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ORIGINAL ARTICLE

Mechanised Pits and Artisanal Tunnels: The Incongruences and Complementarities of Mining Investment in the Peruvian Andes

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Abstract

Conflict has become a central concept to understanding the recent expansion of mining across the Andes. Yet, while contestation can emerge and has done so, the continued extraction of minerals requires scholars to attend to how mining projects maintain viability. This article moves beyond analyses of conflict to elucidate the role of compromise in achieving temporary states of homeostasis. Using ethnographic data collected at the Las Bambas copper mine in the highlands of southern Peru, I explore the agential navigation of communities affected by mining and the projects they develop in pursuit of 'a better life'. The article elucidates the challenges that industrial production presents for professional employment, the limitations of boomtown hustling (informal economic activity) for aspiring individuals, and the rise of artisanal mining as a project of social mobility. Ultimately, the acceptance of such 'illegal' mining by corporate proprietors demonstrates the complementary nature that informal and formal extraction play in allaying the momentum of conflict.

Keywords: Andes; Peru; mining; development; informality

My back hurt like hell. I had been stooped for less than an hour, trawling a shovel across the floor of an empty corral, dislodging the caked dung from the stony earth. I had climbed the slopes behind Ccanccayllo,[1] a *comunidad campesina*[2] in the province of Cotabambas, Peru, in the early afternoon with Luis and Gustavo to collect *wanu* (sheep manure), a natural fertiliser to be tipped onto the freshly tilled fields that we had begun to prepare, anticipating the arrival of the rains. It was laborious work, especially at an altitude of nearly 4,000 metres. With my muscles burning, I put the shovel down in search of respite.

[1]Throughout this article, pseudonyms have been used for all communities and individuals.

[2]*Comunidades campesinas* are incorporated collective peasant communities within Peru found predominantly in the highlands. The terms '*comunidad*' and 'community' are used interchangeably.

Gustavo and Luis carried on, laughing as they did so. 'What's wrong, Kieran? Are you still not used to the mountains?' As I rested, I admired the panoramic view extending beyond the corral and the high plateau on towards a ridge that marked the perimeter of the Las Bambas copper project. A fence had not yet been completed to demarcate the mine from its southern neighbours and so the tawny grassland of various peasant communities rolled without interruption to the edge of the pit. There, the greyish subterranean face of a disappearing mountain emerged, as did an enormous industrial conveyor belt, towering above the mine's tailings pond. The murmurs of excavators and dump-trucks were swallowed in the kilometres that separated us, dissolved through rustic tranquillity, leaving the scene as a silent moving image, intimate but distant.

Picking up my shovel once more, I re-engaged with the work at hand. Gustavo and Luis had begun to discuss hypotheticals: if you had money, where would you invest it? What was smart business? Luis challenged Gustavo on his wish to open a clothing store, saying that fashion is a risky business, one that is always shifting with tastes and trends. Gustavo agreed and quickly changed his answer, declaring that a fuel station along the stretch of road that now connected Cusco and Cotabambas would be a solid business.

The heads of our shovels continued to break the crusty floor of the corral. Luis huffed, shifting his attention from personal to corporate coffers: 'The company [MMG, the multinational mining group which owned the Las Bambas concession] should be building a technical college here in Challhuahuacho to train the young men of the community for work in the mine.' Gustavo was quick to respond, '*Claro, no hay chamba*' ('Yes, there is no [other] work'). The sweat, building up under our pullovers, forcing us to peel off layers, seemed to contradict Gustavo's eager affirmation.

We finished dumping the dislodged manure over the wall of the corral where it now sat in a large taupe mound. Thanking Yauri, who had offered the contents of the enclosure in exchange for *caña* (an alcoholic beverage) and coca, we vowed to return in the coming weeks with a truck to collect the fertiliser. As we descended towards the main plaza of the community, I was free to contemplate the complex forms of desire and frustration, hope and disillusionment, found on the margins of Peru's newest mega-mining project. What challenges was the beginning of extraction creating for the local communities along its borders? What opportunities remained within their grasp? What would become of the various collisions produced by the incursion of corporate mining into the highlands of eastern Apurímac? The significance of these questions, presenting not just the prospect of contestation, but the potential for resolution, reverberates beyond the periphery of the Las Bambas copper mine.

For nearly two decades, the spectre of conflict has loomed large over Peru's mineral-rich highlands. Since the 1990s, as the economy was liberalised in order to attract foreign investment, resources have once again become central to the country's development model.[3] Extractive industries and mining projects have grown exponentially, fuelled by resource-hungry economies, particularly in Asia,

[3]Murat Arsel *et al.*, 'The Extractive Imperative in Latin America', *The Extractive Industries and Society*, 3 (2018), pp. 880–7.

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where urban development and consumer electronics abound. While the Peruvian government and pro-industry lobbyists have been quick to celebrate investment numbers, growth rates, poverty reduction and the technological sophistication of contemporary production, the local realities and outcomes of extraction have been anything but unequivocal. Across the country, as corporations have gobbled up more and more concessions throughout the Andes, roadblocks, protests and violence have flared around both productive and prospective mining sites. By the early 2000s, as pointed out by Fabiana Li, the term 'mining conflict' (*conflicto minero*) had begun to permeate the public vocabulary of the nation, saturating political debates, academic papers, newspaper op-eds, radio programmes and even 'everyday conversation'.[4] This prism of conflict is understandable in light of the rate at which the rural hinterlands of the country have been opened up to global capitalism.[5] Yet, given the continued extraction of minerals, scholars must also attend to how mining projects maintain viability; to how compromise and states of homeostasis emerge between corporations and communities. These quasi-pacific states may be temporary, unsustainable and non-uniform, but nevertheless are fundamental to the needs and futures of global mineral production.

Literatures which explore the feasibility of extraction, focusing on the relations of corporations and communities, have rightly emphasised the ways in which asymmetrical power can be used to entice, compensate or coerce populations to bend to the will of industrial exploitation.[6] Analyses of corporate social responsibility (CSR), performance and security measures have explored the plethora of forms and techniques by which contestation can be delegitimised, disarticulated or blunted.[7] These contributions have been highly germane to understanding the maintenance of extractive zones and the continued flow of resources across Latin

[4]Fabiana Li, *Unearthing Conflict: Corporate Mining, Activism, and Expertise in Peru* (Durham, NC: Duke University Press, 2015), pp. 8–9.

[5]Amongst the explosion of academic interest that has mirrored the rise of mining investment in the region, scholars have homed in on particular elements of conflict produced by mining investment: land tenure, environmental degradation, water rights, gender, livelihood transformation, rent-seeking etc. See Javier Arellano-Yanguas, 'Aggravating the Resource Curse: Decentralisation, Mining and Conflict in Peru', *The Journal of Development Studies*, 47: 4 (2011), pp. 617–38; Jeffrey Bury, 'Livelihoods, Mining and Peasant Protests in the Peruvian Andes', *Journal of Latin American Geography*, 1: 1 (2002), pp. 1–19; Anthony Bebbington and Mark Williams, 'Water and Mining Conflicts in Peru', *Mountain Research and Development*, 28: 3 (2008), pp. 190–5.

[6]For overview, see Jerry K. Jacka, 'The Anthropology of Mining: The Social and Environmental Impacts of Resource Extraction in the Mineral Age', *Annual Review of Anthropology*, 47 (2018), pp. 61–77.

