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Governing new mining projects in D. R. Congo. A view from the HR department of a Chinese company

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ABSTRACT

As in many other resource-rich African countries, the liberalization of the copper mining sector in the D. R. Congo in the 2000s has caused an influx of foreign investors who have started new mining projects. Drawing inspiration from Foucault, this article aims to shed new light on the government of such projects. To do so, it takes as a case study the HR management policy of a mining project first developed by a South African junior company and then bought out by a Chinese state-owned enterprise. Based on ethnographic fieldwork, the analysis shows that putting in place HR techniques such as recruitment methods, industrial relations procedures, or personnel administration tools do not follow a single power rationality. Caught in complex power games, these techniques have distinctive historical backgrounds, ends, and effects. Such an approach, it is argued, allows to develop a more complex understanding not only of the process through which mining companies localize their operations, but also of the changes brought by Chinese capital in Africa.

1. Introduction

The Congolese copperbelt has been one of the most striking examples of the African mining boom in the 2000s. Following the decline of the public enterprise Gécamines, the World Bank urged the Congolese government to split its mining and industrial assets, and to lease them to foreign investors. Supported by a new mining code in 2002, this liberalization of the copper mining sector resulted in an influx of foreign companies drawn by the prospect of record profits. From 2004–2008, the price of copper quadrupled from US$2,000 to US $8,000 per ton. Since then, a dozen mining projects — most in a joint venture with Gécamines — have started the production phase.[1] Independent of these industrial mining projects, there has also been an impressive expansion of artisanal and small-scale mining (ASM) since the late 1990s. Tens of thousands of ‘creuseurs’ (artisanal miners) have entered in Gécamines’ old quarries to mine heterogenite (a surface oxidized ore rich in cobalt) or malachite (a surface oxidized ore rich in copper), and industrial facilities (both smelters and hydrometallurgical plants) were built on the outskirts of major towns to process these minerals.

As the past twenty years have been marked by a number of mergers and acquisitions, shareholders in several mining projects of the copperbelt have changed several times. In the past few years, however, there has been a clear rise in Chinese capital. In the 2000s, Gécamines and the Congolese government have signed several mining contracts with Chinese central State-Owned Enterprises (SOEs), the most famous being the resource-for-infrastructure Sicomines deal. Additionally, following a process analogous to that described in Hilson et al. (2014) and Crawford and Botchwey (2017) for Ghana, Chinese firms have gradually taken control of the ASM supply chain — that is, the marketing and processing of heterogenite and malachite produced by ‘creuseurs’. Since the 2008 financial crisis, Chinese involvement in the Congolese mining sector has taken a new form. Beyond the mining projects developed by Chinese central SOEs and processing facilities owned by Chinese firms, several mining projects previously developed by private global companies have been bought out by Chinese state, private, or mixed

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[1] Industrial mining projects currently in the production phase include Tenke Fungurume Mining (TFM, China Molybdenum), Mutanda Mining (MUMI, Glencore), Kamoto Copper Company (KCC, Glencore), Sino-Congolaise des Mines (Sicomines, Sinohydro and China Railway), Minière de Kalumbwe Myunga (MKM, China Railway), Compagnie Minière de Luisha (COMILU, China Railway), Minière de Kasombo (MIKAS, Huayou), Compagnie minière de Musonoi (COMMUS, Huayou), Frontier (Eurasian Resources), Boss Mining (Eurasian Resources), la Société d’exploitation du Kipoi (SEK, Tiger Resources), Société Minière de Kinsevere (Minerals and Metals Group), Ruashi Mining (Jinchuan), Chemicals of Africa (Chemaf, Shalina), Huachin Mabende (Huachin and China Non-Ferrous Metals) and Congo Dongfang Mining (CDM, Congo Dongfang). This list does not include projects in the development phase or smelters and hydrometallurgical plants processing ore from ASM.

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enterprises. This was the case, for instance, for the Tenke-Fungurume, Kinsevere, Luiswishi, and, more recently, Kamoa-Kalula mining sites. If these acquisitions by Chinese firms reflect a broader trend, especially in the copper mining sector, it has been nowhere more visible than in the Congolese copperbelt, where they now control more than half of the operating mines.

Based on a case study, this article examines how new industrial mining projects in the Congolese copperbelt have implemented their human resources (HR) management policies. To what extent do these policies break with that of Gécamines in the past? How have they been adapted to the Congolese context? How do Chinese companies' buyout of mining projects impact HR policies? In answering these questions, the analysis that follows aims to provide new insights into the 'government' of mining projects in Michel Foucault's sense of the word.[2] From this perspective, the corporation is viewed as an assemblage of multiple governmental techniques that have different ends. The analysis is thus not about the essence of the corporation, its beneficial or harmful nature, but about the practical methods through which it works and how it structures its environment.[3] Particular attention is paid to the 'strategic games' involved in their implementation, as these games can unmake the more or less stable 'states of domination' that these governmental techniques aim to produce (see Foucault, 1994 [1984]).

