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Artisanal copper mining and conflict at the intersection of property rights and corporate strategies in the Democratic Republic of Congo

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ABSTRACT

Since 2002, the mining sector in the Democratic Republic of Congo (DRC) has been liberalised and the Congolese government has allocated many formerly state-owned mining concessions in the provinces of Haut-Katanga and Lualaba to large-scale mining (LSM) companies. This paper examines the causes of conflict at LSM sites in Haut-Katanga and Lualaba. Conflict dynamics do not fall neatly along the lines of diverging interests between artisanal miners and companies. An adapted property rights approach helps make sense of the multiple components of the property rights regime. Interviews and mine site observation from August–December 2016 and January–May 2017 revealed the existence of at least three, at times competing, parts of a plural mineral rights regime: a corporate component; an "authorised" system for artisanal extraction; and an "unauthorised" element. These components constitute a plural regime in which different claims are defined and enforced to different degrees and at different times, and provide a preliminary explanation for conflict incidence. The at times contradictory nature of these systems of extraction leads to inherent instability but also, frequently, non-conflictual encounters. The piece also discusses the distributional impact of the interaction between the different components of the mineral rights regime, and policy implications.

1. Introduction

The Democratic Republic of Congo (DRC) is the sixth biggest copper producer worldwide, and the world's foremost producer of cobalt (SOMO et al., 2016). The copper- and cobalt-producing province of Katanga, in southeastern DRC, was historically the country's large-scale mining (LSM) area. From the mid-1970s onwards, the DRC was in economic crisis (Geenen and Hönke, 2014), including the once-prosperous state-owned copper-mining enterprise, Gécamines. The artisanal and small-scale mining (ASM) of minerals grew in importance among Congolese people. By the mid-1990s, the state had to sell some mining concessions to private buyers. The Congolese wars from 1996 to 1997 and 1998–2003 brought industrial mining to a halt, but mining in relatively stable Katanga experienced renewed interest in the post-conflict period (Geenen and Hönke, 2014), which overlapped with the global commodity price boom. Tens of thousands of artisanal miners were displaced in the industrial-mining provinces of Haut-Katanga and Lualaba¹ when companies began to clear concessions for industrial extraction (Hönke, 2010).

Multiple conflicts between industrial and artisanal mining resulted from the (re)-assertion of mining companies' claims. Artisanal miners regularly enter LSM sites in search of livelihood opportunities, which as a violation of Congolese law puts them at risk of imprisonment. Artisanal miners who enter LSM sites in southeastern DRC are viewed in an ambiguous, often negative light (civil society representative, personal communication, August 9, 2016). At times they are described as clandestine (human rights organisation representative, personal communication, August 23, 2016), which situates miners vis-à-vis the presumed "legal" property rights of companies. An LSM company respondent spoke of "illicit exploitation" (personal communication, August 22, 2016), though some were more neutral (two company C representatives, personal communication, August 30, 2016). Some respondents used the language of theft (university researcher, personal communication, August 13, 2016; civil society representative, personal communication, August 23, 2016; government official, personal communication, August 29, 2016) or illegality (civil society researcher, personal communication, August 27, 2016). Other interviewees had a more nuanced view, noting that when LSM companies come along

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¹ In 2015, Katanga was divided into four provinces (Haut-Katanga, Lualaba, Haut-Lomami, and Tanganyika) in line with the country's 2006 Constitution (GRIP 2016).

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miners' activities become "illegal" (development organisation representative, personal communication, August 10, 2016) and that there has been a move towards the elimination of artisanal mining (human rights organisation representative, personal communication, August 22, 2016). A government official argued that miners are not just "thieves", but looking for something to eat (personal communication, September 1, 2016).

My objective is to analyse conflict between artisanal mining and LSM, at and around LSM sites, which manifests in different ways and with different levels of intensity. What can these dynamics tell us about the causes of these confrontations? This analysis centers on the systems and mechanisms through which artisanal miners' access is governed at large-scale copper- and cobalt-mining sites in Haut-Katanga and Lualaba, and the impact of this governance on conflict and on the local distribution of resources, specifically access to unprocessed copper for sale. I argue that the interaction of several components of the property rights (PR) regime(s) at and around mine sites has a significant impact on conflict and distributional dynamics at the local level.

For interviewee protection purposes I refer to the two sites in the region of Lubumbashi, the capital of Haut-Katanga, as A and B, and the third, in neighbouring Lualaba, as C. All were once government owned. Company A was one of the earliest investors in the area and is of Global South origin and based in the Global South, but with significant links to the Global North. Mine site B, registered in the DRC in the mid-2000s, is now majority owned by a firm based in the Global South, and managed by its former owner, also from the Global South but with a different national origin. Company C was previously majority owned by a corporation based in the Global North. The company recently sold its interests in the firm that owned 80% of mine site C, to a company from the Global South². The empirical evidence was collected through semi-structured interviews and site visits in Haut-Katanga and Lualaba from August–December 2016 and January–May 2017, and primary and secondary sources obtained in the region or online.

First, I provide background on LSM-ASM conflict in southeastern DRC's LSM sector. I then move to the theoretical framework, an adapted property rights approach. The following section lays out the multifaceted PR regime (which I refer to as a mineral rights regime) at and around LSM sites. The next section describes different aspects of the conflict phenomenon along a continuum. The final two sections provide a preliminary explanation for the incidence of conflict at LSM sites, and describe the distributional impact of the interaction between the different components of the mineral rights regime and of company responses to regime dynamics.

