Modern China

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Modern China 2013 39: 131 originally published online 24 January 2013
DOI: 10.1177/0097700412473705

Modern China
39(2) 131–164

DOI: 10.1177/0097700412473705
http://mcx.sagepub.com

"The Beginning of a World Empire"? Contesting the Discourse of Chinese Copper Mining in Zambia

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Abstract

A discourse fostered by Western politicians and media of Chinese copper mining in Zambia has been central to global discussions of China-in-Africa since the mid-2000s. Based in the West's putative strategic rivalry with China, the discourse also invokes racial stereotypes about Chinese cruelty and disregard for human life. Focusing on Human Rights Watch's 2011 attempt to prove China's firms to be Zambian copper mining's "worst employers," we show that the discourse is highly inaccurate: methodological mistakes compound elementary empirical errors, even as the politics of the discourse serve up a synecdoche for the global rise of a monolithic China.

Keywords

China–Africa links, Chinese investment overseas, Chinese SOE, human rights, China going global

In mainstream analysis of China-in-Africa, no Chinese investment is discussed more than copper mining in Zambia. Western politicians and media

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have globally spread a discourse about it since 2006, when China's leaders and Africa's heads of state met at the Forum on China–Africa Cooperation (FOCAC) (Taylor, 2011) and Zambia's Patriotic Front (PF) launched a campaign of anti-Chinese demagoguery that was finally to bring it to power in 2011 (Negi, 2008; Fraser and Larmer, 2007; see page 152 for a list of abbreviations used in this article). Although thereafter the PF government made a "u-turn" on relations with China and Chinese firms in Zambia, the consequences of its anti-Chinese incitement remain very much present.

The China-in-Africa discourse indicts monoliths "China" and "the Chinese" (Marton and Matura, 2011). Its central claim is that Chinese practice a neocolonialist authoritarian capitalism. In Zambia in 2011, U.S. Secretary of State Hillary Clinton warned Africans that China may be neocolonialist because its conduct does not always comport with "international standards" of transparency and good governance and Chinese enterprises do not always make full use of African talents (Associated Press, 2011; International Business Times, 2011). In Nigeria in 2011, U.K. Prime Minister David Cameron "acknowledged . . . he was keen to counter the 'Chinese invasion' of Africa" because "the model of authoritarian capitalism [in China] we are seeing [cannot] offer the confidence and stability needed for investment" (Daily Mail [U.K.], 2011). Other Chinese sins are also charged. For example, the United States officially termed China a "rogue creditor" for making loans to African states at low interest and without political conditions (Wall Street Journal, 2006), even though most Chinese loans are at international commercial rates (Brautigam, 2010) and Western banks more often lend to corrupt regimes (Global Witness, 2009). A leading U.K. business journal claimed China is "coddling dictators" (The Economist, 2008); yet the United States sells many more arms to such African rulers than China does (Midford and De Soysa, 2013), while European states are close behind the United States in arms sales to autocracies (Perkins and Neumayer, 2010).

The discursive trope of Chinese neocolonialism in Africa features both in quotidian U.S. state propaganda (Voice of America, 2011a) and high-level official pronouncements and is driven by Western elite perceptions of competition for resources and influence. Secretary Clinton has said that "the United States is in a competition for influence with China around the globe" (Clinton, 2011: 10). Michael Battle, U.S. ambassador to the African Union, has warned that "if we don't invest on the African continent now, we will find China and India have absorbed its resources without us, and we will wake up and wonder what happened to our golden opportunity of investment" (Hickel, 2010). A U.K. journalist has observed that "the anxiety manifest and unsubstantiated claims made" in Wikileaked U.S. diplomatic cables on China/Africa show that "in a number of African countries the sense of rivalry is unambiguous" (Kynge, 2011). Indeed, Johnnie Carson, the top U.S. African affairs official, addressing Western oil executives in 2010, called China "a very aggressive and pernicious economic competitor with no morals" (Guardian, 2010). He added in 2011 that "China" is taking work away from Africans and failing to comply with local labor laws, pay decent wages, train staff, and share technology (African Diplomacy, 2011), claims that a leading scholar of Africa/China links has shown to largely have no basis (Brautigam, 2009: chap. 11). Amid the repetitions and variations of similar tropes about China-in-Africa, Walter Carrington, a former U.S. ambassador to Senegal and Nigeria, is one of the few contrarians among Western elites:

> What are [Chinese] doing that is substantially different than others similarly situated? . . . African governments, as a whole, do not see the Chinese to be the bogey men many Americans fear them to be. Rather they see them as offering more options for aid and trade, [options free] of the highly objectionable and sovereignty undermining conditions which we and our allies often impose. (This Day, 2011)

The discourse has two approaches to pitching China-in-Africa. In U.S. political terms, one approach is liberal, the other conservative. Together, they have induced half a random sample of 7,500 Americans to regard China's influence in Africa as a "great threat" or "threat" to U.S. national interests (United Press International, 2007). Both approaches take no issue with the neoliberal principles of structural adjustment and the terms of trade between core and peripheral countries. The liberal framing condemns Chinese activities in Africa as a threat to "global" norms of governance, labor rights, and other standards (U.S. State Department, 2008b). Thus the liberal framing might concede that Africa derives a few (literally) concrete benefits from Chinese, such as infrastructure building, but stresses the need to defend norms assumed to offer protection for ordinary people. For example, in a "veiled attack" on China, Hillary Clinton, speaking in Senegal in 2012, averred that

> the US was committed to "a model of sustainable partnership that adds value, rather than extracts it" from Africa. Unlike other countries, "America will stand up for democracy and universal human rights even when it might be easier to look the other way and keep the resources flowing." (Guardian, 2012)

The conservative framing, on the other hand, emphasizes that Chinese activity in Africa imperils Western interests, as it is part of "China Buys up the World" and poses the threat of "Being Eaten by the Dragon" (The Economist, 2010). Thus, the Chinese presence in Africa is a total loss for Africa and the West, especially as to resources. It is also "Chinese colonialism." For example, a U.S. senator has said that "China has embarked on a new form of colonialism in Africa, grabbing as many natural resources as it can while disregarding the effect on the people of that continent" (U.S. State Department, 2009). Such claims are made despite U.S. companies controlling vastly more African resources than Chinese firms: for example, "in 2006, total [oil] output by all Chinese producers [in Africa] was approximately a third of a single US firm's (ExxonMobil) African production" (U.S. State Department, 2008a). In 2009, mining accounted for 29 percent of China's foreign direct investment (FDI) flow to Africa, while it was 60 percent of the United States' FDI flow to Africa (Ali and Jafrani, 2012).