[7]Anthony Bebbington, 'Extractive Industries and Stunted States: Conflict, Responsibility and Institutional Change in the Andes', in Ravi Raman and Ronnie D. Lipschutz (eds.), *Corporate Social Responsibility: Comparative Critiques* (Basingstoke: Palgrave Macmillan, 2010), pp. 97–115; Fabiana Li, 'Documenting Accountability: Environmental Impact Assessment in a Peruvian Mining Project', *Political and Legal Anthropology Review*, 32: 2 (2009), pp. 218–36; Thomas Perreault, 'Performing Participation: Mining, Power, and the Limits of Public Consultation in Bolivia', *Journal of Latin American and Caribbean Anthropology*, 20: 3 (2015), pp. 433–51; Elana Shever, 'Engendering the Company: Corporate Personhood and the "Face" of an Oil Company in Metropolitan Buenos Aires', *Political and Legal Anthropology Review*, 33: 1 (2010), pp. 26–46. For analysis of policing and securitising extraction zones, see Marina Welker, '"Corporate Security Begins in the Community": Mining, the Corporate Social Responsibility Industry, and Environmental Advocacy in Indonesia', *Cultural Anthropology*, 24: 1 (2009), pp. 142–79.

America and the world. Here, however, I am more interested in exploring the space for, and role of, compromise; in elucidating, in the words of Judith Verweijen and Alexander Dunlap, the 'myriad', 'indirect', and 'subtle' ways in which viability arises amidst discontent and inequalities.[8] Scholars interested in such exploration and elucidation must be attuned not only to the imposition of, for example, 'counter-insurgency' measures by corporations and governments (as in the case of Andrea Brock and Dunlap),[9] but also to the ways in which individuals 'carve out a livable space for themselves between not one, but many, rocks and hard places'.[10]

Drawing on a wide range of regional and disciplinary debates, this article, following in the wake of Luis and Gustavo's frustrations and yearnings, burrows into the peripheries of the Las Bambas copper mine to explore these very concerns. Placing particular emphasis on the agency of populations on the margins of extraction and the projects they construct from the opportunities at hand, the article highlights the unintended compromises that emerge between corporation and communities, allowing capitalism to function smoothly.[11] The article begins by elucidating the persistent struggle for 'the better life' that reverberates throughout Cotabambas and its centrality for local orientations towards extractive development. Through ethnographic description, I move on to document the challenges and incongruences that contemporary mining poses for Andean peoples interested in social mobility. As industrial techniques close off avenues for professional employment, so the article shows, individuals are forced to navigate the unique constellations of informality that resource frontiers create. Ultimately, as the activities of boomtown hustling[12] fail to generate sustainable incomes and livelihoods, artisanal mining emerges as a widespread remedy to counter development incongruences over time.

Importantly, in documenting the rise of artisanal mining, I build on Hannah Appel's concept of 'frictionless profit',[13] arguing that corporations cannot rely solely on the tactics of social engineering (whether hard or soft), but must remain open and responsive to alternative projects of betterment initiated 'from below'. Here, the article shows that minerals which cannot be fully enclosed by MMG

[8]Judith Verweijen and Alexander Dunlap, 'The Evolving Techniques of the Social Engineering of Extraction: Introducing Political (Re)actions "From Above" in Large-Scale Mining and Energy Projects', *Political Geography*, 88 (2021), pp. 186–204.

[9]Andrea Brock and Alexander Dunlap, 'Normalising Corporate Counterinsurgency: Engineering Consent, Managing Resistance and Greening Destruction around the Hambach Coal Mine and Beyond', *Political Geography*, 62 (2018), pp. 33–47.

[10]Elana Shever, *Resources for Reform: Oil and Neoliberalism in Argentina* (Stanford, CA: Stanford University Press, 2012), p. 20.

[11]Cf. Hugo Romero Toledo, Angélica Videla and Felipe Gutiérrez, 'Explorando conflictos entre comunidades indígenas y la industria minera en Chile: Las transformaciones socioambientales de la región de Tarapacá y el caso de Lagunillas', *Estudios atacameños*, 55 (2016), pp. 231–50.

[12]'Hustling', here, encapsulates a savvy and creative means of making ends meet, or, in the words of Nanna Jordt Jørgensen, of '[surviving] … through improvisation … making the most of any available opportunities for gaining a bit of income': 'Hustling for Rights: Political Engagements with Sand in Northern Kenya', in Elina Oinas *et al.* (eds.), *What Politics? Youth and Political Engagement in Africa* (Leiden: Brill, 2018), p. 143.

[13]Hannah Appel, 'Offshore Work: Oil, Modularity, and the How of Capitalism in Equatorial Guinea', *American Ethnologist*, 39: 4 (2012), pp. 692–709.

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become sources of compromise and negotiation rather than of conflict and violence. The 'illegal' artisanal mines initiated by the communities throughout the region become implicitly accepted by corporate policy, which folds artisanal mining into the company's strategic engagement with communities rather than contesting ownership over copper. Through such policy, a complementary nature of formal and informal labour emerges, one that mitigates the inequalities of extractive development to maintain degrees of viability for mining capitalism in this corner of the Andes.

The data presented in the article are the product of 15 months of anthropological fieldwork between 2016 and 2017, when I lived, worked and studied amongst over a dozen communities that surround the Las Bambas copper project. While the mine's historical context was absorbed through a review of corporate and civil society documents,[14] the majority of the material for this article was collected through semi-structured interviews, informal conversations and the serendipitous events of participant observation. Ccanccayllo, as my base community and home to my most trusted informants, plays a prominent role in the emergence of issues presented here. However, the central claims of the article are corroborated by interviews and observations across communities in Cotabambas to reveal a broader regional picture. Importantly though, given my own positionality (as a male foreigner) and gendered cultural practices of the rural Andes, my trusted informants were predominantly male. As such, the use of the term *comunero*[15] throughout the article is purposely gendered to capture this masculine bias, reflecting a limitation of the article that should be kept in mind.[16]

Mining, Migration and the 'Search for a Better Life'

Miguel stood up with a sigh, reluctant but duty-bound, soon offering his hand. It was late, and we had not yet completed tilling the *chacras* (agricultural plots), a task which had pulled all the able bodies of Ccanccayllo out of their beds earlier that morning. Our moment of rest was over; the barrels of *chicha* (fermented maize drink) that we had lugged uphill were now empty and the women had stopped singing: signs that revelry must make way once more for the final push of the plough. The rains were approaching. The earth had to be prepared for sowing.

[14]MMG, *Las Bambas Sustainability Report*, Lima, 2017 (http://online.fliphtml5.com/zexo/xmbe/#p=1; last accessed 10 July 2022); CooperAcción, *Caso Las Bambas: Informe Especial 2015*, Lima, 2015 (https://cooperaccion.org.pe/wp-content/uploads/2015/10/2015-10-Las-Bambas-informe-OCM.pdf, last accessed 9 July 2022); ProInversión, *Las Bambas: Un modelo de desarrollo sostenible* (Lima: Agencia de Promoción de la Inversión Privada, 2005).

[15]The word describes members of a *comunidad campesina* in Peru. However, its regional use extends beyond this formal definition, encompassing locals of the province regardless of their 'official status'. Throughout the article, the latter more general use is employed.

[16]For interesting insights into the nuances of women's lived experience on the margins of extraction, see Inge A. M. Boudewijn, 'Negotiating Belonging and Place: An Exploration of *Mestiza* Women's Everyday Resistance in Cajamarca, Peru', *Human Geography*, 13: 1 (2020), pp. 40–8; Katy Jenkins, 'Unearthing Women's Anti-Mining Activism in the Andes: Pachamama and the "Mad Old Women"', *Antipode*, 47: 2 (2015), pp. 442–60. For more global comparisons see Negar Elodie Behzadi, 'Women Miners' Exclusion and Muslim Masculinities in Tajikistan: A Feminist Political Ecology of Honor and Shame', *Geoforum*, 100 (2019), pp. 144–52.