Whether they explicitly build on Foucault's work or not, several social scientists have studied some of the power devices that mining companies put in place, especially the securitized enclave (e.g. Ferguson, 2005, 2006; Hönke, 2009, 2010; Appel, 2012) and CSR programs (Szablowski, 2007; Rajak, 2011; Dashwood, 2012; Welker, 2014). These studies provide in-depth examinations of the struggles involved in the making of such devices and their various power effects. As such, they make an important contribution to the study of the mining companies' governmental practices advocated here. At the same time, most tend to ascribe a certain rationality to the corporation as a whole, if not to mining capitalism in general, from the study of a single power device[4] . In doing so, they miss a key point in Foucault's approach, which requires taking the diversity of power devices, techniques and tools at work inside mining companies into account (Rubbers, 2019a). In the analysis that follows, special attention will accordingly be paid to the HR governmental techniques' distinctive ends and effects.

Although crucial for understanding the how of mining capitalism, HR management in mining companies has been given little attention in the social science literature. Undoubtedly this neglect arises from the notorious reluctance of mining companies to authorise researchers' access to their facilities[5] . Nonetheless, even those researchers who have completed fieldwork inside a mining company — even sometimes in the HR department — tended to use this access to study other issues: personnel nationalization policies (Burawoy, 1972), the workers' experience (Gordon, 1977), CSR programmes (Rajak, 2011; Welker, 2014), or the specificity of Chinese capitalism (Lee, 2010, 2017). While these ethnographies provide detailed background information on different aspects of the organization of work, they have not taken up HR policies as a subject of analysis in their own right.

This article is based on research carried out within the framework of the WORKinMINING project on the micropolitics of work in the mining companies of Congo and Zambia funded by the ERC consolidator grant programme (ID 646802). From 2016–2018, I completed multiple fieldtrips in the Congolese copperbelt in order to meet the various categories of actors (HR managers, unionists, labour inspectors, political authorities, etc.) involved in the regulation of work in the mining sector. Below I propose a case study on Shaba Mining, a small mining project in which I had the opportunity to take up a month's 'internship' in July and August 2017[6] . This mining project is of particular interest in that it was first developed by Springbok, a South African junior company, before it was taken over by Wang, a provincial Chinese SOE, in 2012.

Before I begin the examination of HR policies at the mine, I will first reconstruct the project's history on the basis of Springbok annual reports since 2004. These reports enable a better understanding of the constraints that limited the project's development, and the decisions the majority shareholder have made to overcome them. I will then open the doors of the HR department in order to study three governmental techniques, namely recruitment, industrial relations, and personnel administration, in more detail. For each technique, special consideration will be given to the tools or procedures involved, their intended ends, and the power games to which they give space. Finally, I will examine the way in which Congolese employees have interpreted the major changes Wang's Chinese managers brought with them in HR management since 2012. Focusing on various governmental techniques, I argue in the conclusion, not only allows the development of a more complex understanding of the process through which mining companies localise their operations, but also of the changes brought by Chinese capital in Africa.

2. A promising project

Situated close to one of the main Copperbelt cities, the Shaba mining site was first developed by the colonial enterprise *Union minière* from the 1910s onwards. The quarry complex that was then formed was further enlarged by Gécamines – the name given to Union minière after its nationalization – from the end of the 1960s to the beginning of the 1980s. In 1998, the L.-D. Kabila government demanded that Gécamines give up the quarry to artisanal mining and, within a few months, thousands of 'creuseurs' entered the site in search for heterogenite and malachite. In 2000, however, mining rights over parts of the site were

[2] For Foucault (2012 [1980]: 14), the government is a 'set of techniques and procedures aimed at the management of people'. Foucault returned to the problem of government from various viewpoints throughout his work — e.g. the production of norms, the well-being of the population, or the making of subjectivities. In this article, I am more specifically interested in his analytics of governmental techniques (for an overview, see Rose and Miller, 1992; Lascoumes, 2004).

[3] For greater precision, in the following pages I will distinguish three levels of analysis in the study of mining companies' governmental practices: devices or policies (e.g. HR management); techniques (e.g. industrial relations, personnel administration, etc.); and procedures or tools (e.g. union elections, IT tools, etc.).

[4] An exception is Marina Welker (2014), who draws attention to the multiple ways in which the 'corporation' as an idea is enacted, depending on people and circumstances. In my view, this approach presents another problem, that of disintegrating mining projects into a multitude of practices and discourses and, in so doing, of putting too much emphasis on the contingency of their operations: government techniques are so much dissolved in strategic games that it becomes difficult to account for the development of mining projects, and of mining capitalism more generally. The purpose of the approach advocated here is less to destabilize the representation of the mining corporation as a monolithic macro-actor than to bring to light the material, social, and symbolic work necessary for developing mining projects through a focus on mining companies' government techniques. Although these techniques have specific and distinctive ends, they are aimed at making the environment in which mining companies operate more stable and predictable – two fundamental conditions for the development of capitalism according to Max Weber.

[5] I obtained the authorization to do a research internship at a mining company's HR department (the research on which this article is based) only after being refused by five other companies.

[6] At the beginning of my internship, a programme was established to allow me to tour the different units of the HR department, to attend various meetings, and to meet all the actors involved in the company's HR policies. All the people contacted during this internship were informed of my research objectives and invited to give me their individual consent before answering my questions. To protect them, I changed the names of the companies at the centre of this study. I have also removed potentially sensitive passages at the HR manager's request, who read an earlier version of this manuscript.

transferred to Shaba mining, a joint venture between Gécamines and an exploration company, which sold its share in the project to a holding company owned by Springbok in 2004. It is this junior company, which further developed the project, that is the focus of this study.