2. Background and literature

A growing group of scholars in IR, political economy/ecology, development studies, anthropology and/or the mining sector have engaged in in-depth analysis of conflict dynamics between LSM companies and practitioners of ASM (e.g. [Hilson and Yakovleva, 2007](#); [Aubynn, 2009](#); [Teschner, 2013](#); [Nyame and Andrew Grant, 2014](#); [Carstens and Hilson, 2009](#); [Hönke and Börzel, 2013](#); [Hönke, 2009, 2010, 2014](#); [Geenen and Hönke, 2014](#); [Geenen, 2014](#); [Bolay, 2014](#)). Frequent (violent) conflict has occurred related to LSM companies' attempts to keep artisanal miners out of concessions contracted out by national governments for LSM ([Hönke, 2010](#)). [Hönke \(2009\)](#) describes the violent contestation from 2005 to 2007 in Katanga, when MNCs sought to exclude artisanal miners from open mining pits, as a major conflict that became a regional issue. Security forces in southeastern DRC have committed human rights violations ([SOMO et al., 2016](#)). The relationship between international mining firms and artisanal miners operating in LSM concessions remains enduringly conflictual. Yet the broad category of ASM-LSM conflict manifests itself in different ways

and with different levels of intensity depending on the circumstances. The goal in this article is to delve further into the specifics of such conflicts.

Several scholars have emphasized interplay and embeddedness between local dynamics and corporate action/security practices by transnational mining companies ([Hönke, 2013](#); [Geenen, 2014](#); [Müller-Koné, 2015](#); [Côte and Korf, 2017](#)). My analysis builds on these scholars' call for an in-depth contextual understanding by describing the processes and arrangements that govern artisanal miners' access (whether granted or denied) to LSM sites in Haut-Katanga and Lualaba. Several authors have considered security practices companies employ to enforce their property rights in areas of limited statehood ([Hönke, 2009, 2010, 2013](#); [Hönke and Börzel, 2013](#); [Abrahamsen and Williams, 2014](#)) like the DRC ([Börzel and Hönke, 2011](#)), where "the state does not hold the monopoly over the legitimate use of force and/or has only limited capacities to set and enforce rules." ([Hönke and Borzel, 2013, 5](#)) [Börzel and Hönke \(2011\)](#) argue that even in areas of limited statehood, governments often play the role of principal gatekeeper between the international and domestic realms. Despite their lack of capacity, governments continue to allocate mining rights. A more appropriate way to describe the DRC may be "rhizomatic statehood", in which the "detailed administrative control of bounded space [...] is replaced by a sporadic, preventive demonstration of despotic, coercive power for stabilizing regimes." ([Hönke, 2010](#)), p. 107–108) [Hönke and Börzel \(2013\)](#) contend that in understanding MNCs' role in governance at the local level in areas of limited statehood, actual corporate behaviour should be the starting point for analysis. Rather than only examining examples of successful corporate involvement, they argue for a focus on the wider range of governance activities, including those that could undermine or even clash with transnational requirements. Applying a modified property rights theory approach that theorises the range of strategies actors use to (try to) enforce their PR sheds light on LSM-ASM conflict dynamics in southeastern DRC and makes it possible to disentangle the complex interactions within the property rights regime(s) at and around mine sites, including how company strategies co-constitute these regimes.

3. Theoretical framework

Classical property rights theory, developed in the context of Europe and North America, predicts that as resource values rise, the benefits to private ownership will eventually be greater than the costs, and private PR will emerge ([Fitzpatrick, 2006](#); [Boserup, 1965](#)). Classical PR theory is predicated on a belief in the greater efficiency of clearly defined, well-enforced PR. There is a belief that clear property rights granted by central governments to MNCs should allow for productive investment and increased economic efficiency, particularly in comparison with supposedly inefficient ASM with its low-quality property rights allocation and enforcement ([Geenen, 2014](#)). African policy-makers have assumed that LSM makes a larger contribution to the economy, particularly compared to the perceived absence of clearly defined rights and responsibilities in ASM. International financial institutions like the World Bank and the IMF pushed for LSM-friendly mining codes in countries like the DRC ([Geenen, 2012](#); [Campbell, 2010](#)).

Many of the dynamics around mining investment are not well captured by the predictions of early PR theorists explaining the emergence of private property in Europe and North America. In much of the global South and Africa, the state cannot or will not enforce rights to private property ([Haddock, 2003](#); [Fitzpatrick, 2006](#)). Moreover, [Teschner \(2013\)](#) argues that ASM is a lucrative business for local people compared to alternatives and [Geenen \(2012\)](#) questions whether ASM needs to turn a profit and be efficient. Yet in many resource-rich countries of the global South, customary social norms (like those that govern ASM) that allowed for the management of resources in common have become degraded, often as a result of state intervention ([Fitzpatrick, 2006](#)). Companies often refuse to compensate artisanal

² This study focuses principally on the period prior to the sale.

miners financially, so miners refuse to stop operating in concessions they consider illegitimate (civil society representative, personal communication, January 24, 2017). The imposition by central governments of MNC property rights to mining concessions often leads not to favourable economic outcomes but to conflict. Mwangi (2007) finds that the efficiency gains classical PR theory predicts will result from private or individual title may be much smaller than expected due to persistent conflict, casting doubt on the argument that LSM is the most efficient form of extraction.