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Ccanccayllo, one of the 18 'affected communities'[17] that encircle the Las Bambas copper project, located in the eastern province (Cotabambas) of Apurímac, had become my adopted home in the region. In the months prior to my afternoon with Miguel I had eagerly conducted formal interviews with knowledgeable elders, attempting to ascertain a social and historical footing from which to interpret changes caused by the encroachment of industrial mining. These authoritative figures paid little heed to the direction of my culturally specific inquiries: they elided the topics of *apus* (mountain spirits) and animate landscapes, brave cattle rustlers[18] and communal reciprocity, and instead turned to themes of historical marginalisation. For them, Cotabambas was best understood neither through prisms of identity or livelihood but in terms of neglect: a smattering of villages which had suffered decades of drought and endemic poverty, without electrification, running water or basic sanitation. It *was*, in their words, a region 'forgotten' (*olvidado*) by government investment, concerns and initiatives.[19] The past tense of the description suggested that the mine had the potential for, or at the very least elicited the expectation of, inclusion in the dynamics of national development.

On this particular afternoon, recognising that the hours of daylight were dwindling, we divided up into small groups to turn the soil of the remaining plots. Miguel, an affable young man I had developed rapport with, led me away to a field on the northern fringes of land assigned for cultivation. The moment provided a natural opportunity to open up my research to voices and histories beyond formal interviews and gatekeepers.

We worked in tandem; he churning the earth in straight and narrow furrows with precise movements of his foot plough, while I dropped seed potatoes into the drills at measured intervals. As we moved quickly to complete the sowing, Miguel began to speak openly about his life:

> I was born in Ccanccayllo and I used to till these fields with my father and brothers. I remember passing through here with my father's sheep. They were small and never fetched a good price in the market, so we remained poor. My father never had much money for us or our future.

I replenished the pouch of potatoes fastened around my waist, and as we shifted east to begin the final drill, I asked him to continue.

[17]Within mining regions in Peru, zones of 'affectedness' are determined by the technical assessments carried out as part of an Environmental Impact Assessment (EIA) prior to exploitation. Communities are identified in reference to both mineral deposits and points of environmental concern (water sources in particular). In the case of the Las Bambas project, 18 communities were officially recognised as being 'affected' by the mine (Golder Associates, 'Estudio de Impacto Ambiental Proyecto Minero Las Bambas: Resumen Ejecutivo', prepared for Xstrata Tintaya S.A., Arequipa, 2010, pp. 15–26). However, the local politics of 'affectedness' is subject to broader debates by communities and individuals who are not incorporated under the official designation.

[18]One of the few ethnographic studies carried out in Cotabambas investigated the history and culture of local cattle theft, giving the region a certain outsized reputation as a lawless frontier of Peru. See Ricardo Valderrama and Carmen Escalante, *Nosotros los humanos: Testimonio de los quechuas del siglo XX* (Cuzco: Centro de Estudios Regionales Andinos/Bartolomé de las Casas, 1992).

[19]Maria-Therese Gustafsson, *Private Politics and Peasant Mobilization: Mining in Peru* (Cham: Palgrave Macmillan, 2018); cf. Mattias Borg Rasmussen, 'Tactics of the Governed: Figures of Abandonment in Andean Peru', *Journal of Latin American Studies*, 49: 2 (2017), pp. 327–53.

> Education was never great in the area. There was a small primary school below the community in Récord which I went to. It was basic; standard for rural Peru. When I finished, I told my parents I wanted to continue and so left for the city [Abancay] where I lived with my great-aunt and enrolled in secondary school.

Miguel smiled as I began to jot furiously in my notebook. He helped seed the earth, covering for my productive lapses, and then continued to speak as we strolled down the hill towards the community truck.

> I had to work while I studied. I sold ice cream in the street before beginning a job in a van taxi, operating the door and collecting fares. Through this I helped contribute to the household and cover school costs. I finished school and immediately made plans to enrol in university, but I moved to Arequipa and got mixed up with the wrong people. Drinking and partying all the time. Thankfully, in 2009, I returned here to Ccanccayllo with my family because of the mine.

Crossing a stream and unloading our sacks and tools onto the flatbed, Miguel concluded his history, 'That's life.'

Miguel's narrative was not only informative and interesting but ordinary. Indeed, as I spoke with more and more individuals from Ccanccayllo and neighbouring communities, I slowly discovered that contemporary demographics surrounding the Las Bambas copper mine were configured by recent migration trends. The community of Ccanccayllo had more than quintupled since 2010; a dozen inhabitants had grown to almost 80 in number. The populations of other affected communities, such as Huacullo and Pampahuara, had swelled into the hundreds. The migratory boom was legible, to the trained eye, within the physical layout of communities. Historically, *casas antiguas* (lit. 'ancient houses') were dispersed throughout the hillside, usually as solitary structures, occasionally, and despite extensive deforestation, falling under the shade of a few trees. Following the great returns to communities throughout the province, the construction of houses became concentrated in designated neighbourhoods, known locally as 'plazas'. *Retornantes* ('returners') was the colloquial name given to the deluge of migrants from the city. It was at times an ambiguous term, given that many individuals were not even born in the region, but they were said to be returning to the land of their parents. Furthermore, some of the elders I initially approached as cultural custodians had only recently returned themselves, having left the region decades earlier following the droughts and poverty so central to their historical recollections. All in all, their life histories drew attention to the fact that huge shifts in migration were convulsing the region.

Most importantly, though, these migratory trends were almost uniformly animated by desires to progress in life. Much like Miguel's, the lives of individuals, within both Ccanccayllo and the neighbouring communities I increasingly visited, were couched in terms of a 'search for the better life'. As was evidenced by this oft-repeated phrase, which saturated the life histories that I compiled in the region, the project of improving the conditions of one's life was paramount. Scholars working throughout Peru and Latin America have elsewhere noted the motivating

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convictions of 'getting ahead', 'advancing' and 'improving oneself' as central to the lives of Andean peoples.[20] The progressive phraseology used in these various locales has roots in historical poverty and economic marginalisation. However, aspirations for improvement, as noted by Krista Van Vleet, are equally entangled with rigid class, racial and symbolic hierarchies in Peru: cultural frameworks that work to construct the rural Andes as backward.[21] Thus, the search for the better life in Cotabambas, I would argue, fits within a broader tradition of climbing the steep inequalities of Peruvian society: a project, fundamentally, of social mobility.