During the first phase, Shaba Mining constructed a concentrator to process the stockpiles and tailings left by Gécamines as well as the ore bought from artisanal miners who had worked the site prior to its takeover in 2004. The second phase, which began in 2008, consisted of removing artisanal miners from the concession and starting mining operations in two quarries. Process facilities were also constructed to produce copper cathodes and cobalt hydroxides on site. Since 2010, the company has opened a third pit and undertaken feasibility studies to start mining the sulphide layer. For various reasons, however, this third phase had yet to begin at the time of my internship in 2017.

Over the course of the 2000s, the boom in the price of commodities allowed Springbok to make record profits and to expand its activities through the acquisition of new mining and industrial projects in South Africa, Ghana and Congo. In 2008, this expansion process was abruptly halted by the financial crisis. Although several of its projects were already in the development phase, Springbok was unable to find funding. To survive, it staked its all on Shaba Mining, which was, then, its most promising project. The board of directors decided to sell other mining projects in Southern Africa and to apply for overrated bank credits to finance Shaba. This survival strategy, which centred on copper production, seems to have been fruitful. Since 2009, the start-up of the new plant at Shaba Mining and the upturn of copper prices have allowed Springbok to stabilise its financial situation. When Wang bought the group out in 2011 after outbidding a private global enterprise, Springbrook was making profits again.

Following its acquisition, Springbok was incorporated as a subsidiary of Wang International, a listed company established by Wang (the provincial SOE) as a flagship for the development of its international mining operations[7] . Maintained as a separate entity, the company continued to operate mining projects in the Copperbelt from Johannesburg. Eventually, from 2014 onwards, Chinese managers were appointed to the company's board of directors in South Africa, and to management positions in its projects in Congo and Zambia. Retrospectively, it appears that the Chinese provincial SOE used the South African company as a vehicle to invest in Central Africa — a place where it had no previous experience (Corkin, 2008). To some degree, however, Wang was unlucky for, as soon as it had completed the acquisition of Springbok, the price of copper began a long descent, from US$8871 a ton in 2011 to US$4863 a ton in 2016. This downturn led the company to slow down the development of new projects and, once again, to focus on Shaba, its main project in Central Africa. At the same time, the mine's oxide reserves were nearly exhausted, and, to make matters worse, the plant faced frequent power shortages. Between 2015 and 2016, Shaba Mining reported net losses. A graph showing the cost curve dropping below the profit curve was posted in the offices at Shaba to explain to workers that the situation was critical.

Faced with this adverse situation, the company implemented three main measures. It decided to mine a cobalt-rich area in the mine in order to take advantage of the rising price of this commodity after 2015[8] . It began to buy high grade oxide ore from traders involved in artisanal mining to upgrade the ore that fed the plant[9] . Finally, it cut costs all round, including those of labour: wages were frozen for an indeterminate period; a hundred unskilled workers employed in non-core services (cleaning, security, catering) were laid off and transferred to subcontractors; and South African expatriates were progressively replaced by cheaper Chinese managers. These measures probably allowed the enterprise to subsist without laying off more workers. In 2016, the company produced 32,000 tons of copper and 3200 tons of cobalt — a little less than in previous years. Its production cost was still higher than the copper sale price, but rising prices seemed to connote the promise of a better future. During my fieldwork in mid-2017, the company had returned to break even, and development projects that had long been suspended (the construction of a new plant and the development of new mines) were on their way back.

If the story of Shaba Mining has been eventful, it is not atypical. The fact that it was set up by an exploration firm, developed by a junior company, and then bought out by a large mining corporation is common for small mines in boom periods. As a careful reading of Price Waterhouse Cooper's annual reviews on the mining industry's global trends show, the strategy followed by the world's 40 top miners since 2004 has been similar to that of Springbok: in the boom years, they reinvested their profits to acquire new projects; facing a lack of capital after the financial crisis, they sought to scale back to their core business and cut costs with the aim of reducing their debts and regaining investor confidence. As they had access to state capital for their overseas operations, Chinese SOEs found themselves in a good position to take advantage of the crisis, and to buy out mining projects in the Congo and elsewhere. The Shaba Mining case can therefore be seen as a particular manifestation of broader changes in the mining sector whose consequences in the domain of work have yet to be analysed.

3. Three HR techniques

At the time of my fieldwork in 2017, Shaba Mining employed 1068 workers, including 52 expatriates. From 35–45 years of age, the majority of these workers had five to ten years' seniority. As in most mining companies, there were few women (5 %), and their presence was concentrated in administrative departments. In addition to its permanent workforce, the Shaba project provided employment to 1238 contract workers. Most of them were employed by two foreign companies —one in charge of mining operations, the other of the site's security. The workers' working conditions will not be discussed here. It is sufficient to say that, with equivalent qualifications, their wages were slightly lower than those who were directly employed by Shaba Mining.