The two approaches, while divergent in their respective emphases, are both present in the China-in-Africa discourse and interlinked in defending dominant norms and interests, with each approach reinforcing the other. U.S. Secretary of State Hillary Clinton's condemnation of China in Africa, quoted above, indicates that she makes use of both approaches. Whatever their approach, general denunciations of the Chinese presence in Africa are often linked with cases of China's large state-owned enterprises (SOEs) (Netherlands Institute of International Relations, 2008), with Chinese SOE investments in Africa's extractive industry being the most frequent targets. In fact, large SOEs number less than 100 along with 1,600 mostly small and medium-sized private Chinese firms in Africa (Huang, 2010).

The deprecation of Chinese SOEs in Africa represents Western elite aversion to China's authoritarian state, although in China, SOEs generally provide better employment conditions than private firms, so much so that a 2010 survey of where recent college graduates preferred to work found that 41 percent preferred SOEs, 26 percent multinationals, 17 percent government, and 7 percent private firms (People's Daily Online, 2011). The deprecation of SOEs in Africa aligns with World Bank neoliberal prescriptions that China must "diversify ownership," that is, privatize its state firms (World Bank, 2012: xvi). It also reflects recognition, found as well among many Chinese policy analysts (Jin, 2012), that large SOEs are the enterprises best equipped to compete globally.

Among Chinese SOEs in Africa, China Nonferrous Metal Mining (Group) Co. Ltd. (CNMC) in Zambia has seen the most negative narrative. CNMC has two copper mines there. Its subsidiary NFCA (Non-Ferrous Metals

Mining Company Africa) owns the Chambishi mine (producing since 2001) and Luanshya (since 2009), and two copper processers, Sino Metals (since 2008) and Chambishi Copper Smelter (CCS, since 2009). The Harvard historian and leading conservative public intellectual Niall Ferguson, in his 2012 U.K. television series on China, averred that Chinese copper mining in Zambia may be "the beginning of a world empire." For Ferguson, this imagined Chinese empire would be a threat to Western elites and ordinary people; it presents competition and imposes "Chinese" conditions of labor wherever it goes. The Chambishi mine, run by CNMC subsidiary NFCA, is a case in point for Ferguson, who maintained that

> a typical monthly wage packet is about £54—barely enough to feed a family. The Chinese pay Chinese wages for Chinese working hours. That has unnerving implications for everyone who wants to win Chinese investment. If you want the Chinese to put money into your economy, you had better get ready to work as hard as they do—and for as little. (Ferguson, 2012)

Ferguson's claims are wildly off the mark. The salary he cites is actually Zambia's minimum wage, as of 2011, of Kwacha (K) 419,000 a month. Yet, Chambishi miners' lowest basic wage as of January 1, 2012, was K1.88 million (US$375); with benefits, it is K3million, or seven times what Ferguson claims (NUMAW, 2011; Wang Chunlai, 2012). The workweek for Chambishi miners is unrelated to that in China. It is the 48 hours that Zambia law allows, the same total hours as at Western-based mining firms and, incidentally, also the European Union's default maximum workweek (World News Review, 2008; MyWage.org/Zambia, 2011; European Parliament and the Council, 2003).

Taking a more liberal approach, Human Rights Watch (HRW) joined the negative narrative of Chinese copper mining in Zambia by issuing a 120-page report in late 2011 on CNMC's four Zambia subsidiaries (HRW, 2011). Operating in the usual neoliberal framework, it does not take issue with the 1990s copper privatization in Zambia, which sharply degraded conditions of service for mine workers. HRW claimed Chinese CNMC to be a good investor, in the sense that large investment is welcome in Zambia, but a bad employer—"the biggest violator of workers' rights among Zambian copper industry employers" (HRW, 2011: 22), which, apart from CNMC, are the private, Western-based producers of 95 percent of Zambia's copper.

HRW represents itself as a global nongovernmental organization (NGO) that issues empirically accurate, methodologically sophisticated, politically neutral reports. In fact, HRW draws three-fourths of its funds from North America and one-fourth from Western Europe (HRW, 2009). Its Zambia report, as will be seen, displays none of HRW's self-ascribed characteristics. Instead of investigating the human rights of investment in Africa or Zambia or copper mining, the HRW report singles out China and Chinese for scrutiny and in a way that is methodologically problematic and inconsistent with sound social science. Although the report's data only concern one Chinese SOE in one country, HRW terms it "a useful magnifying lens into Chinese labor practices in Africa" that "begin[s] to paint a picture of China's broader role in Africa" (HRW, 2011: 13, 1).

Niall Ferguson's off-the-mark claims about the Chambishi mine invoke hoary notions of Chinese cruelty and disregard for human life, ideas with a long history in the West (Hayot, 2009; Wu, 2008; Brook et al., 2008) that have persisted, for example in statements about Chinese not valuing human life from figures such as William Westmoreland, U.S. commander in Vietnam (Jackson, 2005), and Jeanne Kirkpatrick, former U.S. ambassador to the United Nations (Thomas, 1999). An ex-aide to Ronald Reagan wrote in 2010 that China has "a much lower valuation on human life than it should have," as seen in mining deaths in China and in a shooting at a small Chinese-owned Zambia coal mine (Hannaford, 2010).

A sense of Chinese cruelty and disregard for human life is also implied in the HRW report, which asserts that CNMC-owned mining firms in Zambia are "the worst" as to safety, wages, hours, and unionization. In predictable media coverage of the report, not a few sources cast CNMC managers in Zambia as reincarnations of the cruel overseer of slaves Simon Legree in the pre–U.S. Civil War novel *Uncle Tom's Cabin*. That is partly owed to HRW's explanation of why CNMC firms' practices are "the worst": they "have tended to treat safety and health measures as trivial" and "appear to be exporting abuses along with investment" (HRW, 2011: 1–2), i.e., applying in Zambia oppressive practices derived from China.

We contest the representation of Chinese investment in Zambia's copper industry featured in the China-in-Africa discourse by focusing on HRW's report, which best exemplifies the discourse's liberal approach. Based on our field interviews among copper industry Chinese and Zambians, statistics, and documentary evidence, we examine HRW's claims as to safety, wages, hours, and unionization. By accounting for factors HRW neglects, we find that its implication that CNMC firms practice a unique "authoritarian capitalism" and that Chinese cruelly disregard human life are not sustainable. In our conclusion, we place HRW's report in the context of the larger China-in-Africa discourse and delineate its political significance.

Table 1. Permanent Employees and Contract Workers ("Contractors"), 2009–2011

Firms/Mines	Permanents	Contractors	Contractors %
Vedanta/KCM	9696 (2010)	11,081 (2010)	53
Glencore/MCM	ca. 8,250 (2011)	ca. 8,250 (2011)	50
FQM/Kansanshi	ca. 3,000 (2011)	ca. 1,000 (2011)	25
Equinox/Lumwana	1,347 (2009)	1,764 (2009)	57
Metorex/Chibuluma	621 (2010)	222 (2010)	26

Source. Konkola Resources Plc, 2010; Davies, 2011; Ngosa and Van Alstine, 2011: 23; Zambian Parliament, 2010: 19; Equinox, 2010: 19.