Significantly, this search for the better life had once been exclusively associated with the city, where standards of education and opportunities for employment were deemed more plentiful; where the trappings of social advancement were more easily attainable.[22] However, following Peru's mining boom, certain forgotten corners of the country became nodes of corporate interest and subject to grand promises. Indeed, beginning in 2004, after the original sale of the Las Bambas concession to Xstrata Copper,[23] Cotabambas became not only highly publicised and promoted within the national media, but overrun by recurring waves of 'officialdom'. Years of exploratory drilling by geologists and technicians coincided with the encroachment of corporate and government social teams which travelled through the province disseminating promises of investment, modernity and progress tied to the impending commencement of the mine.[24] These social teams, in many ways, can be seen as the foot soldiers of 'expectation'[25] or of what, more recently, Gisa Weszkalnys has referred to as the 'affective resonance' that resource extraction comes to hold for local populations.[26] Their nebulous promises of advancement found counterpoints in a region whose residents and diaspora were equally concerned with historical neglect and development. Thus, as mineral optimism began to saturate this highland corner of Apurímac, it became little wonder that so many individuals such

[20]See Ulla D. Berg, *Mobile Selves: Race, Migration, and Belonging in Peru and the U.S.* (New York: New York University Press, 2015); Anahy Gajardo, 'Performing the "India Permitida": The Counter-Gift of Indigenous Women Targeted by a Corporate Social Responsibility Programme (Chile)', *Bulletin of Latin American Research*, 40: 2 (2021), pp. 172–87; Jessaca B. Leinaweaver, 'Improving Oneself: Young People Getting Ahead in the Peruvian Andes', *Latin American Perspectives*, 35: 4 (2008), pp. 60–78; Karsten Paerregaard, *Linking Separate Worlds: Urban Migrants and Rural Lives in Peru* (Oxford: Berg, 1997).

[21]Krista E. Van Vleet, *Hierarchies of Care: Girls, Motherhood, and Inequality in Peru* (Urbana, IL: University of Illinois Press, 2019).

[22]The historical significance of this should not be underestimated. While migratory movements of people in Peru is nothing new, traditionally the greatest flows of Peruvians have been those to the urban margins from rural villages. See Eric Hirsch, 'Investment's Rituals: "Grassroots" Extractivism and the Making of an Indigenous Gold Mine in the Peruvian Andes', *Geoforum*, 82 (2017), pp. 259–67; Peter Lloyd, *The 'Young Towns' of Lima: Aspects of Urbanization in Peru* (Cambridge: Cambridge University Press, 1980).

[23]Though the Anglo-Swiss multinational Xstrata won the initial bid for the Las Bambas concession in 2010 and carried out the early social work in the region, the project was sold to MMG in 2014.

[24]Gustafsson, *Private Politics*, p. 145.

[25]James Ferguson, *Expectations of Modernity: Myths and Meanings of Urban Life on the Zambian Copperbelt* (Berkeley, CA: University of California Press, 1999).

[26]Gisa Weszkalnys, 'A Doubtful Hope: Resource Affect in a Future Oil Economy', *Journal of the Royal Anthropological Institute*, 22: S1 (2016), pp. 127–46.

as Miguel had returned 'because of the mine', believing in the potential it might hold for the better life they sought.[27]

With the central power of social mobility emerging as a dominant rationale for life projects, the questions of what the 'better life' might constitute, and how the Las Bambas mine might provide it, began to bear down upon me. How exactly might the capacious promises of, and desires for, progress – those offered by the mine and held by communities – intersect? I invited a trusted informant, Óscar, then vice-president of Ccanccayllo, to a popular cantina in the boomtown of Challhuahuacho as a first step.[28] He was a *retornante*, born and raised in Abancay, spending his youth in the streets of Cusco and Lima, before migrating back to Cotabambas (the province of his parents) following the announcement of the Las Bambas copper mine. On this particular day, the cantina's afternoon hum conducive to conversation, I asked what he wished for from life – where he saw himself and what it was he believed would sustain him and his family. 'Will you remain in Ccanccayllo?' Óscar shook his head emphatically, stifling a chuckle, handing me the glass he had just emptied.

'I want to open a clothing store', adding words to gesture. 'Sell shoes, hats, shirts. Brand name stuff. Nike; Adidas. I've always wanted to open a store in the city. I've never had the money. Not yet, anyway.'

'In the city? Which city? Here in Challhuahuacho?', I pushed further.

'No, not here. I have a family to return to. Either Abancay or Lima.'[29]

'Where might this opportunity come from?' My question came across as laughable. 'The mine, of course!'

As we waited for the delivery of the next beer bottle, I was forced to privately consider the spectre of incongruence: the tentative and fragile gulf that separated aspirational futures and the contemporary moment. The search for the better life throughout Cotabambas depended on the finer details of modern extraction's arrival in this forgotten region: its development precepts, tax dollars and industrial methods. How corporate policy and production came to relate to desires for social mobility over time – following the project's ideational beginnings – became pertinent to understanding the realities and futures of a once forgotten region. Emerging incongruences between image and reality, between hope and practicality, if not properly negotiated, had the potential to undermine mineral optimism and foster the emergence of contestation and conflict.

'Modern Mining', Professionalisation and *Chamba*

Throughout late 2016 and into 2017, outside the rhythms of the agricultural cycle, a certain vibrancy continued in Ccanccayllo due to the ongoing construction of a new school. It was the first major project to flow from mineral tax payments. From January of 2016, dozens of primary schools began to be built in the communities

[27]Kieran Gilfoy, 'Toxic Endurance and Social Becoming: Environmentalism in the Shadows of Andean Extraction', *The Extractive Industries and Society* (2021): https://doi.org/10.1016/j.exis.2021.100930.

[28]Challhuahuacho, once a small back-water municipal town of adobe houses, became an energetic boomtown of services and speculation owing to its proximity to the Las Bambas concession.

[29]Óscar had a partner and child who had remained in the barrio of Villa El Salvador on the outskirts of Lima.

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of Cotabambas, endowed in accordance with the logic of 'social responsibility' (i.e. infrastructural investment). During the morning of those early months, the men of Ccanccayllo emerged from their homes after breakfast, latched on to the end of wheelbarrows and concrete trowels, and continued, piecemeal, to erect the community's first development project.

One afternoon I stepped into the adobe home of Gustavo. He and his wife had recently migrated to the community from Cusco and Abancay and had reached an agreement with the contractors in charge of the school project, according to which they would provide meals for the specialist labourers (electricians, plumbers, etc.) recruited from beyond the province. Sitting on a wooden bench, I began to peel potatoes with Gustavo and his wife Sofía. At our side huge pots of water gurgled over a propane fire.

'*No hay chamba*', Gustavo declared, almost under his breath. It was not the first time I had heard him utter the phrase. It was he, after all, with whom I had shovelled sheep manure a few months previously. Yet, as we sat there near the school construction site, sheathed by the echoes of hammers and only metres away from churning cement mixers, I found myself deeply confused. 'I will have to return to Lima soon and look for work', he added.

At the time, I did not have the cultural confidence to challenge what appeared to be cognitive dissonance. Yet, it was an issue my research could not ignore. The assertion of there not being work reverberated throughout the region, trailing me from community to community. As I arrived in Huacullo, Marqqueca, Urucancha and Sachapuna to speak with friends and acquaintances, they bemoaned the absence of work, often with the ongoing construction of a school behind them; dry cement still on their hands. It became apparent that, in some manner, the extension of community projects both disrupted and highlighted local notions of labour.

Answers began to surface through an excavation of the region's recent past. The *comuneros* of Cotabambas pointed me towards a previous epoch, one in which the province began to be transformed by the initiation of the Las Bambas project. In 2012, just one year after the government approved the copper mine's EIA and the mine was formally authorised,[30] major flows of return migration intensified to the region and, importantly, the construction phase of the project began. The building boom of the time entailed a concentrator plant, a dramatic expansion of the mining camp, heavy-haul roads through the districts of Challhuahuacho and Mara towards the Cusco border, and, beginning in 2013, a massive housing complex for the relocation of Fuerabamba (a community which rested atop the main deposits of copper). Young and old alike were immediately absorbed into a burgeoning bricks-and-mortar economy, driven by construction firms which had won contracts to meet the infrastructure needs of the mine. Memories retold in my presence painted Cotabambas as a dynamic province during these years, filled with *retornantes* and other transient migrants, cement bags and gravel mounds. My interlocutors, beyond expounding the sheer scale and sophistication of these work programmes, spoke in nostalgic tones about elements of labour quality: corporate transportation, catered meals, 'modern' equipment, hourly wages, and, most often, work uniforms emblazoned with the logo of a (any) firm. Indeed, nearly

[30]CooperAcción, *Caso Las Bambas*, p. 3.