Among the eight departments in the company, the process department (the plant) was, with more than half the total workforce, by far the most important. In comparison, the HR department was, with its 24 workers, of rather modest size. According to the original joint-venture agreement, Gécamines was responsible for appointing the personnel manager. Curiously, however, the public company had not exercised this prerogative before 2011: The first two personnel managers were directly recruited by the project. From 2011–2012, and then from 2013 to 2014, however, two Gécamines representatives took on the position, the interim periods being covered by an experienced HR employee. I was told that the South African management did not find either of these Gécamines representatives suitable for the position. Against the

[7] Like private global companies, Chinese SOEs create shell companies in tax heavens to escape taxation. Springbok is thus the sole subsidiary of a company registered in Mauritius, which is itself the main subsidiary of Wang International (registered in the Cayman Islands). The buyout of Springbok was not Wang's first venture outside of China. In the previous months, this Chinese provincial SOE had taken over three other foreign mining companies in South Africa and Canada. In buying Springbok, its objective was to get a foothold in the copper and cobalt mining sector and diversify its investment portfolio.

[8] In comparison to the Zambian copperbelt, the Congolese copperbelt has also important cobalt reserves. Long considered a by-product of copper, cobalt has taken on new importance with the development of new technologies (smartphones, laptops, tablets, etc.).

[9] Artisanal miners have played a key role at several stages of the project's development. The opportunity to buy the production has allowed Shaba Mining to take advantage of the commodity supercycle when it was still in the development phase (2004-2008), and then to compensate for the depletion of its oxide reserves in recent years (2014-2017). Far from being a completely separate sector, artisanal mining is better viewed as a labour submarket, which is in a subcontracting relationship with industrial mining (Rubbers, 2019b).

background of a desire to implement a new strategic plan in 2014, the Springbok group therefore decided to hire a HR professional itself, and to create a new position for him in Shaba Mining, HR Manager.

This manoeuvre soon created tensions. A year after the arrival of this professional, Gécamines responded by appointing a new personnel manager for Shaba, and by demanding that the HR manager be considered his deputy. Rather than resorting to conflict, the two men pragmatically accommodated themselves to this embarrassing situation. During my internship, they seemed to manage the department congenially, taking care not to impinge on each other's prerogatives. The personnel manager was responsible for administration and representation duties — signing the documents, chairing the department's meetings, and sitting on the board of the heads of department — while the Springbok-recruited manager led the new projects and developed the company's HR strategy.

The new HR manager's arrival nonetheless increased tensions between some department staff. Upon assuming office, he recruited or coopted workers that he saw as 'competent' and 'motivated' and assigns them to key positions. It is to them that he entrusts new projects, and it is with them that he collaborates on day to day basis. The 'old-timers', on the other hand, were relegated to administrative tasks of lesser interest. This discrimination among colleagues resulted in the formation of what HR officers see as two separate 'clans' in the department. As I will explain below, far from being an exception specific to the HR department, these 'clans' are an essential part of the company's informal structure as a whole.

3.1. Recruitment

During the development phase, Shaba Mining had a small permanent staff. When the project's second phase began, it slowly started to increase its workforce, from 400 in 2008 to 1200 workers in 2011. Given the economic situation since then, no more than five people have been recruited each year, principally to replace departing workers. In view of the low number of job offers, the employee in charge of recruitment in the HR department has lost a great deal of the importance that he had in the past. Workers nevertheless continue to visit him in his office to find out about possible vacancies and to try to obtain an internship for a relative. Internships are commonly viewed as the best way for young graduates to get a job in the company and, more generally, in the mining sector.

Recruitment procedures differ for expatriate executives, national skilled employees, and local unskilled workers, and correspond to significant disparities in terms of hierarchical position and level of remuneration (see Rubbers, 2019a):

(a) Springbok's head office in South Africa, and, increasingly, Wang headquarters in China, recruits executives and technicians from the international job market. In 2015, there were 53 (mainly South African) expatriates from Springbok, and 5 (Chinese) from Wang. The following year, the numbers were more balanced, with 26 Springbok expatriates and 25 from Wang. The choice to hire expatriates rests on their technical (management recognizes their degrees), language (they speak the same language as management), and moral (management trusts them) skills. In the case of Chinese expats, their cost to the company is not much higher than that of Congolese managers with the same qualification.

(b) Since the project was established, the 'local community' has been prioritized for recruiting unskilled labour. This acts as a means to prevent social conflicts, secure the mining concession, and give the image of a socially responsible corporation. Hiring this category of workers was entrusted to the company's social department, which works in collaboration with different local stakeholders. The department asks the neighbouring municipality's mayor for a list of the inhabitants, which is then used as a database of potential workers during the recruitment process. Similar to other mining companies established in rural areas, Springbok also takes the recommendations of customary chiefs and other local authorities into consideration. Finally, as part of the plan to remove artisanal miners from the concession (there were about 3000 of them in 2004), a hundred of them were offered jobs as security guards or as unskilled workers in the process department.

(c) Skilled employees — the majority of workers in Shaba Mining — are directly recruited by the project's HR department. To do so, it has put a fairly standard recruitment procedure into place. Candidates whose CVs are selected by the HR department must pass tests, then an interview with a mixed committee. Despite its apparent objective character, this procedure leaves room for certain managers to favour or exclude candidates. The HR manager, who receives recommendations from all sides, has the opportunity to sort and rank the CVs. In the application files I was able to see, I came across reference letters with a hand-written annotation from the HR manager that the recommended candidates' CVs should be placed on the top of the pile. At the end of the selection process, however, the last word generally belongs to the head of the department in which the candidate will work. If he already has a candidate, the selection procedure is likely to be a mere formal exercise. Some workers told me that they had been recruited by the company without having passed any test. Following the instructions of their sponsor, they signed a fixed-term contract, which was later converted into a permanent contract.