The Issues: Safety

On safety, HRW relies on interviews with 95 miners from four CNMC operations and 48 from non-Chinese owned copper mining firms. The report asserts that because "nearly all" interviewees "said the Chinese copper operations were the country's worst when it comes to health and safety," they must be the worst. There are four problems with this conclusion.

First, HRW's interviewees are not representative in an industry where most workforces are fragmented into permanent and contract employees. Only interviewees who have worked at both CNMC and other mines and are drawn from among both permanent and contract workers can make a comparison. HRW does not indicate the interviewees' employment status, but those who worked at both non-CNMC and CNMC firms were in fact skilled, permanent employees laid off during the financial crisis by two big firms, U.K.-Indian owned Konkola Copper Mines (KCM) and Swiss-owned Mopani Copper Mines (MCM), and then recruited by CNMC (Maseko, 2012). Workers at CNMC mines are almost all permanent employees. Other mines however, especially KCM and MCM, have much worse conditions of service among their many contract workers (see Table 1), who are less skilled than permanents and often work in less safe mine construction, where many accidents occur because contractor bosses try to meet unattainable targets so as to collect bonuses (Apotheker, 2009; Mwinbe, 2011; Chola, 2009). HRW's interviewees thus are not at all representative of the industry workforce and cannot represent non-CNMC mine conditions in general or plausibly compare, in general, which firms have the worst safety conditions.

Second, the views of HRW's miner interviewees are suspect, given the intense anti-Chinese prejudice where they work and live. Such miners have been the main PF targets for mobilization (Africa Confidential, 2010: 23).

Analysts have noted that "the PF enjoys overwhelming support on the Copperbelt Province, where it secured a large majority in the [2006 and 2008] presidential elections" and that PF leader "Michael Sata won by a huge margin [in 2011] in Copperbelt Province, where he has enjoyed unwavering support since the 2006 polls" (Negi, 2011: 37; Africa-Asia Confidential, 2011). Given PF's years of anti-Chinese agitation, analysts have found that many CNMC firm miners and other "street-level" Zambians "hate the Chinese" (Behar, 2008; Rajwar, 2010: 32). Workers at CNMC firms have shown through their use of anti-Chinese slogans that they are influenced by anti-Chinese discourse (Han and Shen, 2011b, 2011c; Lusaka Times, 2008). During strikes at NFCA, CCS, and the private Chinese-owned Collum Coal Mine (CCM), there has been violence and threats against Chinese, including beatings, stone throwing, and arson, with mining firms and police responding through violence of their own (Alex Mwale, 2011; Yan and Sautman, 2012). Many Zambians perceive their countrymen employed by Chinese firms to be mostly anti-Chinese (Hardus, 2009). Miners and Zambians more generally may also be prejudiced against Chinese and in favor of whites in mining. A long-serving Zambian political leader and enterprise manager told us:

> The messages coming out of Washington, London and Paris about the Chinese presence in Africa has led to the cultivation of prejudices against the Chinese among some Africans who identify with the West. This kind of prejudice is also cultivated by political forces in Zambia. . . . The focus on the Chinese-owned mine has actually shielded the other foreign-owned miners from criticism. There is a prejudice in Zambia regarding Indian and Chinese mine owners, because Indians are seen only as shopkeepers and Chinese are not seen as knowing anything about mining. Only whites are viewed as having mining expertise. (Lewanika, 2007)

Workers who are racist or have an unconscious racial animus ("implicit discrimination") against employers may not accurately depict even conditions they say they experienced or observed. Studies show that racial prejudice and racialized discourse shape attitudes and distort evaluations over a wide range of issues (Kellestedt, 2003; Bertrand and Mullianathan, 2004; Piston, 2010). Prejudice may affect even perceptions of those with the most incentives to be objective (Bass et al., 2012). It affects memories: prejudiced witnesses have greater "perceptual memory traces" of wrongful acts by perpetrators from a racial group against which the witness is biased (Edlund and Skowronski, 2008). In Zambia's racially charged atmosphere, miners may better recall wrongdoings when firm owners are Chinese than when they are not, just as anti-Jewish sentiment spread by politicians and media among white South African miners a century ago affected their ability to objectively evaluate Jewish mine owners' actions (Shain, 1994).

Views of conditions at firms about which pervasively negative racial/political discourses exist are thus bound to be distorted. Given racial animus against "the Chinese," workers' assertions that Chinese firms are the worst on safety in Zambia's copper industry cannot be taken at face value, but must be examined against safety statistics, which HRW does not use.

Third, HRW ignores comparative fatality rates. In mining, "the data which are the most reliable indication of safety are those for fatalities" (Nichols, 1997: 126). We place data of CNMC firm fatalities in the context of all of Zambia's foreign-owned mine fatalities over a decade. Whether one considers 2001–2008, when CNMC only had the Chambishi mine, or includes 2009–2011, when it also operated CLM (CNMC Luanshya Copper Mine), CNMC mines had a roughly proportionate number of fatalities: 7.2 percent of the mining workforce and 8.3 percent of total fatalities in 2001–2008, or 10.5 percent of the workforce and 11.5 percent of fatalities in 2001–2011 (see Table 2). As CNMC mine deaths are roughly proportionate to workforce totals, CNMC cannot be regarded as the worst in safety.

To make a more qualified comparison, one must also factor in the different safety implications of underground (UG) mining and open cast (OC, open pit or surface) mining. Studies in the United States show fatality rates at UG mines are three times those at OC mines (Center for Disease Control, 2005), while in Australia's metal mining industry, the difference is 6:1 (Minerals Council of Australia, n.d.: 15). In Zambia's copper mining, a study of KCM showed a 7:1 OC/UG fatality ratio. Mine Safety Department data for 2006–2011 indicate that 12 died in OC mines and 92 died in UG mines, a ratio of 7.7:1 (Michelo et al., 2009; Besa, 2012).[1] Among the foreign copper mining firms in Zambia, only CNMC's mines, until 2012, were all UG. All other foreign copper mining firms had either only OC or mixed UG/OC mines. Factoring in the UG/OC fatality differential, Figure 1 presents a comparison between CNMC's fatality rate and the UG portion of the fatalities of other foreign mines.[2]

Fourth, in 2011 and 2012 interviews, close observers of Zambian mining differed with HRW's assertion that safety is worst at Chinese-owned mines. Mineworkers Union of Zambia (MUZ) president Oswell Munyenyembe stated that "his union cannot entirely blame the Chinese companies because other mining houses are equally culprits" (Daily Mail [Zambia], 2011b). Zambia's chief mining engineer put it that NFCA on safety is "doing well

Table 2. Total Fatalities in Zambia Copper Mining and CNMC Zambia Fatalities

	Foreign-owned copper mines		
Year	Deaths	Total number of workers	CNMC-related fatalities
2001	23	13,500	1
2002	17	13,500	2
2003	21	13,500	4
2004	19	13,500	2
2005	34	40,000	1
2006	18	40,000	3
2007	15	40,000	0
2008	21	38,000	1
2009	17	32,500	4
2010	14	53,000	3
2011	19	53,000	4
All years	218	Average 2001–2011: 26,500	25

Source. MUZ, 2011; Mine Safety Department, 2011; Sautman and Yan, 2012.
Note. We do not include 46 fatalities from the BGRIMM dynamite plant explosion of 2005 because, as the MSD recognizes, although BGRIMM operated on NFCA property, it not a CNMC company.