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all of my friends in the region who had been employed by construction contractors during the building boom retained and displayed Facebook photos 'on the job' which highlighted the presence of heavy machinery and the fluorescent jackets of company attire. Tied to this construction phase was the extension of corporate technical programmes to affected communities. The *comuneros* of Ccanccayllo and beyond participated in training workshops, organised by sectors of trade: electrical, welding, heavy machinery training, etc. Though they often laughed and teased each other about test results, there seemed to exist a general belief that these workshops were neither performative nor illusory; that they seemed to map out a desirable trajectory worthy of our consideration.

During fieldwork and the compilation of life histories, the term 'professional' continuously crept into conversations – whether describing men's search for employment, or women's efforts to educate their children. As an idea identified by social scientists working in the southern highlands of Peru, it remains without clear conceptual boundaries.[31] According to Paul Gelles, to become a professional is associated with escaping marginalisation and achieving social status by obtaining 'steady salaries in "respectable jobs"'.[32] In this regard, and much like social mobility, professionalisation does not simply connote material or economic advancement, but the cultural clout imbricated with particular forms of work (i.e. skills, attire, etc.). Within the specific context of contemporary Cotabambas, I would argue, as the building boom consumed the province, experiences with contractors – sprinkled with trappings of prestige – engendered a previously elusive desire for formal labour among young men. Participation in technical training, furthermore, worked to specify the better life that extraction could promise: creating anticipation for social mobility via professional employment in the industrial production of copper.

However, by 2016, construction of the mine and its operational infrastructure were completed and building contracts had expired. Training workshops ended, and immense labour reserves began to build up within the communities. A new programme was initiated in which affected communities would be offered temporary, ephemeral and drastically reduced work contracts inside the mine's perimeters: one or two persons per community for only a few months per year.[33] To supplement the dramatic change in work patterns, an advance of the '*canon minero*' (a corporate tax payment scheme for mineral extraction) was agreed which attempted to kick-start the cycle of community development projects. By 2017, as wheelbarrows and rudimentary cement mixers gave the appearance of dynamic community activity, within the Las Bambas mine proper only 8.4 per cent of the production workforce comprised *comuneros* from Cotabambas.[34]

[31]See, for example, María Elena García, *Making Indigenous Citizens: Identities, Education, and Multicultural Development in Peru* (Stanford, CA: Stanford University Press, 2005); Paul H. Gelles, *Water and Power in Highland Peru: The Cultural Politics of Irrigation and Development* (New Brunswick, NJ: Rutgers University Press, 2000).

[32]Gelles, *Water and Power*, p. 45.

[33]Cf. Matthew Himley, 'Regularizing Extraction in Andean Peru: Mining and Social Mobilization in an Age of Corporate Social Responsibility', *Antipode*, 45: 2 (2013), pp. 394–416.

[34]MMG, *Las Bambas Sustainability Report*, p. 49.

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These outcomes reflected a structural shift in contemporary mining within Latin America and its attendant development outcomes. In Peru specifically, the promotion of foreign investment in extraction, following the turn of the millennium, was often couched within the rubric of 'modern mining': 'new' practices based on scientific leaps – mining that now 'relied on chemical processes, powerful machinery, and sophisticated laboratories'.[35] Though the national shift towards large-scale industrial mining projects had begun in the 1950s in the deserts of southern Peru,[36] open pits themselves did not flourish in the Andes until after the country's neoliberal turn during the 1990s. The emergence of modern mining was hailed by government and industry officials, primarily, as a countervailing campaign against the legacies of pollution increasingly associated with extraction.

Yet, beyond environmental concerns, labour relations too were changing with the onset of modern industrial methods. While employment at Peru's expanding sites of operation were becoming less dangerous, more highly skilled and better compensated, mining capitalism now required less manpower.[37] This fundamental reality of new mega-projects revealed a dramatic historical turning point, one in which technological advancements and mechanisation rendered the rural Andean body surplus to the processes of pulling minerals out of the ground.[38] As open pits replaced antiquated tunnels – mountains devoured rather than pilfered – large swathes of an expectant and mobile labour force were becoming idle and marginal. Ironically, as mining became more professionalised, it offered fewer direct opportunities for *professionalisation*. Rather than be incorporated into the prestigious technical workforce of the coalface, local populations would instead be recipients of low-skilled and short-term infrastructure projects funded via corporate tax payments and funnelled through regional and municipal governments.[39]

It is here that the complaint '*No hay chamba*' begins to become perceptible and significant. Gustavo and other *comuneros* throughout Cotabambas were bemoaning the absence of a particular kind of work that accompanied the maturation of the Las Bambas frontier from the project's initial ideational optimism, through the early construction boom and onwards to exploitation and production. Where once migratory returns to the region seemed to be legitimated by the promises of formal employment and professional clout, the onset of production expelled huge segments of the populations from the dynamic core of extraction, to look on from the margins amidst the intermittent extension of development projects.

[35]Li, *Unearthing Conflict*, p. 19.

[36]Elizabeth Dore, 'Environment and Society: Long-Term Trends in Latin American Mining', *Environment and History*, 6: 1 (2000), pp. 1–29.

[37]See Himley, 'Regularizing Extraction'; Stuart Kirsch, *Mining Capitalism: The Relationship between Corporations and their Critics* (Berkeley, CA: University of California Press, 2014); Martín Arboleda, *Planetary Mine: Territories of Extraction under Late Capitalism* (London: Verso, 2020).

[38]See Himley, 'Regularizing Extraction'. For a historical overview see Kendall W. Brown, *A History of Mining in Latin America: From the Colonial Era to the Present* (Albuquerque, NM: University of New Mexico Press, 2012) and Elizabeth Dore, *The Peruvian Mining Industry: Growth, Stagnation, and Crisis* (London: Routledge, 1988).

[39]See John Crabtree, 'Funding Local Government: Use (and Abuse) of Peru's Canon System', *Bulletin of Latin American Research*, 33: 4 (2014), pp. 452–67.

This point, I would argue, is a central element of emerging incongruences that fester in the peripheries of contemporary mining in the highlands of Apurímac.

The challenge becomes to interpret and further investigate this decoupling of social mobility from formal employment. While the technological advancements of contemporary extraction in Peru make local populations superfluous to modern mining,[40] the search for the better life remains, placing new demands on local communities and individuals alike. Where once mineral production depended upon indigenous labour, industrialisation leaves desires for social mobility to seek out alternative avenues for progress. While classical ethnographies of resource exploitation in Latin America investigated the local consequences of capitalist *exploitation*,[41] the industrial techniques of modern mining force scholars to explore the lived experience of a capitalist endeavour uninterested in exploiting local labour.[42] How these emerging incongruences between expectation and reality are traversed leads into the questions that follow: what alternatives exist for *comuneros* in the absence of professional *chamba*? What new strategies for social mobility can be found for aspiring communities beyond the open pit of industrial production?