This does not mean that all recruitment is based on favouritism. Most of the skilled workers I met were recruited at Shaba Mining after the tests without any personal support inside or outside the company. Nevertheless, even when they have been recruited without the intervention of a sponsor, many workers benefit from the support of a supervisor who made them part of their 'clan' once they were already in the company. For this reason, the relationships that bind workers to their sponsor take various forms. While some feel strongly indebted, others were just pleased that they enjoyed his confidence. Such 'clans', which have from three to six members, were found in most departments. In order to secure a promotion or a transfer within the company, it is important to have such a sponsor. As I observed in the HR department, it also plays a role in the everyday division of labour, with the least interesting tasks falling on those excluded from the 'clan' in power.

Far from having imposed an entirely new social order, the company found itself to a large extent caught in the social networks of its workers. These networks, which take the form of small, more or less flexible, 'clans' do not follow the lines of tribal, provincial, or national identity in any simple way. They are also based on other principles of affinity such as belonging to the same church, living in the same neighbourhood, or sharing the same understanding of what it means to be a proficient worker. In this respect, Shaba Mining's 'clans' mirror the complex texture of Central African cities' social life since the colonial period (Balandier, 1955; Epstein 1958, 1992).

As a governmental technique, the recruitment process thus responds to different ends, or power rationalities. Far from being only based on cost and competence, it involves various moral, cultural, social, and political considerations. Trust, loyalty, cultural intimacy, or the image of the corporation as a responsible citizen are among the reasons given to account for its organization across different channels and its effect on the company. It leads to what Gabrielle Hecht (2002: 699) calls an 'ethnotechnical hierarchy', in which powers and privileges are unequally distributed between expatriate executives, national skilled employees, and local unskilled workers.

3.2. Industrial relations

In D.R. Congo, the organisation of union elections in companies is decreed by the government. At Shaba Mining, the first union delegation (five members for 400 workers) was elected in 2008. It remained in place until the 2014 elections, during which the number of seats in the delegation was brought to ten (for 1000 workers) and distributed among ten unions, with each union holding one seat. Such elections use secret ballots. As such, the unionists do not have any membership lists: 'When you see them', a shop steward told me, 'they tell you that they voted for you. But they say the same thing to the other delegates.'

In almost all the mining companies established in the Congo, the employer deducts union dues from the workers' salaries and gives these dues to the unions according to the number of votes they obtained during the last union elections. Shaba Mining, by contrast, chose to equally distribute the dues it collected among the unions, without taking into account the numbers of votes a particular union had obtained. While such practices are not without issue, it nevertheless ensures a united and stable union delegation. Moreover, Shaba Mining has decided to give substantial benefits to the shop stewards. During a conversation in their office, they told me that they received a bonus of US$150 per month, plus an attendance fee of US$200/day for the four regular meetings that they have with the employer each year. In total, they thus get a minimum of US$2600 per year in addition to their annual salary. According to the HR officer in charge of industrial relations, these amounts were fixed at the start of the project, when the copper price was high and the delegation only had five members.

The 2008 union elections came at the right time for Shaba Mining. It was recruiting an increasing number of workers to start production (phase 2 of the project) and it needed to install a union delegation to negotiate a collective agreement and find a solution to the problem of salary scales. At the project's start, like almost all new mining companies in Congo, Shaba Mining negotiated a global salary with the workers on an individual basis, without taking into account the Congolese labour code, which imposes a job classification with a salary scale for each category of worker[10] . This practice exposed the company to the risk of being obliged to calculate bonuses, benefits, and taxes on the basis of the global salary it offered to workers (instead of the base salary), a considerable extra cost. It also created a situation whereby workers who were equally qualified and were doing the same job were paid differently. The installation of a union delegation and the introduction of a job classification allowed Shaba Mining to avoid the high tensions that have emerged in other mining companies, without completely putting an end to wage inequalities among workers. Until today, such inequalities result in demotivation among many workers.

As in all Congolese companies, the union delegates are easily suspected of collusion with the employer. After all, they profit from their roles as shop stewards and do not hesitate to present themselves as the company's 'social partners', whose role is to 'educate' the workers about the requirements of industrial work. The story of the only Shaba Mining strike since its creation provides a good illustration of this mistrust towards the unions.

> At the end of November 2015, the workers stopped work for three days to protest an alleged mistake in the calculation of their wages, which had led to an increase in the tax rate to their detriment. They set up a picket line and demanded that they be allowed to meet with the general manager. Before the latter acceded to their request, however, the Security Department took the initiative to ask the police to disperse the strikers. As the political situation in the country at the end of 2015 was tense, the local state authorities (the labour inspector, the governor, and the mayor) immediately intervened to end the conflict and demand that a mixed committee of experts study the problem. This committee concluded that the company had not made any mistake, but encouraged it to change the way in which it calculates wages in favour of the workers. It also asked the company to not lay off the strike's leaders, although they had organized it illegally. As is usually the case in D.R. Congo, this strike was organized by the workers, not by the unions. Fearing that the shop stewards play into the hands of management, workers did not tell them about the strike and refused to have them act as mediators in the conflict. Negotiations were directly conducted by representatives (the so-called 'strike leaders') whom they chose themselves for the occasion.