A property rights regime (PRR) is a set of institutional arrangements through which claims over objects (i.e. property rights) are defined and enforced, with more or less success. Property rights may be enshrined in law, which doesn't mean they are legitimate, simply that they have legal status (Katz-Lavigne, 2016). Mining companies often employ what is referred to in PR theory as first-party (self-enforcement) measures (Fitzpatrick, 2006). LSM firms in the DRC rely on private security companies (PSCs), but since PSCs are not permitted to use firearms, "the mining industry depends on state security forces for robust operations." (Hönke 2010, 120–121) In Katanga, all the major international companies drew on coercive enforcement (Hönke, 2010). Some companies implement coalitional measures (what PR theory refers to as second-party mechanisms) (Fitzpatrick, 2006) by creating partnerships with other actors, including through corporate social responsibility. Yet the fact that in Katanga, all the bigger international mining firms drew on coercive enforcement (Hönke, 2009) points to the limitations of "soft", coalitional approaches. Mining companies' priority is to ensure the viability of their investments, even if it means employing undemocratic measures like clientelistic exchange (Hönke, 2013). Officials and representatives of agencies of the state are often called upon to help enforce companies' claims. State actors' involvement – often based on private interests (Hönke, 2009) – can be viewed as coalitional mechanisms, rather than the legitimate state action that PR theory calls third-party measures (Fitzpatrick, 2006). Companies draw on a range of context-specific strategies to enforce their claims, but are not always able to prevent incursions. The persistence of conflict at and around LSM sites points to the existence of unresolved claims: no one claimant to a given resource can fully exclude (or co-opt) the others (Fitzpatrick, 2006). Continued conflict suggests that the segment of the population that relies on artisanal mining remains unsatisfied with a given resource distribution and that these actors continue to press their claims. I draw on a modified PR framework that emphasizes the persistence of multiple facets of a property rights regime.

4. The mineral rights regime

At and around LSM sites in southeastern DRC, there are at least three parts of an overarching property rights regime (or mineral rights regime) composed of plural, overlapping, contested facets: a corporate component; an artisanal ("authorised") system; and an artisanal ("un-authorised") element. Different claims are defined and enforced to different degrees and at different times. The three elements at times conflict and sometimes work in tandem to achieve joint objectives even if they seemingly have opposite goals. These networks and systems are multiple, overlapping, and often reconfigured.

4.1. The corporate component

The corporate component of the mineral rights regime refers to the means companies employ to define and enforce their claims to minerals (which are validated by the central government and Congolese mining law) by deterring unwanted incursions, more or less successfully. As with the other elements of the mineral rights regime, the corporate component varies across sites. There is no single institutional recipe, though companies share information and learn from each other's security approaches (company A security officer, personal communication, October 11, 2016), which typically include the police, one or more

PSCs, company guards, and/or guard dogs. Corporations place representatives from multiple security bodies at fixed posts (often one or more PSC agents, and at least one police officer), combined with regular vehicle and/or foot patrols. When companies have more than one PSC on contract they may divide up duties, for example by dispatching one agency to entrance barriers and another to the extraction site. When the security situation becomes critical, companies call upon intervention units of the Congolese police like the *Groupe mobile d'intervention* or the *Légion nationale d'intervention* (LNI). On the "softer" end (Hönke, 2009), LSM firms draw upon civil society actors. At site C, the company is in regular contact with local civil society, which reports security incidents involving the artisanal miner population (civil society representative, personal communication, February 9, 2017). Not engaging with artisanal miners is also a strategy for companies to secure their ability to operate. Company C reportedly has "compassion" for the miners; while it sometimes reinforces security, at other times they are allowed more freedom (miner, personal communication, March 31, 2017).

This component includes efforts to disrupt and undermine well-organised networks and processes for mineral extraction not authorised by the company, which often involve company guards and employees. Company representatives are aware of the mineral rights regime and potential impact of choices in the security domain. Companies' choice of strategy is based on an assessment of the conditions at and around their mine sites (I do not assume perfect information) and the resources and options available to them. Corporate operating procedures and principles matter, but are enacted in consideration of the PRR.

4.2. "Authorised" artisanal extraction

The "authorised" and highly organised system for the extraction of resources from LSM sites without company permission is another facet. Customary authorities, local elites, the central administration, and local and global NGOs shape local outcomes in the mining sector. The Congolese government uses investment in LSM to reassert control over areas previously beyond reach. A number of powerful political actors struggle for control of the country's resource-rich areas (Geenen and Hönke, 2014), implementing strategies to secure their access to resources. Companies negotiate with local elites, who use these arrangements to benefit from LSM (Geenen and Hönke, 2014). Companies' and other actors' coalitions of enforcement are not mutually exclusive, but overlap: actors responsible for securing mining concessions often play a dual role in allowing outside parties to access mine sites. In response to the central government's sale of many mining concessions to private investors, systems and networks were put into place for the systematic removal of minerals from LSM sites. These processes share many similarities with those previously in place for "illicit" extraction from Gécamines (Ngoie Mwenze, 2009). Mining company and PSC employees collaborate with the Congolese police (particularly the Mine Police, which is officially mandated to guard the mines, but other branches too), artisanal miners, and other actors. This component of the regime is "authorised" because actors draw on different forms of power, including state and corporate power, to legitimise their activities. Generally speaking, the private and state security agencies are involved in organising the removal of the minerals they are mandated to protect, though some agencies and individuals are said to be more systematically involved than others. A company B security officer described the Mine Police as a *porte dorée* (golden door) for allowing miners into the concession (personal communication, January 27, 2017). In southeastern DRC these widespread, highly organised practices are often referred to as *la frappe*. I translate the French terms as hit or strike, which demonstrates that these practices are perceived as rapidly executed, and forbidden as a violation of Congolese law. Yet *la frappe* is widely accepted and participated in by a range of actors, groups, and institutions. This set of practices constitutes an open secret of an ambiguous nature. These dynamics have been documented at other LSM sites in southeastern DRC (Bread for All, 2014 Bread for All,