Hustling and Informality in Challhuahuacho

With the rain and mud that coated the empty chemical containers, the footing was treacherous. I walked atop their slick plastic tops in constant fear of falling. Víctor moved with much more assurance, counting the containers as he hopped from one to another, inspecting their quality for re-sale. He shouted at us when he arrived at the end of the stacked vessels, verifying Ernesto's original total of 42.

We were in the yard of their cousin Julio's business, one of a minority of 'winners' on the Las Bambas frontier. As an individual married to a Fuerabambina, Julio had negotiated special treatment through preferential corporate contracting and ran a business supplying the mine with industrial chemicals required for mineral processing.[43] Constant pestering from Víctor and Ernesto regarding the absence of work in Ccanccayllo had raised his concern, putting him on the look-out for opportunities to offer his cousins. He had heard that the used containers –

[40]For further reading on rise of 'surplus populations' in contemporary capitalism, see Kathleen M. Millar, *Reclaiming the Discarded: Life and Labor on Rio's Garbage Dump* (Durham, NC: Duke University Press, 2018); James Ferguson, *Give a Man a Fish: Reflections on the New Politics of Distribution* (Durham, NC: Duke University Press, 2015); Tania Murray Li, 'After Development: Surplus Population and the Politics of Entitlement', *Development and Change*, 48: 6 (2017), pp. 1247–61.

[41]June Nash's *We Eat the Mines and the Mines Eat us: Dependency and Exploitation in Bolivian Tin Mines* (New York: Columbia University Press, 1979) and Michael T. Taussig's *The Devil and Commodity Fetishism in South America* (Chapel Hill, NC: University of North Carolina Press, 1980) are primarily concerned with the 'devilish' consequences of a labour force folded into global capitalism. Contemporary extraction turns the riddle on its head, pushing locals aside from production activities. The new 'devil' must be found in the margins of exploitation.

[42]James Ferguson, 'Declarations of Dependence: Labour, Personhood, and Welfare in Southern Africa', *Journal of the Royal Anthropological Institute*, 19: 2 (2013), pp. 223–42.

[43]Fuerabamba was a *comunidad campesina* that sat directly upon the first prominent deposits which Xstrata and then MMG intended to exploit, and thus was relocated. As part of the negotiations on the relocation agreement, Fuerabamba stipulated preferential contracts for service provision with the mine owners.

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measuring a cubic metre – that were returned to his yard could be re-sold in Cusco for 150 Peruvian *soles* (US$40) per unit. Víctor and Ernesto leapt at the prospect, borrowing a large flatbed truck from their cousin and requesting my help.

We took rough measurements of the truck's cargo space and began the arduous task of moving the containers from the muddy floor of the yard onto the flatbed. Fingers and feet were painfully jammed trying to fit the awkward and misshapen merchandise into the space allotted. There were few considerations of health and safety as the acrid chemical fumes which leaked out from the open tops of the containers burned our throats and seared our eyes. After two hours, we had been able to stack and secure some 24 plastic vessels for the overnight journey to Cusco. The remaining containers would have to wait until Ernesto and Víctor returned. Behind agitated and blood-shot glares, they thanked me before running off into the night in search of a driver.

As alluded to above, the de-professionalisation of expectations that accompanied the onset of industrial production did not mark an end to desires for social advancement. Rather, the maturation of the mining zone demanded further 'navigation' by individuals in search of the better life.[44] By the beginning of 2017, the school in Ccanccayllo had been completed. Though it had been a short-term, low-skilled development project lacking the prestige and formality *comuneros* longed for, it had, at the very least, provided a daily stipend. The extent of the production shift in extraction and the completion of the school was captured forcefully by *las casas con candados* (padlocked houses). Those *comuneros* who retained strong connections with 'the city' bolted their doors in the neighbourhood and returned to the urban margins, ostensibly until something changed (the commencement of the next development project; alterations to work rotas, etc.). Those who remained in Cotabambas during this liminal period began to orient their daily lives more and more towards the boomtown of Challhuahuacho. The town, built to service the mine, held the alluring possibility of informal labour which seemed to compare favourably to the increasing isolation and lethargy of the peasant community. However, as many of my friends and acquaintances would come to learn, income-generating activities – even in the boomtown – were fleeting and sparse. The marginal relations between corporate extraction and its social peripheries revealed a disjointed circulation of economic dividends between mine and region, presenting new challenges in the search for social mobility.

Ernesto and Víctor – those with whom I had stacked the used chemical vessels – were two of my closest friends from Ccanccayllo, who, having few connections in the neighbourhood of Lima where they were born, 'stayed on' in Cotabambas, moving into Challhuahuacho. Their rented room was fortuitously located across the street from my own accommodation and I often stopped by after my morning coffee, hoping to follow them into the informal economy of the mining town – to sniff out fleeting opportunities for daily labour. On certain days Víctor's phone would ring and we would scamper off to help unload bricks at the construction site of

[44]I borrow the term from Henrik Vigh, who conceptualises navigation as the movement through social worlds, across waves of obstacles, 'negotiating the many more to come on one's way along an envisioned course'. See Henrik Vigh, *Navigating Terrains of War: Youth and Soldiering in Guinea-Bissau* (New York and Oxford: Berghahn, 2006), p. 54.

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a guest house or restaurant that had come late to the boom of Challhuahuacho. On other days we might stop by at a friend's woodworking shop to retrieve lumber or to deliver finished products to buyers around town. The chemical container endeavour was the most recent exploit, interrupting weeks of inactivity, and provided the brothers with a windfall payment that was unusual for their informal activity. Normally, we would toil for between 20 minutes and a couple of hours before being handed ten, 20 or 50 *soles*. Some would be stowed away for paying the rent or sent to Celestino (their father) in Ccanccayllo. The rest would cover the day's lunch and, if we felt like celebrating, a beer or two that evening.

For those who stayed in the region, without jobs or families to facilitate returns to the city, the struggle had become that of eking out a living on the margins of a saturated service economy that proved less and less fruitful as the mining zone matured. Ernesto and Víctor's insecure and informal grind reverberated in equal measure throughout the community, and petered out just as quickly. Suyai had drawn upon familial ties in Tambobamba – a neighbouring district – to obtain piecemeal work in the transportation of sheep to abattoirs. Quenti, one of the few individuals from Ccanccayllo with a car, had become an occasional taxi driver around Challhuahuacho. Other community members – in particular women whose husbands could not find manual labour – focused on the Sunday market in town, arriving early to display produce from their fields in Ccanccayllo or more 'exotic' fruit and vegetables obtained through networks of relatives that extended beyond the high altitude of Cotabambas. Sales were limited, especially given that the large restaurants of Challhuahuacho's service economy were frequently subject to inspection, and thus imported the majority of their produce from big certified farms in Arequipa. Those beyond the absorption capacity of even the informal economy were forced to eat into the meagre savings which they had put away during the construction boom. A few *retornantes* had gone so far as to sell off familial property and assets in the city to tide themselves over.

All of these informal endeavours, to essential but varying degrees, depended on connections of trust and support beyond the individual family. Yet the social capital of individuals, groups and communities living along the mine's margins seemed only and always to stretch into further rings of limitation. These dynamics were especially harsh for many of the young men who had spent their youth in the city, where informal earnings depended only on learned cunning and a degree of effort. Many of my friends and interlocutors complained how much easier it was to make a buck in the city: shining shoes, selling soft drinks along main thoroughfares, running through stalled traffic at busy intersections with snacks. It was not ideal, and far removed from professional desires, but the opportunity to peddle and hawk was always available – a comparative nostalgia which might have seemed laughable years ago during expectant returns to Cotabambas. In many ways, their complaints raised questions about the unique challenges of economic marginalisation particular to extractive investment, and, furthermore, about the prospects of alternative forms of 'informality' that might emerge.