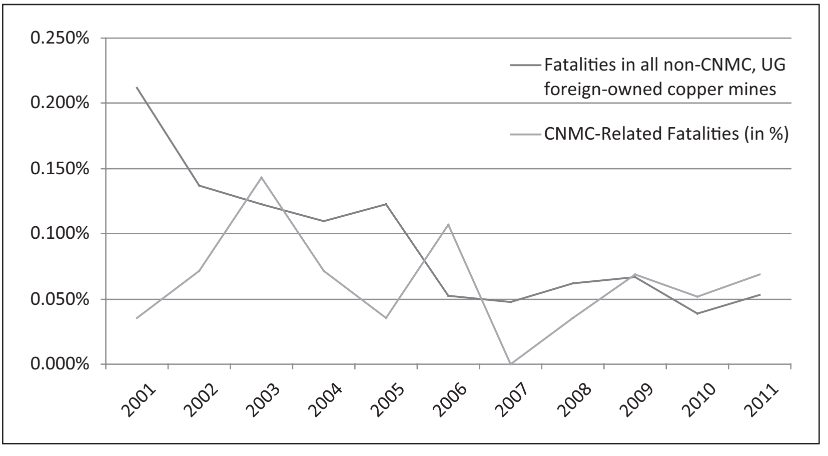

Figure 1. Fatalities compared: CNMC and non-CNMC underground copper mines
*Note***.** The rate of CNMC mine fatalities shows a steeper variation than fatalities for the group of other mines because the number of CNMC workers and fatalities is smaller. CNMC = China Nonferrous Metal Mining (Group) Co. Ltd.

now around these issues. They're raising the bar" (Chilumbu, 2011). Zambia's Mine Safety Department (MSD) chief inspector of mines said "NFCA is OK" and "no longer stands out" (Kalezi, 2011). The MSD's director stated that Chinese mines have the most advanced technology (winder, trolley line, dust abatement) affecting safety and health (Lumamba, 2011). A MSD inspector told us that while before there were problems at NFCA, "it has improved tremendously" and "now they are at a par with other companies" (Besa, 2012). MUZ's director of occupational health and safety and the president of NFCA's main union, the National Union of Mine and Allied Workers (NUMAW), both told us that the Chambishi mine's safety training had especially improved (Mushota, 2011; Kaluba, 2011). Zambia Congress of Trade Unions General Secretary Roy Mwaba has "acknowledged that the larger Chinese enterprises were abiding by local labor law" (Brautigam and Tang, 2011: 45). Asked which Chinese firms comply with labor laws, Zambia's assistant labor commissioner listed only CNMC firms: CLM, NFCA, and CNMC processing plant CCS, three of the four companies HRW says are abusers (Seti, 2011).

The Issues: Wages

The HRW report contends that "Chinese copper mining companies offer base salaries around one-fourth of their competitors' for the same work" (HRW, 2011: 24). HRW's assertion is based on bargaining agreements covering unionized workers. In 2007, 52 percent of miners at thirteen firms were unionized (National Economic Advisory Council, n.d.: 19, 24). Almost all were permanents (Apotheker, 2009). At CNMC's two mines, miners are permanent employees, but much use is made at most other mines of non-union contract laborers (see Table 1). HRW ignores that, leading to its exaggeration of the wage gap.

An NGO has stated that "when we visited [MCM's] Mufulira in 2009 and 2010, miners confirmed [that] those employed by sub-contractors could be paid as little as half the wages of permanent employees, for the same work" (Counter Balance, 2010: 17). The deputy commissioner of labor said in 2011 that contract workers may get only one-fourth the pay of permanents (Seti, 2011). In 2011, MCM miners, likely from the half of MCM's workforce who are contract workers, said they were "typically paid" £3 a day (Davies, 2011), i.e., US$120 a month. The Labor Ministry reported in 2011 that "[L]abor offices have recorded a number of reports, especially in areas such as Mopani Copper Mines and Konkola Copper Mines, where several sub-contracted companies have been paying below the Government's minimum wage"

(Times of Zambia, 2011d) of US$82 a month. Subcontracted laborers at KCM reportedly received an average of £63 (US$95) a month, but often less, in 2011 (Azaonline, 2011); some said they got only £37 (US$56) ("Konkola Copper Mines, Zambia," 2011). Striking KCM contract workers stated in 2011 that none was paid more than K500,000 or about US$100 a month (Post, 2011b). In 2012, strikers at the Kansanshi mine, owned by Canada's First Quantum (FQ), said they were paid between K1 million and K5 million monthly, indicating that contract workers among them receive half or less of permanents' pay (Daily Mail [Zambia], 2012a). CLM's human resources manager, who had also worked for the previous Luanshya mine owner, has related that before CNMC got the mine in 2009, contract workers there received only half what permanents made (Chola, 2012). A Luanshya MUZ activist has said that after CNMC took over the mine it "increased wages, in some cases fourfold" (Mail & Guardian, 2010). Copperbelt contractors had to be ordered to hike pay to meet 2012's K700,000 revised minimum wage (Daily Mail [Zambia], 2012h).

When account is taken that CNMC mines employ a high ratio of permanents, while KCM, MCM, and others have many very low-paid contract workers, the wage gap sharply diminishes. HRW, however, ignores workforce compositions and actual wage differentials.