Fastenopfer and RAID, 2014)

The mix of actors involved in these networks and the extent to which they coordinate (or are in competition) with each other is site-specific, but the functioning of the networks is centred on monetary payments. Artisanal miners are expected to pay security actors for access to LSM sites. Whether miners pay upon entry or departure varies, as does the amount. \$50 per head was cited in the Lubumbashi region: miners pay police, mining equipment operators, security guards, and/or company employees (miner, personal communication, February 13, 2017; two miners, personal communication, March 16, 2017). The price of entry is linked to factors including the availability of minerals and the ease with which they can be extracted. These amounts can at times be negotiated (miner, personal communication, February 13, 2017). In exchange, security guards and police officers watch out for the miners, letting them know when company security is on its way (civil society representative, personal communication, March 4, 2017).

These processes are not all encompassing; some security actors reportedly seek to disrupt “unauthorised” artisanal mining and/or refuse entry to miners out of concern for their jobs (miner, personal communication, April 9, 2017). Yet one artisanal miner remarked that when a miner enters the site sponsored by a trader, everyone is aware of it, from the highest-placed security officials to the lowest; everyone receives money (two miners, personal communication, March 16, 2017). The functioning of this mode of extraction (in which lower-level representatives of the police or other state agencies send money up the chain to the higher echelons) echoes the way other public entities operate in the DRC (company B security officer, personal communication, January 27, 2017). Multiple institutions are involved, including the PSCs, though allegedly not to the same extent as the Mine Police (company B security officer, personal communication, January 27, 2017; trader/miner, personal communication, February 14, 2017; three miners, personal communication, February 17, 2017; two miners, personal communication, March 16, 2017).

4.3. “Unauthorised” artisanal extraction

The “unauthorised” component of the mineral rights regime refers to artisanal miners’ activities not sanctioned by the “authorised” system for artisanal extraction. Many miners regularly attempt to get around the rules and procedures of “authorised” artisanal extraction. Resistance to corporate strategies as well as to the rules of “authorised” artisanal extraction is a key piece of the conflict puzzle. Companies are not the only actors to draw on a range of strategies to enforce their property rights. Structurally weaker actors like artisanal miners have capacity for resistance and continue to press their claims (Mwangi, 2007). While Congolese mining concessions are being cleared of “unauthorised” occupants, artisanal miners frequently continue to exercise *de facto* rights to resources. Company enforcement efforts in the face of miner resistance result in lasting conflict. Less examined are the strategies and alliances put in place by artisanal miners (who have less power and fewer material resources) to ensure access to mineral resources. Studies that examine these actors’ strategies include Geenen (2014) and Geenen and Hönke (2014). The decision of weaker actors to put themselves at risk of violent expulsion demonstrates that they have calculated that risking violent removal is their best option. While continuing to press for access represents a real risk of incarceration and physical harm, miners struggle with financial hardships, family responsibilities, and lack of economic opportunities. LSM companies cannot hire nearly as many people as are in need of jobs (company B security officer, personal communication, January 27, 2017). Many artisanal miners feel they have no choice but to take the risk (miner, personal communication, February 13, 2017).

Miners employ strategies to gain access to LSM sites without having to pay security for reasons including the cost of access (four miners and a journalist, personal communication, February 8, 2017), the fear that agents might turn around and betray the miners, and the restrictions on

the frequency and length of time allowed for entry. These limits are particularly present in the Lubumbashi area, where access to LSM sites has been increasingly restricted. Miners’ approaches to circumventing payment and other rules include avoiding places where security guards and police officers are deployed (three miners, personal communication, March 13, 2017) or entering when guards’ presence is limited (when it’s raining and the guards have sought shelter, or during break times/shift changes). Some miners prefer to enter the mine site during the rainy season, because the guard leaves his post and hides to not get wet (three miners, personal communication, March 13, 2017; two miners and their mother, personal communication, March 31, 2017). “Unauthorised” artisanal mining highlights miners’ resourcefulness in deploying strategies to ensure continued access to copper.

Miners at times exhibit persuasive, forceful, and even aggressive behaviour to “transgress” the rules and regulations, particularly when a group is refused access to an LSM site or ordered to leave before they are finished working (four miners and a journalist, personal communication, February 8, 2017; miner, personal communication, January 2018). Artisanal miners also rise up in anger and/or enter by force when fellow miners die as a result of action by security forces or in an accident (journalist, personal communication, February 7, 2017; LNI representative and Mine Police representative, personal communication, March 20, 2017). Yet there is a major disparity in force between artisanal miners’ digging tools and rocks, and the guns and tear gas wielded by police. Miners’ determination to enter LSM sites reflects the context in southeastern DRC. Most mining concessions have been sold; there are few sites available for artisanal mining, though the Mining Code contains provisions for ASM concessions (civil society representative, personal communication, January 24, 2017; doctoral candidate, personal communication, February 1, 2017; trader and her miner son, personal communication, February 27, 2017). The lack of alternatives explains why many miners seek entry to LSM sites despite the risk (two miners and their mother, personal communication, March 31, 2017; three traders and an ex-miner, personal communication, February 4, 2017; artisanal miner, personal communication, February 27, 2017; February 13, 2017; one miner and two ex-miners, personal communication, February 17, 2017).

