finally, corporate actors’ framing positions them and other private actors as those best suited to (re)shape and attempt to remake ASM, thereby further “greenwashing” their reputations.

I have highlighted the need for further research on knowledge production around artisanal and industrial cobalt mining in DRC. More systematic investigation (including discourse analysis) represents a pathway for further research. Olukoshi, Hormeku-Ajei, Balaji, & Nayar argue the need “for Africans to go beyond the persistent narratives that serve to bolster neoliberalism” (Olukoshi et al. 2020). How ASM resist the “problematic ASM” framing and legitimize themselves is one area for further research. The role of other actors who have benefited from these narratives – including global consulting and auditing firms and NGOs – is another. Finally, there is scope for comparative research on corporate actors’ framings, including companies of different national origin and who are differently positioned in global supply chains.

Neo-colonial dynamics are deeply embedded in framing in cobalt-mining areas. Crucially, “the ideologies, religions, cultures and customs constructed to rationalise, legitimise and explain the processes of accumulation were centrally premised on the construction of race, in which ‘the Self’ was White and ‘the Other’ Black” (Shivji 2021). Literature showcases a

common thread from colonizing powers' *terra nullius* (Ryan 2023) to racist ideas and notions of "savagery" (Wiegratz and Zeilig 2021) to narratives of incompetence and lack of capacity for improvements in ASM despite contrary evidence (Radley and Geenen 2021). Finally, given the gendered dimensions of phenomena such as child labour, there is much need for research on women and men's involvement in cobalt mining from a non-gender-blind perspective, as highlighted in Bashwira et al. (2014).

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