CNMC subsidiary CLM's deputy CEO told us in 2011 that Chambishi miners made half what workers make at KCM, Zambia's best-paying mine, while CLM miners got about 80 percent of KCM wages (Gao, 2011). MUZ's president said that CNMC had stated it would provide "industry standard" salaries by 2012. NFCA in fact raised wages in 2012 to almost CLM's level, which now range from 54 percent (lowest basic pay) to 76 percent (highest basic pay) of KCM salaries (see Table 3).[3]

HRW not only exaggerates the wage gap, it offers no explanation but a "cultural" one: that CNMC imports labor practices from China. This explanation is unfounded: there are concrete factors, such as the productivity level and cost of production, that explain (but do not excuse) the actual wage gap. As MUZ's president has observed, "It is common knowledge that undertakings or employers have unique productivity and unit cost profiles and their ability to pay differs from employer to employer, due to numerous factors" (Daily Mail [Zambia], 2012d). Similarly, NUMAW president Mundia Sikufele has acknowledged that when bargaining, branch union leaders should take into account the profitability of their company (Lusaka Times, 2012b).

Productivity and profits at CNMC mines are considerably lower than at others, in part due to CNMC mines having less skilled workforces. The Chambishi main mine was closed for thirteen years before CNMC bought it.

Table 3. Unionized Miners Basic Salary Increases at Foreign-Owned Zambian Copper Mining Firms, 2012

Company	Increase %
NFCA	22
CNMC Luanshya	16
Sino Metals	100–150
CCS	25
Konkola Copper Mines	13
Mopani Copper Mines	17
Lumwana Mining Co.	18
Kansanshi Mining	13
Chibuluma Mines	17

Source. Dow Jones Network, 2012a, 2012b; Platts, 2012; HRW, 2011: 128; *Times of Zambia*, 2012b, 2012c; *Daily Mail* (Zambia), 2012b, 2012e, 2012j; Han and Shen, 2011a; *Post*, 2012.

Table 4. Productivity in Non-CMMC Foreign-Owned Copper Mining Firms, 2010

Firms/mines	Total employees	Copper production (tons)	Tons/worker
Vedanta/Konkola	20,777	217,000	10.4
Glencore/Mopani	16,500	198,000	12.0
Metorex/Chibuluma	843	17,000	20.2
Equinox/Lumwana	3,800	147,000	38.7
FQM/Kansanshi	4,000	233,000	58.3

Source. Steel Guru, 2011a; Metals Bulletin, 2011; TradeMark Southern Africa, 2010; Zambian Parliament, 2010: 19; Ngosa and Van Alstine, 2011: 23.

The Luanshya mine changed owners three times in the decade before CNMC acquired it. Skilled workers thus dispersed to other mines. The main reason for lower productivity and profits, however, is that both are UG mines and have relatively low copper contents (CLM 1.1 percent; NFCA 1.8 percent, versus KCM 2.4 percent) (Wang and Kamanga, 2012). As a leading textbook on mineral processing technology observes, mining costs "vary enormously and are very much higher for underground than for open pit operations" (Wills, 2006: 22).

Productivity at CNMC's two mines (NFCA, 6.6 tons per worker; CLM, 7.9 tons) is much lower than at Zambia's other foreign-owned mines and lower than Zambia's and China's average (see Table 4).

Table 5. Productivity and Wages in China, Zambia, NFCA, and CLM (2009–2011)

Country or company	Copper produced or expected (tons)	Number of workers	Productivity (ton/worker)	Monthly wage (US$)
China (2009)	1,000,000	76,769	13.0	398 (average)
Zambia (2010)	676,198	55,000	12.3	—
NFCA (2011)	23,243	3,500	6.6	229–485 (average 334)
CLM (2011)	18,680	2,350 (in mining)	7.9	358–712

Source. Shang et al., 2010: 16; China Data Online, 2011; Wang, 2012; Gao, 2011; Chilumbu, 2011; Hu, 2012.

Table 6. Non-CNMC Copper Mining Firms Operating Profits Compared with NFCA's, 2010

Company/Mine	Tons copper	Copper × NFCA's copper (24,000)	Operating profits (US$)	Operating profits × NFCA's US$40 million
FQM/Kansanshi	233,000	9.70	997 million	24.9
Vedanta/KCM	217,000	9.00	309 million	7.7
Equinox/Lumwana	147,000	6.10	529 million	13.2
Metorex/Chibuluma	17,000	0.71	47 million	1.2

Source. Table 4; *Times of Zambia*, 2011b; *Post*, 2011a; Steel Guru, 2011b; *China Daily*, 2010. *Note*. MCM declared no profits in 2010 and is under investigation for tax evasion.

Productivity in Zambian copper mines, at 12.3 tons per worker, is about the same as in China, but very low compared to the 100 tons per worker in Chile, the world's largest copper producer, where miners earn US$1,000 a month (Daily Mail [Zambia], 2011a; Telegraph, 2010). Yet, while productivity in Zambia and China is twice that at CNMC mines and productivity in Chile is 13 times higher, CNMC mines pay Zambian workers as much as miners in China and about half what Chilean miners earn. If productivity is taken into account, the argument that CNMC salaries are particularly low fails (see Table 5).

The same is true with profits (Table 6). NFCA's profits began in 2005, seven years after CNMC bought the Chambishi mine. It reported a 2010 profit of US$40 million (Zhang, 2010) and in 2011 said it had US$200 million in profits since 2005, which were reinvested at Chambishi (Han and Shen, 2011c). Productivity at the CNMC Luanshya Baluba mine is about the same as Chambishi's, so profits are likely no higher. In fact, CLM's CEO has stated that production costs at its Baluba mine are so high that it has been loss making, with profits only expected from 2012 onwards from its new OC Mulyashi mine (Luo, 2012).

Three other factors also affect wage levels. First, CNMC investment in relation to output has been very high. NFCA reckons it has invested US$1.4 billion (Times of Zambia, 2010), while KCM, with ten times the production, invested US$2 billion (Post, 2011c). NFCA has budgeted US$800 million more to develop Southeast Ore Body (Times of Zambia, 2011a). CLM spent US$70 million to rehabilitate the Luanshya mine, abandoned by its Swiss owner in 2008. It has spent US$438 million to expand the Baluba mine and construct the Mulyashi mine. CNMC also put US$340 million into its CCS smelting plant (Zambia Review, 2011: 48, 51). Second, due to long continuity of employment by non-CNMC miners and discontinuities at CNMC mines, more non-CNMC miners have moved up their salary ladders (Wang, 2012; Chola, 2012). Third, NUMAW's Chambishi chairman has observed that the Zambian government demands that firms limit wage hikes to avoid spurring inflation (Gillan, 2008).

When the factors noted above are accounted for, CNMC/non-CNMC wage comparisons can be explained in terms of the specific structure, history, and profitability of CNMC's production (Van Bracht, 2012).[4] Yet, HRW report readers will only take away from it that cruel Chinese super-exploit African workers, a point consonant with the mainstream China-in-Africa discourse.