5. Manifestations of conflict

LSM-ASM conflict manifests in multiple ways along a continuum, including no conflict; tense interactions and implicit threat of violence; the explicit threat of violence; the use of force to injure or sabotage; and the use of force to (attempt to) kill. The arrest of artisanal miners by the Congolese police is common at LSM sites, with different amounts of force used. When security comes across artisanal miners, their goal is often not to arrest the miners, particularly if there is a large number present, but to disperse them. The implicit threat of violence is a key part of these efforts, particularly when the police are present, since only the police are authorised to carry weapons. Company B also uses guard dogs, and company C was in the process of trialling the use of dogs in early 2017. The threat of physical violence is visible, and artisanal miners understand the risks they face. Some miners are afraid of the police because they have weapons (company A security officer, personal communication, December 6, 2016, personal communication, October 11, 2016; artisanal miner, personal communication, February 13, 2017). Even in the presence of unarmed guards, the implicit threat of violence exists: the guards frequently call the police to intervene (company B security officer, personal communication, January 27, 2017).

When encounters between artisanal miners and the security forces become more tense, the situation can shift from an implicit, to an explicit, threat of violence. These types of threats are likely to be deployed under circumstances like the presence of a large number of miners or miner refusal to leave the site. Some security guards, particularly the police, do not like to have their authority questioned; they argue that

they are the ones with the weapons (trader, personal communication, February 14, 2017) and threaten to shoot miners. Unarmed security guards reportedly also threaten to shoot (company A security officer, personal communication, October 11, 2016).

Encounters are more likely to escalate to higher levels of conflict if neither the security forces nor the artisanal miners are prepared to yield. Miners who refuse to leave are often chased out using coercive methods like tear gas (LNI representative and Mine Police representative, personal communication, March 20, 2017; LNI representative, personal communication, May 16, 2017). Miners may be subjected to arrest with physical violence. Beating is a form of punishment frequently inflicted on miners caught by security forces (former artisanal miner, personal communication, March 13, 2017). While PSC guards do not carry firearms, they still inflict physical punishment (beating) on miners (former miner, personal communication, November 25, 2016; four miners and a journalist, personal communication, February 8, 2017, March 19, 2017) as do the Industrial Guard (company security) (two miners and their mother, personal communication, March 31, 2017) and Mine Police (former miner, personal communication, March 19, 2017). A miner and his mother reported that in December 2016, the site B “soldiers” (the LNI) arrested him at home. He resisted and was hit in several places, including the head, until he was covered in blood. The “soldiers” also started shooting; one of his friends was reportedly shot in the leg (personal communication, March 29, 2017).

While some encounters pit a single miner against one guard or police officer, companies often place multiple security services at guard posts. More forceful measures are likely to be deployed when the threat is perceived to be greater, like when miners arrive in large numbers. At site A during the 2012–2013 holidays, there was a rumour that the governor had given miners permission to extract minerals while management was away. When the Mine Police could not contain the miners, the miners’ presence was met with a forceful response by several forces, including the LNI (LNI representative, personal communication, May 16, 2017). Several miners were reportedly killed (company A security officer, personal communication, October 11, 2016; occasional miner, personal communication, March 21, 2017; two miners, personal communication, March 16, 2017; LNI representative and Mine Police representative, personal communication, March 20, 2017). Artisanal miners and civil society representatives, and company reporting, provided multiple accounts of shooting injuries and deaths of miners at all sites over time (miner and his wife, personal communication, March 31, 2017). In 2014 “Jacques” (a pseudonym) was injured by a bullet at mine site B when the security forces were chasing miners out. He was surprised to find that a bullet had hit him; someone else was shot in the leg. Jacques was hospitalised for three or four months and released thereafter, at which point they arrested, hit, and sent him to prison. Jacques has extensive scar tissue on his arm from the wound (miner and his mother, personal communication, March 29, 2017). Such incidents have also been reported at site C, where company C reportedly embraces a human rights approach (miner, personal communication, February 14, 2017; miner, personal communication, February 17, 2017; company C, personal communication, April 17, 2017) and respects international norms (university professor, personal communication, August 13, 2016). According to local respondents and company reporting, the site has experienced several large-scale confrontations and violent incidents, including the deaths of several miners at the hands of the police (civil society representative, personal communication, February 9, 2017; civil society representative, personal communication, March 4, 2017). The evidence does not lend support to the belief expressed by several miners, particularly in the Lubumbashi region, that companies order the police to open fire (three traders and an ex-miner, personal communication, February 4, 2017). The Mine Police has been discouraged from shooting; the government has given tear gas to the Mine Police, and they’re only allowed to fire in the air if alone and overwhelmed (LNI representative and Mine Police representative,

personal communication, March 20, 2017). Yet a company A security officer argued that the police “attack” the miners if ordered (personal communication, October 11, 2016). A company B security officer noted that the police tasked with maintaining order have very little equipment. When 50 police officers are faced with 1000 people, in the officer’s view, their actions become legitimate self-defense (personal communication, January 27, 2017). Given that companies co-constitute property rights regimes at and around mine sites, corporate responsibility is considerable, whether deaths occur by deliberate action or stray bullets.