Informal livelihoods, as an academic concern for Peruvian and Latin American social scientists, are nothing new. As rural–urban migration gave rise to debates of marginality during the mid-twentieth century, diverse theoretical orientations and

critiques of social exclusion continued to understand informality as a way of cushioning unequal outcomes: a fail-safe in the absence of full employment.[45] Yet understandings of informal livelihoods across Latin America have consistently resulted from studies of cities: a bias towards an urban dynamism not wholly appropriate to the rural mining zone. Indeed, as identified by my informants in their reflections on city hustling, the relations between corporate capitalism and its margins, following the maturation of the frontier, did not foster the more 'traditional' informal economy they had become accustomed to during their youth. This is neither unique nor, perhaps, overly surprising. Anthropologists working on contemporary extraction throughout the Global South have elucidated the desire and efforts of corporations to increasingly insulate themselves and their profits. In Appel's words, extractive industries work not only to pull resources out of the ground, but to 'disentangle the production of profit from the place in which it happens to find itself'.[46] These efforts at insulation involve minimising commitments and connections to the social margins of operations. Consequently, the new 'company towns' of rural extraction zones, as James Ferguson argues, have become dependent on imported skills and machinery, where transient contractors fly in and out with their salaries, 'hopping over' entire regions in the process.[47] As production becomes more detached from locales, fewer and fewer economic linkages are made with the communities that come to host these industrial projects, further exacerbating development incongruences.[48] In the case of the Las Bambas mine, the few local–corporate connections were largely limited to a select group of hoteliers and restaurateurs in Challhuahuacho who had negotiated special treatment when they sold land to the mine. This limited and wholly service-based economy – which also imported products, produce and labour – offered few financial pickings for industrious and ambitious individuals like Ernesto and Víctor. In order to sustain hope for social mobility, they and others would have to get creative: become less concentrated on boomtown hustling and instead cultivate informal economies that were unique to the rural mining zone they were navigating. This shift in focus would entail probing the soft underbelly of industrial mining in search of opportunities where corporate insulation and enclosure were more difficult to achieve.

Artisanal Mining on the Las Bambas Frontier

It was mid-morning, many months after my arrival in Cotabambas. I was walking along a mountain face that overlooked a hamlet of Huancarama, an affected

[45]See José Nun *et al.*, 'Marginalidad en América Latina', Centro de Investigaciones Sociales, Instituto Torcuato di Tella, Buenos Aires, 1968; Janice E. Perlman, *The Myth of Marginality: Urban Poverty and Politics in Rio de Janeiro* (Berkeley, CA: University of California Press, 1976); for brief overview see Kristine Kilanski and Javier Auyero, 'Introduction', in Javier Auyero *et al.* (eds.), *Violence at the Urban Margins* (New York: University of Oxford Press, 2015), pp. 1–17.

[46]Hannah C. Appel, 'Walls and White Elephants: Oil Extraction, Responsibility, and Infrastructural Violence in Equatorial Guinea', *Ethnography*, 13: 4 (2012), pp. 439–65.

[47]James Ferguson, *Global Shadows: Africa in the Neoliberal World Order* (Durham, NC: Duke University Press, 2006), pp. 194–210.

[48]Himley, 'Regularizing Extraction', p. 399.

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community to the east of the mine along the main transportation corridor where copper concentrate was funnelled through the province towards Cusco and then south to the coast, carried by a convoy of transfer trucks. Below music blared from a transistor radio as women dropped carefully chosen potatoes into the drills of a recently tilled *chacra*. I was with Francisco, who was chatting to me about his adolescence in Arequipa and Lima, when we came upon a cavernous hole in the face of the mountain: a mine shaft (see Fig. 1). We stopped and Francisco soon led me into the opening. There were ropes, empty beer bottles and discarded helmets and picks. Various tubes were hooked up to a water pump used to empty the shaft during the rainy season. Large timber poles ran between its rock walls.

Popular history dates such tunnels to the era of Spanish colonialism. Francisco claimed coerced locals would lead colonial agents to mountains and hills known to contain gold and silver, which were subsequently looted and left abandoned. 'But', Francisco stated with a grin, 'they didn't take the copper!' He bent down to pick up small bluish-green stones. Here, in Huancarama, the picks, helmets and beer bottles confirmed that Francisco and others had been re-entering the abandoned tunnels; indeed, digging their own in search of colonial leftovers.[49] As he allowed the chipped stone to sift through his fingers and fall to the ground, he proclaimed 'Todos estos cerros están mineralizados' ('All these hills contain minerals', lit. 'are mineralised').

It was a phrase that I had grown accustomed to hearing: a prominent if also opaque expression within the local lexicon of Las Bambas' margins. Friends and interlocutors throughout the region were fond of pointing out that 'mineralised mountains' (*cerros mineralizados*) stretched throughout the province and beyond. Given the near-uniform appearance of these hills to my foreign gaze, I had initially understood the phrase as a broad metaphor that recognised the importance the region was coming to hold within Peru: rumours and potential stirrings of more corporate interventions on the horizon. However, on this particular day in Huancarama, claims of 'mineralised mountains' were granted a concrete and tangible weight. Copper was not only an abstract commodity for global consumption, a variable or factor to be pulled through the algorithm of extractive development policy, but an object and material that could not be neatly quarantined by government and corporation in tandem. The vast veins of potential wealth that stretched for miles below these mountains spilled beyond the legal and technical capacity of formal intervention, tempting communities and individuals who planted potatoes in the soil above and now traversed the frustrating maturation of the region's mining economy.

These encroaching realisations were granted further significance by the trucks parked near the main plaza below the mountain on which we stood. Investors from the neighbouring department of Arequipa, with experience working in various informal mines throughout southern Peru, had arrived that afternoon following an invitation by community members who wished to expand production in the tunnels I had just observed. The investment team now waited for an audience on the doorstep of Huancarama's president. Following our descent from the mountain,

[49]The continued exploitation of colonial and republican mines by local populations is neither new nor unique within Latin America. See Andrea Marston, 'Of Flesh and Ore: Material Histories and Embodied Geologies', *Annals of the American Association of Geographers*, 111: 7 (2021), pp. 2078–95.

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Figure 1. Artisanal mine in Cotabambas.
Source: Author.

and the slow trickle of other *comuneros* from their fields and houses, I listened attentively as the artisanal investors delivered their pitch: labour divisions, tool provision, expertise and profit-sharing. The community appeared both appreciative and curious, interrogating further specifics through a round of questions, before agreeing to have a decision on a potential partnership in the coming weeks. The investors, buoyed by the affirmative reception they had received, carried on after handshakes to a scheduled appointment within another community further west.

Historically speaking, informal mining is not without precedent in eastern Apurímac. Further afield, in the province of Grau, artisanal activity had been carried out for decades by locals in and around the municipality of Progreso (following the discontinuation of formal exploitation at Ccochasayhuas).[50] Over time, the small-scale projects of Grau fostered an incipient transportation network between the region and copper-processing plants along the coast. Adventurous entrepreneurs with enough capital to purchase a truck traversed the dangerous highland roads of Progresso to buy sacks of minerals from communities boring into the hills. However, despite this historical precedent, lasting connections did not spill over into the province of Cotabambas, where formal large-scale mining projects did not yet exist.