The Issues: Hours

HRW says of the two CNMC processing plants that "most miners at Sino Metals and CCS reportedly work 12-hour shifts, compared to the eight-hour shifts outlined in Zambian law and standard in every other copper mining and processing operation in the country" (HRW, 2011: 3) and that "several Chinese-run copper mining companies require miners to work brutally long hours—72-hour work week for some, 365 days without an off day for others" (Wells, 2011). Western media have expectedly played up this "cruel Chinese" theme. It is sweepingly inaccurate: HRW's report itself says only that workers in certain Sino Metals departments work 72-hour weeks, while an unspecified number work 365 days a year (HRW, 2011), not that workers at "several" firms do so. In fact, the 80 percent of CNMC workers who are at the Luanshya and Chambishi mines put in 8-hour shifts. There are 12-hour shifts, but 48-hour weeks, at CCS. A CCS employee has explained that these are needed because of complex machinery and a lack of trained supervisors.[5] In smelters in Zambia (MCM Mufilira) and Australia (Mt. Isa Smelter) that use the same ISASMELT technology that CCS uses, employees also work 12-hour shifts (Mubita, 2012; Arthur and Li, 2003).[6]

The hours that Zambian miners work do not accord with HRW's representation of work-'til-you-drop Chinese bosses and more enlightened Western-based firms' managers. In 2007, KCM miners reportedly worked more than 8 hours, often up to 12 hours, without overtime pay (Action for Southern Africa et al., 2007: 14–15). In 2008, a Zambian seeking work at Chambishi stated that "his countrymen prefer to be employed by the NFCA rather than other foreign companies. They say they would rather work the 8 hours demanded of them by the NFCA than the 12 hours which is commonplace in other companies" (World News Review, 2008). In 2009, KCM miners worked four 12-hour days, then two days off (Servant, 2009). In 2010, a permanent miner at the Australian-owned Lumwana mine said her colleagues work four 12-hour day shifts, then four 12-hour night shifts, then four days off (Van Niekerk, 2010). In 2012, striking Kansanshi miners demanded that their 12-hours shifts be cut to eight (Times of Zambia, 2012a) and the Industrial Relations Court eventually issued an order to that effect.[7]

A 2011 U.K. media account of MCM noted that miners there "toil six-and-a-half days a week," that is, up to 365 days a year (Davies, 2011). Presumably, thousands of MCM miners work that schedule. Yet, Sino Metals workers who HRW said worked every day were far fewer and, since 2012, all at Sino Metals work 8-hour days and have at least one day off a week (Xu, 2012; Kalasa, 2012). Media reports about HRW's study nonetheless predictably assert that long shifts are a general practice at Chinese-owned mining firms in Zambia and Chinese firms alone, while HRW tells readers they can draw from its report inferences about Chinese practices in Africa generally.

The Issues: Unionization and Job Security

The HRW report notes that MUZ says it is excluded from Sino Metals and CCS. It implies that MUZ is shut out due to its militancy and connection to the PF and that this amounts to a human rights violation. Yet, all four CNMC firms have had one or more major unions. At CLM and NFCA, where four-fifths of CNMC firms' workers are employed, NUMAW and MUZ have bargained jointly with employers; from 2012 that is also so at Sino Metals (Kalasa, 2012).

At the main Zambian copper mines, 50–70 percent of the workforce is unionized (Apotheker, 2009). At Kansanshi in 2011 for example, two-thirds of permanents employees, but half of all workers, were union members (Ngosa and Van Alstine, 2011: 23). By 2008, 70 percent of NFCA workers were already unionized, with both unions present (Apotheker, 2009): in 2011, NUMAW, with 1,000-plus members, was stronger than MUZ there

(Mukuka, 2011). At CLM in 2012, both MUZ (1,100 members) and NUMAW (1,346 members) are strong (Zulu, 2012). MUZ is also recognized at 15 MCC, a CNMC-related company that built CLM's new Mulyashi mine (Mukuka, 2011). Both unions have staunch PF supporters among their leaders (Mwale, 2011; Mwinbe, 2011).

CCS employees stated in 2010 and 2012 that MUZ will likely be present there eventually, but has not yet met the legal criteria for recognition (Fan, 2010; Tembo, 2012).[8] A CCS employee said in 2011 that contrary to HRW's assertion, CCS is unaware of any court order requiring it to recognize MUZ.[9] It would, however, be odd for CCS to display anti-MUZ animus when NFCA, CLM, Sino Metals, and 15 MCC do not. CCS, while a distinct legal entity is, after all, directed by NFCA (Haglund, 2010: 107) and "at CLM, both NUMAW and MUZ operate freely . . . at NFCA, MUZ has operated a branch office since 2006, with NUMAW establishing its own branch office soon after the union's creation in 2003" (Sichone, 2011). There seems no basis then to imply that CCS is politically hostile to MUZ; neither is MUZ hostile to CNMC: the MUZ branch chairman at CLM told us that "when Chinese [took over Luanshya], it was at a time of anti-Chinese sentiment. The union supported [CNMC]" (Mwinbe, 2011).

What has most devastated union activism in Zambia's mining sector is not CNMC, but the sharp decline in membership due to financial crisis retrenchment at non-CNMC firms. MUZ membership dropped from 26,000 before the crisis to 12,000 in 2011 (Mukuka, 2011). CCS is moreover not the only Zambian mining firm where there has been only one union. Chibuluma, owned by South Africa's Metorex until 2012, has had only MUZ (Reuters, 2012). That was seen as an *aid* to organizing: interviewees at Chibuluma have explained that because "the mine has only one union, the MUZ, therefore the membership is easier to mobilize for anything, as opposed to the situation in other mines where there is more than one union" (Lungu and Kapena, 2010: 88).

In Zambia, having one union per workplace or industry is seen as advantaging workers. The Minister of Labor, speaking in 2011 on having more than one union at mining firms, said "we are focusing on supporting the most representative group as a way of ensuring that no confusion is created," indicating a policy of not requiring recognition of more than one union (Debate, 2011). The PF government has since extended the policy to whole industries (Daily Mail [Zambia], 2011d). The Zambia Congress of Trade Unions has called for mergers, as "multiple unions in the same sector are leading to compromised and ineffective negotiations" (Daily Mail [Zambia], 2012c). The head of Zambia's Democratic Governance and Human Rights Advocates has said "having one union will represent the workers effectively" (Times of Zambia, 2011e). While Zambian law allows workers to set up multiple unions in a workplace, it hardly amounts to a human rights abuse if they have only one, provided it represents their interests.

In fact, MUZ itself lists a raft of firms where it is the only union (PWYP Zambia, 2011). MUZ's Southern province organizer Bernard Dolopo has stated with regard to the Collum coal mine, where another union, the Gemstone and Allied Workers Union of Zambia (GAWUZ) and MUZ are both present, that it would have been better to have only one union at the mine to represent the interests of all the miners. (Daily Mail [Zambia], 2012f). And in 2012, MUZ and NUMAW were considering a merger (Chewe, 2012; Kaluba, 2012; FlavaFM radio, 2012).[10] As permanent employees, moreover, CNMC miners are not "barred from joining a trade union at pain of dismissal," as MCM contract workers say they are (Davies, 2011).