Despite the emphasis in the literature on conflict between artisanal miners and the security forces, many encounters occur with no or little conflict. Site C, far larger than sites A and B combined, includes several hundred square kilometres in active mining (company C, personal communication, April 17, 2017). Yet arguably the majority of encounters between artisanal miners and security are characterised by little or no conflict. At site A, miners aren’t really scared. They enter easily at 11:00 p.m. and leave around 4 or 5 a.m. (personal communication, February 13, 2017). I explore the question of why encounters between artisanal miners and security forces are often *not* conflictual below.

6. Understanding conflict incidence

Why are so many interactions between artisanal miners and the security forces characterised by little or no conflict, while others are far more conflictual? Some encounters are mostly unilateral: if the police deploy forceful measures against miners and the miners flee, the conflict will typically end (though some miners may be arrested) rather than escalating. Some miners are deterred by unarmed guards’ refusal to allow miners to enter (miner and his mother, personal communication, March 29, 2017; miner, personal communication, February 13, 2017). Yet corporate tolerance of miners and miner avoidance of confrontation are only part of the answer. Public and private security, and the artisanal miners with whom they work, find ways to collaborate in the frequently peaceful removal of unprocessed ore from LSM sites. It is therefore necessary to delve deeper into the mineral rights regime to understand conflict.

Plurality (the fact that the mineral rights regime has multiple components) does not mean conflict is inevitable. Yet informal arrangements are notoriously fragile (Katz-Lavigne, 2016; (Bread for All, 2014 Bread for All, Fastenopfer and RAID, 2014). Conflict frequently results when the different components’ rules are not consistent with each other, or if these rules overlap, as is the case with the corporate priorities of company enforcement vis-à-vis the frequently diverging rules of the “authorised” and “unauthorised” systems for extracting minerals without company permission.

The corporate and “authorised” artisanal extraction facets of the mineral rights regime frequently clash. The arrival of unanticipated security patrols or a company supervisor regularly leads to artisanal miners’ expulsion even if “arrangements” have been made between police officers and miners (journalist, personal communication, February 7, 2017; two miners and their mother, personal communication, March 31, 2017). At site C, machinery operators frequently allow artisanal miners to operate undisturbed, unless surprised by the arrival of security. If the supervisor is present, the miner may be arrested. There are risks even when miners pay the security services (miner and two ex-miners, personal communication, February 17, 2017). If the security patrol passes while the miner is collecting minerals, the police and guards deny involvement, saying the miners entered without them seeing. The miners have to run away or hide, losing the money they paid, and may be arrested (doctoral candidate, personal communication, February 1, 2017; journalist, personal communication, February 7, 2017; miner and two ex-miners, personal communication, February 17, 2017; miner, personal communication, March 3, 2017). At site C, when the heads of the Mine Police and the Industrial Guard are present, the

miners flee; other days, they can work without problems (ex-trader, personal communication, February 17, 2017; two miners and their mother, personal communication, March 31, 2017). When the head of office visits, the guard may arrest the miner to save his job, even after taking money (two miners, personal communication, March 16, 2017). One miner was an eyewitness when two teams of miners were brought into a site by facilitators, who were informed of a surprise visit by their boss. These facilitators chased the miners away, having taken their money, and seized their products. The situation degenerated into conflict, with the miners throwing stones and being on the receiving end of gunshots and tear gas (miner, personal communication, January 2018).

In principle, the “authorised” and “unauthorised” arrangements exist in opposition to corporate interests. Yet the functioning and objectives of the three components at times work together. The “authorised” facet operates to restrict the volume of miner entry. Therefore, security forces’ management of miner entry into mine sites does contribute to the achievement of company goals. At other times, the two components’ objectives conflict, like when a surprise inspection or visit by company management disrupts the functioning of the “authorised” artisanal-mining arrangement.

The risk of physical harm does not only apply to artisanal miners. Miners have reportedly used force against unarmed security guards to gain access to mine sites. Company C has documented many cases of injuries of unarmed guards and company employees, as well as (to a lesser extent) police officers. Miners once attacked a company C security guard at a train station. He was in uniform and they started throwing stones (company C security guard, personal communication, March 4, 2017). At company B in 2016, there were 64 injuries of security guards, an unprecedented number (security officer, personal communication, January 27, 2017). Companies transfer risk to unarmed guards, despite policies that don’t allow guards to confront miners (company C, personal communication, April 17, 2017).

It is not only the contrast between the corporate and “authorised” facets of the regime that leads to conflict, though the focus in the literature is often on the conflict implications of the relationship between LSM and ASM. A relatively unexamined layer is conflict between those who implement the “authorised” component, and miners who try to get around its rules and restrictions by circumventing it entirely or attempting to change the “rules of the game” through persuasion, intimidation, or aggressive behaviour. Much of the conflict at and around LSM sites is linked to security forces’ efforts to disrupt and penalise efforts to circumvent the “unauthorised” component of the regime. It’s possible for a miner to avoid being caught if he’s aware where the security forces are (three miners, personal communication, March 13, 2017). Yet miners’ frequent attempts to enter without paying increase their physical risk: the security forces have an incentive to ensure miners comply with and continue to pay into the system in place. The use of force to deal with miners falls most heavily on people who don’t give money in exchange for entry (journalist at site C, personal communication, February 7, 2017; trader and her miner son, personal communication, February 27, 2017; two miners, personal communication, March 16, 2017; miner and his mother, personal communication, March 29, 2017). The security guards reportedly beat miners who don’t make “arrangements” (four miners and a journalist, personal communication, February 8, 2017). The guards try to stop miners from entering without paying. Miners who try to enter “fraudulently” tend to get discovered because miners who pay will not allow a miner who hasn’t paid to work with them, because they don’t want problems. If seven people pay to enter and an eighth has joined, the security guards detain everyone. When a miner has paid, if the police officer on patrol sees danger, he will signal that miner. Miners who enter without paying are responsible for their own security. If an officer sees miners who haven’t paid, those miners will be caught (trader and her miner son, personal communication, February 27, 2017; three miners, personal communication, March 13, 2017; two miners, personal communication, March 16, 2017). Yet there is some flexibility in terms of paying off