The role of trade unions, however, is not only to educate the workers and to preserve social peace. They are also expected to support workers who are subjected to disciplinary actions, they bring their grievances to the employer, and they defend workers' interests when the company initiates a collective redundancy procedure. According to several HR officers, the workers owe shop stewards a certain number of 'victories' since the start of the project: salary increases, an annual school bonus, the distribution of sacks of maize flour, a substantial contribution to funeral fees, and so on. Since 2014, the new Chinese management has frozen salary increases and some bonuses, but it has nevertheless given in to some of the union delegation's demands. During my time in Shaba, the company had bought new buses to transport the workers to the plant, and a new restaurant was being constructed. It had also started to give plots of land outside the mining concession to the workers. Finally, as copper and cobalt prices had increased, it conceded to pay a production bonus for the last trimester while also increasing salaries on the basis of seniority at the end of the year.

From the management's perspective, industrial relations comprise a governmental technique aimed at educating the workers and preventing labour conflicts. In the Shaba Mining's case, the installation of a union delegation did not prevent a work stoppage in 2015. The unions failed to prevent it and was also unable to bring back the situation under their control. As is generally the case in the Congo, it was the workers who went on strike and the local authorities who mediated the conflict. This does not mean, however, that trade unions play an insignificant role in Shaba Mining. Since the start of the project, they have indeed managed to obtain various bonuses and benefits that go beyond what is legally required.

3.3. Administration

Since 2014, Springbok has sought to formalise and standardise the HR management in the group's companies. This plan has several dimensions: the de-layering of hierarchies; the standardization of job titles; the establishment of common rules and procedures; and the development of IT management tools. In order to put this plan in place, Shaba Mining, a company that had a reputation for being particularly disorganised, recruited and appointed a HR manager. All my informants referenced Shaba Mining's disorganisation in the past. One HR officer, for example, told me that, before his arrival in 2011, the workers' files were neither organised nor kept up to date. Thus, on payday, numerous workers came to the HR department to file a complaint: their promotion, or the birth of their last child, had not been taken into account in the calculation of their salary. To put the files in order, he had to go into the offices to collect the documents that were available (they were often deposited on the floor) and then call in workers so he could obtain the documents that were missing or incomplete.

Special efforts have been made within the framework of the new HR plan to better control the workers and reduce the cost of fraud. One of the first things that Springbok did was to construct automatic doors at the entrance of its buildings, and to put a computerized time-attendance system in place. Beforehand, the workers' entry and exit times were recorded by controllers in each department, who transferred attendance lists to the HR department at the end of each week. As it was relatively easy for the workers to work something out with the controllers, both absenteeism and overtime were very high at that time. Since the installation of the new doors, the workers arrive and leave on time, and the number of hours they work is easily calculated by the computer programme.

[10] According to this mode of remuneration, all workers in the same category are paid the same base salary, to which is added a series of bonuses and benefits. The bonuses and benefits provided by the law are calculated as a percentage of the base salary.

More recently, an IT specialist in the HR department was asked to develop a biometric control programme to access the eleven health centres to which Shaba Mining is affiliated. During my time there, the HR department was preparing a campaign to count the workers and their dependents, and to take their fingerprints digitally. Once the system is in place, the IT officer in charge of the project told me, it will be very difficult for a worker to have his girlfriend, or a distant relative, treated at the company's expense.

The development of these various control tools are part of the rise in what sociologist Marie-Anne Dujarier (2015) calls 'disembodied management'.[11] In this management model, the workers tend to be treated in a more abstract manner than in the past, through the use of computer programmes. Although the use of such programmes is in tune with recent developments in HR management doctrine, the purpose assigned to them in Shaba Mining has been less to mobilise the workers — to turn them into entrepreneurs of themselves, responsible for their work, who participate in the development of the company on their own initiative — than to restrain their behaviour. Reflecting a deep distrust of the workers, who the management often considers to be exclusively motivated by money, new policies and instruments have been put in place in order to keep a watch on, control, and punish them.

The HR manager is clearly conscious of this limitation. For him, the measures implemented since 2014 represent significant advances in the modernisation of HR management at Shaba Mining, but this is still far from being an ideal model in this domain: if, thanks to the time attendance control system, the workers arrive on time, a number of them 'twiddle their thumbs' inside the company's buildings. In his view, the project's HR function requires a more strategic ambition. This should go beyond following bureaucratic procedures and foster a corporate culture favouring commitment to work. To do this, he would like to install a performance evaluation scheme, new participative structures, and flexible career plans. Inspired by the latest fashion in HR management, these ideas are consistent with the strategic plan Springbok adopted in 2014. The HR manager is not sure, however, that the Wang's Chinese executive managers will support them: 'The Chinese corporate culture' he said to me, 'is more authoritarian. The Chief gives an order, and the workers obey'.