The HRW report represents CCS and Sino Metals as union busting, but makes no effort to determine whether MUZ's then absence at both plants had a practical effect on workers' situations. Its readers are again left with the idea of cruelty by Chinese, and only Chinese, employers.

HRW terms CNMC a bad employer, but fails to detail an aspect of CNMC practice that has indisputably benefited workers, that is, providing continuing work when other mining houses do not. The financial crisis hit in late 2008 and by spring 2009, 30 percent of all Zambia's permanent miners and nearly half of all miners were laid off (Matenga, 2010; Muchimba, 2010: 27; Servant, 2009; Washington Post, 2009). After the recovery, the major firms did not hire back all of their laid-off workers: KCM had 11,978 of its own employees in 2008, but 9,696 in 2010 (Times of Zambia, 2011c). MCM had 10,000 employees in 2008, by May 2009 only 7,500, and in 2011, 8,750 (Zambian Parliament, 2010: 18; Times of Zambia, 2009; Davies, 2011). In early 2009, however, CNMC adopted a "three not's" (*san bu*) policy: to not lay off workers, not cut back on planned investment, and not hesitate to make new investments. A study notes that

> the Chinese mine [NFCA] showed a counter-cyclical expansion, with acquisition and re-capitalization of a new mine and continuing investment. . . . The Chinese mine did not cut production, investment, development projects and was also the only one, with the South African mine [Chibuluma], not to retrench workers. (Fessehaie, 2011: 26).

CNMC hired or rehired some 2,400 workers when it acquired Luanshya during the financial crisis (Post, 2010). In contrast, when Luanshya's former

Swiss owner bought it in 2004, it rehired only 1,000 of the 4,000 workers previously employed there (Times of Zambia, 2004). The former owner contracted mining development to a South African firm that hired over 1,000 workers at half the regular wage. After taking over in 2009, CNMC got rid of the contractor and made the 1,000 workers CLM employees, doubling their salaries (Gao, 2011; Mwinbe, 2011). CNMC's "three not's" also benefited firm suppliers, as CNMC, unlike other foreign investors, did not cut back on buying goods and services from locals (Fessehaie, 2011: 60).

The three not's idea was CNMC's, but China's Ministry of Commerce adopted it, despite the potential for substantial losses (Luo, 2011). Similarly, in 2011, Albidon Ltd., 51 percent owned by Chinese SOE Jinchuan, suspended operations at its Munali nickel mine in Zambia, due to low nickel prices and technical difficulties. It agreed, however, to continue paying full salaries to its 2,000 or so workers and to carry on with the "corporate social responsibility" of building schools, hospitals, etc. (Zambian Watchdog, 2011; Lusaka Times, 2012a; Daily Mail [Zambia], 2012g).

Conclusion: Contextualizing HRW's Report

A study of mine labor conditions in Zambia or elsewhere in Africa generally would reveal much more intense abuses than at CNMC firms. These affect millions in Africa, while CNMC in Zambia only employs one-tenth of the country's miners, little more than 1 percent of formal sector workers, and less than a tenth of 1 percent of Zambia's workforce (Mwale, 2011; Zambia Business Survey, 2010: 7), whose conditions outside mining are worse than inside it and often worse at Zambian-owned firms than at foreign-owned ones. For example, the fatality rate for artisanal ("illegal") miners, who average US$3–5 a day, is much higher than at the foreign-owned copper mines. Of 4,300 members of the Federation of Small-Scale Miners Associations of Zambia, founded in 2008, 231 died by the end of 2011, many buried alive (Daily Mail [Zambia], 2011e; Maravi, 2008; Post, 2011d). At the 180 informal mines, all Zambian-owned, miners work manually. Their earnings are as low as US$40 a month and unionization is very difficult (Nyumbu, 2012).

Discussions of rights violations can avoid casting aspersions on a nationality. Martin Luther King once responded to claims that Jewish landlords and shopkeepers exploit African Americans by saying that "the Jewish landlord or shopkeeper is not operating on the basis of Jewish ethics; he is operating on the basis of a marginal businessman" and the solution "is for all people to condemn injustice wherever it exists" (Greenberg, 2010: 223). He understood that structural, not cultural factors created the exploitation at issue. Given the anti-Chinese agitation in Zambia and Western China bashing, HRW could have studied rights violations in Zambian mining generally, to "condemn justice wherever it exists," instead of singling out a Chinese firm. A study of that kind would have found violations common in mining generally; a 2010 Zambia parliamentary committee, made up of ruling and opposition party members, did just that (Zambian Parliament, 2010: 19). Even PF secretary general Wynter Kabimba, referring to mining, has said "there was no distinction between the behavior and practices of European, American and Chinese foreign investors" and that "the excitement about Chinese investments in Zambia was misplaced" (EAZ, 2007: 2–4).

The Chinese share of foreign investment in African mining is far from the largest. Canadian firms are in first place, with US$32 billion as of 2011, a ten-fold increase over the past decade (Bradet, 2011), with one tenth of it in Zambia (Campbell, 2011: 1). As of late 2009, Chinese investment in mining, *for the whole world*, was only US$39 billion (China Ministry of Commerce, 2010), while in late 2010, China's total stock of investment in Africa was US$11.3 billion (Yi, 2011). In 2011, 54 percent of Zambia's copper production came from Canadian-owned mines, one of which (FQM) projects that it will produce more copper in 2015 than all firms in Zambia did in 2011 (Daily Mail [Zambia], 2012i). Contrary to a common assumption, Canadian investments are no less problematic than those of other countries (Keenan, 2011; Campbell, 2011: 1; Tougas, 2010). Studying them would have done more to mitigate abuses than singling out a Chinese SOE in Zambia; unlike the HRW report and anti-Chinese discourse, it also would have not played into (nonexistent) anti-Canadian sentiment.

Labor abuse in Zambian mining is not a pressing rights issue in the wider African context and before HRW's report there was no lack of works by scholars, journalists, and NGOs about labor conditions in Chinese-owned mines in Zambia (Lee, 2009; Haglund, 2009; Kragelund, 2009; Business & Human Rights Resource Centre, n.d.). HRW has a guideline: "We respond to emergencies, but we also challenge entrenched, longstanding, or steadily deteriorating human rights problems" (HRW, n.d.). There is no emergency in Zambian mining and conditions at CNMC firms have improved in recent years, as HRW admits (HRW, 2011). Meanwhile, since the late 1990s, labor conditions at the many privatized firms that make up much of Zambia's formal sector have deteriorated (Lungu and Fraser, 2008; Afrodad, 2007: 8). It is not, however, malpractices arising from privatization that concern HRW, but only those it says are due to a Chinese state presence.