security when surprised by them (miner and two ex-miners, personal communication, February 17, 2017). One miner agreed when asked if the police protect the people with whom they work. At times the security forces transport miners to where they can work (miner and his mother, personal communication, March 29, 2017). Some miners enter without paying, but if caught, are obliged to pay. If a miner caught at site C does not have money, he is beaten and his products taken away. If he has money, the guards take the money and leave him alone (three traders and an ex-miner, personal communication, February 4, 2017). Though miners who enter without paying take more risks, artisanal extraction at LSM sites is always risky and exploitative. One respondent was arrested and beaten three times: twice after entering the site without paying, and once when he had paid. Whether a miner pays or doesn’t pay, he runs the risk of being arrested and beaten (three miners, personal communication, March 13, 2017; two miners and their mother, personal communication, March 31, 2017).

Tensions also result when there is disagreement on the rules and modalities for miner entry. Dynamics of large-scale confrontation described at all three sites showcase conflict between the “authorised” and “unauthorised” facets (company A security officer, personal communication, October 11, 2016; occasional miner, personal communication, March 21, 2017; two miners, personal communication, March 16, 2017; LNI representative and Mine Police representative, personal communication, March 20, 2017). When miners are denied entry because they do not want to pay the entry fee demanded by security forces, or don’t have money, miners sometimes throw stones at security (especially unarmed guards), particularly when in a large group (Mine Police representative, personal communication, February 7, 2017). In one case at site A, there was an argument after the payment to police officers. The police wanted more money and the miners did not want to pay (miner, personal communication, February 13, 2017). If there is no agreement on the amount of money to be paid, miners and security agents get into a dispute. The Mine Police may demand an amount, like 50,000 Congolese francs, that the miner cannot or is not willing to pay, leading to clashes (civil society representative, personal communication, March 4, 2017; two miners, personal communication, March 16, 2017). Miners and the security forces do not always see eye to eye on the amount of time miners can spend at the site. In December 2016, when it came time for miners to leave site A at night, security started to use tear gas. One miner stayed behind; he threw a stone at a police officer, and tried to take the officer’s weapon. The officer reportedly fired on the miner (trader/miner, February 14, 2017).

These elements help explain the persistence and severity of many conflictual encounters between artisanal miners and the security forces. As discussed, police officers and security guards at times follow orders not to allow miners into the concession. By taking on miners who enter the concession without passing by the arrangements in place, the security forces can appear to be doing their jobs (journalist, personal communication, February 7, 2017) without compromising their interests.

In sum, the boundaries between the three components of the mineral rights regime are fluid and continuously in flux, rather than clear and fixed. These categories are analytically useful but empirically entangled – given the overlap between the actors involved in each type of activity – but contribute to our understanding of conflict incidence.

7. Distributional impact

Conflict dynamics are inextricably linked to the distributional impact of the mining governance at work. The extent of exclusion at different sites – which I argue is an outcome of the interaction between the different facets of the mineral rights regime – has distributional impacts for artisanal miners and their communities.

Artisanal miners are at the base of the pyramid when it comes to the distribution of benefits, but bear the biggest share of physical and financial risk, whether or not they attempt to circumvent the systems of

“authorised” extraction. Miners caught by security run the risk of being chased out and losing the opportunity to extract minerals that day as well as the minerals they have collected, and money paid to security. Miners who are caught risk arrest or even physical violence, especially if they resist when security orders them to leave. Financial and physical risk is intertwined: miners’ attempts to protect their financial interests can lead to greater physical risk or arrest (which also carries financial penalties), and seeking to avoid physical danger can force them to make financial sacrifices.

While structures and mechanisms for “authorised” extraction are highly exploitative of artisanal miners (Mine Police representative, personal communication, October 7, 2016), they nonetheless rest on reciprocity practices and ensure access to mineral resources for miners with few options. Despite its harshness, a certain amount of flexibility and understanding is built into the system. For instance, if the company tightens security, the miners plead the Mine Police for access, arguing that they have no money (LNI representative and Mine Police representative, personal communication, March 20, 2017).