4. A Chinese cultural revolution

The HR manager's reflection on Chinese corporate culture raises the question of what changes the new majority shareholder has brought into the HR governmental practices of Shaba Mining. Over the course of the past decade, various civil society organisations have condemned the working conditions in Chinese companies established in Africa. In response to these attacks, many researchers — eager to deconstruct the myths surrounding 'Chinese imperialism' — have stressed the influence different factors have on Chinese labour practices: different firm types, the sector in which they are involved, the length of their presence in the country, the pressures exerted by the state and trade unions, or the ethos of expatriate managers (see Baah and Jauch 2009; Gu, 2009; Hairong and Sautman, 2013; Kernen and Lam, 2014; Lee, 2017; Lam, 2017; Fei et al., 2018; Oya and Schaefer, 2019). There are still few empirical studies, however, and their main focus has been on the operations of SOEs and their subsidiaries (Haglund, 2009, 2010; Lam, 2017; Lee, 2017). To my knowledge to date, no study has been conducted on how Chinese companies have changed labour practices in mining projects developed by investors from other countries. Focusing on this type of investment can therefore shed new light on the dynamics of Chinese capitalism in Africa.

Whether during ordinary conversations or in work meetings, the Congolese workers often referenced how the new Chinese managers from Wang have introduced changes since 2014. In their view, the Chinese prioritize problems tied to production and cost control, leaving the HR management to the South Africans and the Congolese. The main reason my informants gave for this is that the Chinese are not interested in motivating workers through incentives: the only important thing is that they obey orders and do their work at the least cost. To this difference in managerial philosophy, they added the problem of language. If Congolese workers already had difficulties in terms of mutual understanding with the South Africans, this was nothing in comparison to those that they have with the Chinese. As Chinese managers' command of French or English is very limited, they are forced to use interpreters, which considerably reduces their capacity to understand what is happening, particularly with regard to HR.

As the Chinese arrived at a time when the price of copper was below its production costs, Wang's strategy has primarily consisted of cutting expenses. They broke or renegotiated the contracts that had been signed with South African suppliers and sub-contractors. According to informants, certain expatriate managers had a personal interest in these contracts, which were greatly overvalued. In addition, they considerably reduced personnel expenses, whether for promotions, training, security equipment, or corporate cultural activities.

All of my informants acknowledged that the measures implemented by the Chinese have improved Shaba Mining's financial situation with few job losses. A unionist thus conceded: 'If they hadn't come, the company would be closed today. At the time, it was too much in debt and the costs were too high'. From the workers' point of view, however, these cuts in labour costs were not solely the result of economic considerations, imposed in response to a difficult situation, but also an organizational choice that reflected a different work culture. This view was expressed to make sense of the Chinese's refusal to grant salary increases: 'These are people who only have one child, and you have seven of them. They do not understand when you ask them for a wage that allows you to take care of all these children'. Or of their reluctance to offer training to workers: 'I have an engineer in the department whose training in South Africa was interrupted on the order of the general manager. He said: 'But why does the company have to pay for his training? Who will benefit from it? It is not he himself''. Thus, the Congolese seemingly consider that, while the South Africans understood the importance of motivating their personnel through various incentives, the Chinese are unwilling to grant benefits beyond the legal minimum.

A domain in which the austerity measures Wang implemented had a particularly visible impact is safety. During my internship at Shaba Mining, trucks in disrepair entered the concession every day to deliver heterogenite and/or malachite ore to the plant. The vehicles' speed was no longer controlled, and the drivers were no longer required to wear their seat belts. On several occasions, Chinese subcontractors were seen without the appropriate personal protective equipment. According to the head of the safety department, who had only three officers under him, there has been a general relaxation of discipline among workers: the workers put on their safety glasses only when he is passing, and minor accidents are no longer reported to him. Although these behaviours have not yet resulted in a serious accident, they deviate from the 'safety first' rule that prevails in the mining sector. This decline in safety standards since the arrival of the Chinese could be explained by the fact that the bodies that fund the project do not require Wang to submit to compliance audits. Most of my Congolese informants, however, did not understand this lack of concern for safety rules and procedures solely as a matter of finance, but also as the product of a culture that attaches little value to workers' lives — a stereotype with a long history in the West (Hairong and Sautman, 2013). They compared this corporate culture with that of the South African managers, who granted the safety

[11] For Dujarier, the rise of this new management derives less from a cost-benefit analysis than from the imitation of the dominant actors in the sector. In support of this hypothesis, the person responsible for the new HR plan at Springbok in South Africa comes from a major mining company. In D.R. Congo, Shaba Mining's HR officers constantly compared the management instruments given to them with those put in place in the larger copperbelt companies.

department the necessary means to fulfil its mission, and set an example by strictly following the rules.

Most Congolese workers agreed that the cuts in labour costs have resulted in a general demotivation: 'The bosses don't care about us', one of them told me, 'they want the work to get done, but they ignore our needs, so we limit ourselves to the minimum'. Even the decline in safety reduced their pride in working for Shaba Mining, which is now considered as a worse employer than private global companies. This demotivation was palpable in my informants' narratives, even though few of them were considering leaving the company. Opportunities in the labour market were few, and they had little chance to find a higher paying job near a city.

5. Conclusion

This article aimed to reconstruct how new mining projects in the Congolese copperbelt have implemented their HR management policies: To what extent do these policies break with that of Gécamines in the past? How have they been adapted to the local context? How do Chinese company buyouts of mining projects affect HR policies? To answer these questions, I proposed the case study of a mining project developed by a South African junior company and then bought out by a Chinese SOE, in which I had the opportunity to do on a one-month internship. Drawing inspiration from Foucault's work, this study has paid special attention to the variety of government techniques the company's HR management has implemented since the start of the project in 2004.