The report's author has stated that the report was conceived in response to "constant questions from African human rights allies, policy makers, and media for our opinion from a human rights viewpoint on China's growing investment in Africa."[11] In singling out a Chinese SOE based on nationality and state ownership, HRW differs from other NGOs that have done firm-level studies of Zambian copper mining. NGOs that studied KCM did so "because of its sheer size" and showed that mining in Zambia has not benefited society, but has brought suffering and disadvantages (Action for Southern Africa et al., 2007: 14–15). They did not focus on KCM because it is U.K.- or ethnic-Indian-owned and did not critically distinguish KCM from other firms. A study of MCM's misbehavior questions "the link between development and mining in general," but makes nothing of the fact that MCM's parent is a Swiss citizen or that its top officers are white. It points out that MCM is "far from a stand-alone case" (Counter Balance, 2010). Ironically, however, NGOs that have examined the worldwide operations of Vedanta and Glencore, owners of KCM and MCM, in terms of safety, environment, and so on, have found them to be among "the worst" (Guardian, 2011; Business Wire, 2012).

In contrast, HRW builds a binary of a Chinese SOE versus Western-based, privately owned firms and makes CNMC a strikingly negative example of investment in Africa. It thus firmly embeds itself in the skewed China-in-Africa discourse. In fact, CNMC does not fit into a binary of "good" and "bad": all mining firms in Zambia exploit the country's labor and natural resources; neither, however, is CNMC "the worst" of the lot.

Chinese firms are latecomers to Zambia. NFCA's early labor practices were indeed deeply problematic,[12] but much has changed since the mid-2000s, in large part because of workers' struggles. For example, MUZ's safety specialist has stated that safety at NFCA began to improve after the tragic BGRIMM dynamite factory explosion in 2005 (Mushota, 2011). The company's anti-unionism was abandoned and collective bargaining agreements signed in 2007 (Lee, 2009). Casualization of labor ended in 2011 and from 2012 all workers are permanent (Mwale, 2011). MSD inspectors, union officials, scholars, and others have noted this evolution. Thus, essentialist "cultural" interpretations that see Chinese practices as basically fixed cannot be empirically sustained. Such racialist essentialism abounds, however, kept alive by forces ranging from Western leaders and media to HRW and Zambian politicians.[13]

HRW decided to make its first study of Chinese investment in Africa about an SOE that has had problematic labor practices, but has also uniquely been the object of long-running, inaccurate, and racialized attacks by biased Western and partisan Zambian media that portray it as exemplifying Chinese investor malpractice in Africa. It was easy to predict there would be thousands of media reports about HRW's study that would pour oil on the fire of anti-China/anti-Chinese sentiment (Dow Jones Network, 2011; Voice of America, 2011b; Radio Free Asia, 2011). They did so to such an extent that China's media-savvy ambassador to Zambia commented that "in the 'Western media' . . . if you have not written something bad about China in a given day, then you have not done your job" (Daily Mail [Zambia], 2011c).

HRW's exercise in bad social science has not told us anything generalizable about Chinese investment in Africa. Instead, it tells us that the discourse that characterizes activities in Africa as deleterious whenever they are Chinese and, especially, state-owned, now takes in even those in the West who assert that they eschew government and media simplicities.

Authors' Note

Some arguments and evidence presented here were previewed in the Africa-focused online forum Pambazuka News. We thank Li Anshan, Dan Haglund, and an anonymous *Modern China* reviewer for their comments and suggestions.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article:

We acknowledge financial assistance for fieldwork provided by our universities and Hong Kong's Research Grants Council.

List of Abbreviations

CCM	Collum Coal Mine
CCS	Chambishi Copper Smelter
CLM	CNMC Luanshya Copper Mine
CNMC	China Nonferrous Metal Mining (Group) Co., Ltd.
FOCAC	Forum on China–Africa Cooperation
FQ	First Quantum
FQM	First Quantum Minerals Ltd.
GAWUZ	Gemstone and Allied Workers Union of Zambia
HRW	Human Rights Watch
KCM	Konkola Copper Mines
MCM	Mopani Copper Mines

MSD	Mine Safety Department (Zambia)
MUZ	Mineworkers Union of Zambia
NFCA	Non-Ferrous Metals Mining Company Africa
NUMAW	National Union of Mine and Allied Workers
OC	open cast (mining)
PF	Patriotic Front
UG	underground (mining)

Notes

1. MSD inspectors provided us with fatality figures by mine for 2006–2011 and identified those that are OC and UG. The inspectors put the UG/OC fatality ratio for the copper mining industry over the years at 8–9:1.
2. We estimate that for other foreign-owned mines as a whole, about half the workforce is in UG mines and half in OC mines. We use 2,300 as the average number of workers for CNMC during 2001–2008, when it only had NFCA's Chambishi mine, and 5,800 from 2009 onwards, when CNMC also had the Luanshya mine (CLM).
3. NFCA/NUMAW-MUZ CBA for 2012; photocopied wage tables from 2012 CLM/NUMAW-MUZ and KCM/NUMAW-MUZ CBAs, provided by MUZ Research Department. There are many wage grades and the ratio of basic wages varies from grade to grade and the many allowances may serve to narrow the ratios.
4. Wage comparisons for Zambia's mines have not been disaggregated by skill level, but a survey about Zambian interaction with Chinese that included respondents working in mining reported that "currently, Chinese wages for skilled labor are comparable to other mines in Zambia and the Chinese owned Luanshya mine even pays better than the Swiss/Canadian owned Mopani mine" (Van Bracht, 2012).
5. E-mail from CCS employee to authors, Nov. 14, 2011.
6. ISA technology, along with 12-hour shifts, has been exported to China from Australia, where it originated.
7. Court Orders.
8. The problem has been that most workers listed on MUZ applications for recognition are still members of NUMAW, in contravention of Zambian law.
9. CCS employee e-mail to authors, Nov. 14, 2011.
10. MUZ has approved merging; NUMAW has concerns.
11. E-mail message from Matt Wells to Yan Hairong, Nov. 26, 2011.
12. See the study of Apotheker (2009), which compared NFCA to the then-Swiss-owned Luanshya Copper Mine (LCM) and also found practices at the latter to be highly problematic.

13. In 2009, PF MP Yamfwa Mukanga, who went on in 2011–2012 to become minister of transport, then minister of mines said "we [the PF] do not hate the Chinese. [But] I hate what they do and their culture" (Zambian Parliament, Debates, Oct. 20, 2009, www.parliament. gov.zm/index. php?option=com_content&task =view&id=1043& Itemid= 86&limit=1&limitstart=3).

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