Companies whose property rights are better enforced and whose sites have less artisanal miner traffic reflect a more exclusionary distribution of resources, particularly given the fact that companies’ claims to LSM concessions and land are widely viewed as illegitimate to begin with. When young people mine in industrial-mining concessions they often say they’re on their ancestors’ land. Therefore, there are not only legal issues at play, but issues of legitimacy as well (civil society representative, personal communication, January 24, 2017), particularly given the illegitimacy of the contracts the Congolese government signed with mining MNCs (Hönke, 2010). Enforcement strategies that are less effective represent a more equitable distribution of resources (albeit still one that is less equitable than a situation in which no LSM company occupied the site). Artisanal miners were first squeezed out of the business in the early years of companies’ activities. Other miners stopped their activities over the years due to security concerns. Particularly at site B (and to a lesser extent site A) in the Lubumbashi area, there has been a tightening up of security that has driven some miners out of mining (miner and his mother, personal communication, March 29, 2017; miner, personal communication, March 31, 2017) and made it more difficult for miners to enter without paying, or even if they are prepared to pay. Miners have struggled to find other revenue-generating activities in a context of displacement by LSM and pressure on agricultural land, particularly in the urbanised Lubumbashi area. Some miners have been able to work at artisanal sites elsewhere in the province or in Lualaba. Yet the number of sites allocated to ASM in southeastern DRC is becoming increasingly limited (miner, personal communication, February 13, 2017). The presence of a relatively “open” mine site for artisanal miners represents a more equitable distribution of resources between the company and local miners than would be the case with a relatively “closed” site. Mine sites are interdependent: greater exclusion at one site often doesn’t solve the problem, but displaces it elsewhere. Thousands of artisanal miners are estimated to be active within company C’s concession, some of whom travelled from other mine sites or were attracted by the relatively easy access.

This discussion does not mean successful exclusion of artisanal miners is ultimately desirable. Growing restrictions on the economic opportunities available to artisanal miners have consequences. More effective enforcement of companies’ PR has a fundamental impact on the distribution of resources locally, and PR enforcement strategies that are ultimately less “effective” are more inclusive for a broader range of local actors – and therefore potentially less conflictual. The failure to compensate those losing their access to resources and to ensure a distributional outcome viewed as legitimate by miners is likely to result in further conflict. For artisanal miners with few livelihood alternatives, security practices that result in greater exclusion from mine sites (when companies will not consider flexible options) impacts their livelihoods. The overall trend of tightening up security has led to increasing

exclusion for artisanal miners and their dependents and, given the absence of viable livelihood alternatives, growing economic hardship.

The distributional impact of more effective security measures, and therefore greater exclusion from LSM sites, is not limited to artisanal miners and their dependents but includes women in the ASM supply chain. Women in southeastern DRC do not go into the mining pits, but they wash minerals and prepare food for miners, among other tasks (civil society representative, personal communication, August 10, 2016). It is increasingly difficult for traders in the Lubumbashi region (many of whom are women) to buy minerals, since artisanal mining has been increasingly cracked down on (trader, personal communication, May 15, 2017). When miners are arrested, their families – often their mothers – have to pay to get them out of prison (two miners and their mother, personal communication, March 31, 2017).

Those unable or unwilling to engage in aggressive behaviour to assert their claims may find themselves increasingly squeezed out of artisanal mining – and therefore punished for their nonviolent behaviour. Policy initiatives around LSM investment that focus on ending conflict should consider the distributional consequences of doing so. A focus on visible conflict and violence restricts the analysis to those with the capacity to disrupt existing arrangements, yet LSM has much wider distributional consequences. Complete exclusion of all unauthorised parties from mining concessions would be a peaceful outcome (in the limited sense associated with the absence of physical violence), but a very exclusionary arrangement (Katz-Lavigne, 2016). The absence of violence doesn’t point to the inherent “justness” of a given distribution, only to the capacity of a set of governance mechanisms to define and impose a given allocation of resources.

8. Conclusion

In this article I first provided context on conflict between ASM and LSM in Africa and southeastern DRC. I presented the theoretical framework, a property rights approach that acknowledges incomplete enforcement of different parties’ rights and claims to mineral resources as well as the persistence of multiple overlapping components of a property rights regime. I then described the multidimensional mineral rights regime at and around LSM sites in the region, including the arrangements and processes that govern artisanal miners’ access (or lack of access) to LSM sites in southeastern DRC. The following section discussed different elements of the conflict phenomenon, along a conflict continuum. The final two sections presented a preliminary explanation for conflict incidence at LSM sites, and discussed the distributional effects of the interaction between the different components of the mineral rights regime. Based on research at and around three LSM sites in the provinces of Haut-Katanga and Lualaba, southeastern DRC, I have linked conflict and distributional dynamics to the mineral rights regime, which includes three principal components: corporate property rights enforcement; well-established systems and networks of artisanal extraction; and local miners’ strategies to circumvent the rules and regulations of “authorised” extraction. I sketched out and examined the implications of mineral governance on conflict incidence as well as on distributional dynamics in terms of who can access locally available unprocessed copper, and ultimately, the proceeds from selling these minerals. The relationship between the mineral rights regime, company security strategies, and conflict is complex. Company strategies engage and interact with the realities of the mineral rights regime at and around their mine sites, which can result in significantly different outcomes across sites and over time, a reality that merits further in-depth, comparative work. The security “recipe” employed by mining companies is different at each site; I have drawn attention to these variations in strategy. The link between exclusion and conflict is a key area for further research when it comes to understanding the specific dynamics at, and differences across, different mine sites.

The small size of the concessions around Lubumbashi and the fact that even low-value minerals could one day be treated given the right

technology (company B security officer, personal communication, January 27, 2017) means that in some areas, competition between LSM and artisanal mining is a zero-sum game and is likely to continue to be so. Yet site C is one example in which relatively low levels of conflict coexist with a relatively equitable distribution of resources, which suggests that such an outcome is possible under certain circumstances and should inform policymakers' analyses of the way forward when it comes to ASM-LSM conflict.

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