In comparison to Gécamines, Shaba Mining has brought several innovations to HR management (outsourcing, IT tools, audit procedures, etc.). These new HR techniques and tools have been widely disseminated in the mining sector during the recent boom of foreign investments and can be associated with broader changes in global capitalism — what is commonly called 'neoliberalism', 'flexible accumulation', or 'post-Fordism'. At the same time, the case of Shaba Mining shows that these techniques have been appropriated selectively and coexist with older governmental techniques and tools (recruitment methods, collective agreements, personnel archives, etc.). Taken together, these various techniques do not respond to a single principle of government. The techniques for recruitment, industrial relations, and personnel administration follow various power rationalities. Caught in complex power games, they also produce their own distinctive effect(s).

To study how governmental techniques are put into place inside one company can lead to a more complex understanding of the way in which mining capitalism meets the ground in different parts of the world. In their research on the Zambian mining sector, just on the other side of the border, Haglund (2009, see also 2010) and Lee (2010; see also 2017) depict the development of new mining projects as a reciprocal learning process through which foreign investors' managerial practices come to be progressively adapted to the local context (see also Lam, 2017). At a certain level of generality, the Shaba Mining case confirms this analysis. It had to comply with the labour law, it had to make concessions to the unions, and through the recruitment process, it found itself to a large extent embedded in its workers' social networks.

This narrative of progressive localisation overlooks, however, the diversity and complexity of the processes involved. Shaba Mining's case suggests that these vary from one domain (power device, technique, or tool) to another, and that they do not necessarily develop in a linear, incremental, way. In the case of safety, for instance, rules and procedures were directly imported from South Africa, and imposed on Shaba Mining. These were considered to be more advanced than those Gécamines formerly used, and they were implemented locally without much room for adaptation. Respect for their application was, however, relaxed after the Chinese SOE Wang bought the project. In the case of HR, in contrast, Shaba Mining did not immediately import a model. Rules and procedures were developed locally by the project's managers in collaboration with young Congolese managers. As their principal preoccupation was to produce copper and cobalt as quickly as possible in order to profit from the commodity supercycle, they did not follow a coherent HR strategy. They improvised piecemeal solutions without considering the longer-term consequences.

This improvisation in regard to HR management is certainly not unique to Shaba Mining. It can be seen across the mining companies that have started production in the course of the last decade. For Shaba Mining's HR manager, who has previously worked in three other (non-Chinese) mining companies, the way in which new investors put their HR policies in place has long been based on trial and error. It was only several years later, after the price of copper had begun to drop, that HR management was entrusted to experts who were charged with designing a new strategic plan and adapting it to the local regulatory framework. To use Lévi-Strauss's (1962) famous analogy, the HR policy of Shaba Mining was first elaborated according to the concrete logic of the 'bricoleur', and then resumed along the lines of the abstract logic of the 'ingénieur'.

Finally, the analysis above sheds light on the HR management policies of Chinese companies that have bought out mining projects developed by investors from other countries. As mentioned in the introduction, the Shaba Mining case is not isolated: in the past decade, the Congolese copperbelt — and, to a lesser extent, the global copper mining sector — has witnessed an upsurge in Chinese companies' merger and acquisition activities. In the HR management domain, the main change that Wang brought about at Shaba Mining has been an across-the-board reduction in labour costs. According to Congolese workers, this cost-cutting strategy reflects a cultural ethos and a lack of concern for their own expectations. It seems, however, difficult to attribute this specific strategy to culture alone — all the more so since Wang took over the project just before a downturn in copper and cobalt prices, and all mining companies producing these commodities have sought to reduce labour costs in recent years. Moreover, Wang has left the HR function largely in the hands of the South African team.

In fact, the comparison of the different mining projects established in the Congolese copperbelt suggests that projects bought out by Chinese SOEs like Wang could offer a better bargain to workers than those developed by private global companies (e.g. Glencore) or Chinese SOEs (e.g. Sicomines)[12] . As they take control of operating mines, these investors tend to maintain the terms of employment and the HR management practices established by their predecessor. The wages in companies such as Shaba Mining are thus in the range of those offered by global private companies, approximatively thirty percent above those in projects run by Chinese SOEs. At the same time, as they benefit from state funding, they generally have the opportunity to provide more stable jobs than private global companies who strive to maximize short-term profits for their shareholders. Although it has experienced hard times since 2012, Shaba Mining did not organize mass layoffs like large private global companies have; its workforce numbers have remained relatively stable, and it has continued to work with the same subcontractors. It remains to be seen, however, if this provisional analysis will hold true for the future developments of Shaba and other mining projects bought out by Chinese companies. After all, the recent history of the Congolese mining sector has been marked by rapid and unexpected changes, and there are strong reasons to believe that this

[12] This tentative analysis builds on C.K. Lee (2017). In her comparative study of mining companies in the Zambian copperbelt, she shows that NFCA, a mining project run by a Chinese SOEs, offers more stable jobs but lower wages than projects run by private global companies such as Glencore or Vedanta. She explains the greater stability of employment found at NFCA by the fact that it benefits from the support of the Chinese state, which has strong strategic and diplomatic interests in the African mining sector. Thus, this support allows its management to work in a longer-term perspective, while it also makes it more sensitive to local pressures for preserving jobs and improving conditions of employment. Following the rise of the Patriotic Front in the second half the 2000s, such pressures were particularly high in Zambia.

will continue.

Declaration of Competing Interest

None.

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