This all began to change, however, following the re-migration to the region as the Las Bambas mine passed through its various stages of development. Not only were expectation and optimism beginning to saturate a once forgotten region, but large and youthful labour reserves were building up, enticing investors from neighbouring regions to engage communities on the prospects of establishing artisanal mines. The potential of these projects was fostered in no small part by the example of the community of Huayquipa. The concession of Las Bambas stretched

[50]Ccochasayhuas was one of the few large-scale mining operations which existed in eastern Apurímac during the twentieth century.

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underneath its land, including a large vein from one of the mega-project's major mineral deposits. With the influx of *retornantes* to the community, investors soon followed, and a nascent informal economy burgeoned into a prosperous precedent known throughout the region. Indeed, I discovered that my close friend Óscar had worked the informal mines of Huayquipa years ago. Returning from Lima at the behest of his father, he used family connections to gain a position in one of the many new *laborales* (labour groups). John and Renán, two other *comuneros* from Ccanccayllo, arrived from Abancay in 2010 and 2011 to work in the artisanal mines of Huayquipa prior to the construction of the Las Bambas mine. Eventually, after rigid rules for the absorption of *retornantes* were drawn up by affected communities, John, Renán and Óscar all settled in Ccanccayllo, taking their experiences with them. On certain evenings, having finished hours of communal labour in Ccanccayllo and rewarding ourselves with a few beers, Renán would speak openly about the money he had amassed in those early years working in the informal copper trade. And even though only a smattering of *comuneros* in the community worked in the mines of Huayquipa, its legend spread. Casual conversations sought to probe the accrued wealth of the neighbouring community: 'Every *comunero* [in Huayquipa] has three new trucks!', Víctor declared one day as we sat around the recently dug holes of the community's reforestation project, drinking Inca Cola. Diego followed his lead: 'They are millionaires. Ccanccayllo needs to find investors.' When Ccanccayllo might find the financial connections and expertise to follow in Huayquipa's footsteps was a simmering question as lives lurched through the incongruences of mining development, deprofessionalised futures and the slow evaporation of hustling opportunities in Challhuahuacho.

In time, I discovered that my adopted community had attempted, many years ago, prior to the construction boom and training programmes, to start its own artisanal mining scheme. To date, neither Ccanccayllo nor any other community in the province had been overly successful in replicating the artisanal economy of Huayquipa. Yet, increasingly, the topic began to infuse everyday conversation across the provincial frontier: discussions in cantinas amongst drinking parties moved from condemning critiques of endemic corruption to the prospects of investors; cross-communal dialogue on the outskirts of local festivals and anniversary celebrations included the whispers of tentative agreements, labour-group formation and contact sharing.

Furthermore, and as my encounter in Huancarama had affirmed, these projects and desires on the margins of the extractive zone were granted further weight by an increase in roving investors, travelling throughout the region in their 4 x 4 trucks, engaging frustrated communities and (re)stoking the potential that the 'mineralised mountains' still held for the better life. In Ccanccayllo artisanal investors gained a semi-regular presence on the outskirts of community meetings, waiting near the plaza for their invitation to engage the audience. The expectant financiers would step forward, present their investment plan, citing their credentials and experience in small-scale mining ventures in other parts of the country (primarily Arequipa or Puno), and the proposed dividends they would collect as a fee for their expertise and labour. As the number of prospective suitors was whittled down and samples of copper from the hills above the village plaza were sent off for testing, the fortnightly community meetings became dominated

by debates and decisions between *comuneros* on the finer points of a project inching closer to activation: plot assignment on the mountain, mandatory workdays, profit sharing across families, etc.

These emergent collaborations began to reveal and probe the possibilities which remained despite the maturation of the mining zone in eastern Apurímac. If the labour systems and residues of corporate investment had thus far failed to relate to communities in ways they desired, the navigation of the frontier opportunity continued apace. Through this process, copper itself – the original source of local transformation – was identified for its unruly potential: a resource that could not be fully enclosed by corporate or government interests; a material that spilled beyond the open pit of Las Bambas, running into the hills which mechanised extraction had not yet reached. Minerals, thus, became an outlet for surplus labour; a source of rural informality for individuals tentatively folded into global commodity chains, who continued to live, toil and aspire amongst the mountains constituting their riches. In this regard, Cotabamban communities can be seen to fit within a wider phenomenon of artisanal mining carried out by populations beyond the carrying capacity of formal economies throughout Latin America and the Global South. Scholars such as Andrea Marston, Gavin Hilson and Negar Behzadi have drawn attention to the role minerals have come to play for contemporary rural locales and, in particular, the importance of artisanal mining in cushioning precarious livelihoods.[51] This article, while in agreement with these claims, moves on to tease out the specific tensions and stresses created by community mining ventures in the shadow of corporate ownership; to investigate how artisanal and industrial extraction came to relate to one another in Cotabambas. It is an avenue of exploration in which the distinctions between the formal and informal begin to blur and the prospects for conflict or compromise become consequential.

Community Copper and Corporate Compromise

On a cool evening in September 2017, I joined an eager caravan of Ccanccayllanos along a crude road recently dug into the side of Chucruni mountain. We were off to work in the community's recently re-invigorated artisanal mines. By chance it was dark when we arrived at the make-shift camp (various small bungalows constructed from eucalyptus poles and plastic tarps). We were served soup by a young cook hired from the neighbouring district of Mara. We soon donned helmets and head lamps and braved the cold, hiking up a worn footpath before reaching the mine's entrance and assuming our positions. Óscar descended beneath a wooden platform by rope with the *perforista* (driller).[52] His father and brother-in-law weighed down a steel crank and pulley with sandbags. I grabbed the wheelbarrow before lowering down various tools to Óscar and his partner below. The work soon commenced in Fordist fashion. Rocks were chipped and chunked from the deposit

[51]Behzadi, 'Women Miners' Exclusion'; Gavin Hilson and Lydia Osei, 'Tackling Youth Unemployment in Sub-Saharan Africa: Is There a Role for Artisanal and Small-Scale Mining?', *Futures*, 62 (2014), pp. 83–94; Andrea Marston and Amy Kennemore, 'Extraction, Revolution, Plurinationalism: Rethinking Extractivism from Bolivia', *Latin American Perspectives*, 46: 2 (2019), pp. 141–60.

[52]*Perforistas*, when it comes to small-scale or artisanal mining, are generally in charge of explosives and 'reading' the walls of a mine shaft.

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below, piled into the rubber basket, and pulleyed to the platform above, where the contents were spilled into the wheelbarrow. I would then push the cart along a short path to the mouth of the mine, where the debris would be dumped. When all the loose stones were pulled to the surface, sticks of dynamite were carefully placed and detonated. The process would resume anew with breaks taken to chew coca, smoke cigarettes, sip *caña* and sort through the mounds of rock in search of verdant nuggets. Those rocks considered to have enough copper content were placed into large plastic sacks and stacked out of the way where they would some day be collected by buyers. We carried on until nearly midnight before laying out mattresses in the camp bungalows and retiring for the night.

The community divided itself into eight different labour groups that mapped onto family lines. Over the course of the few months that marked the end of my fieldwork, I divided my own toil between various groups, hoping not to alienate any family. Each group was assigned its own mining site – 20 to 50 metres separating each one – and was charged with securing its own investors and connections (either through the artisanal groups that passed through the community or by phone calls placed to friends and associates outside the region). Therefore there existed disparate levels of production on the hill. Óscar's labour group had quickly procured the support of an artisanal mining team from Cusco which, beyond providing labour and expertise, supplied them with equipment that ranged from strong wooden planks and steel cables to sophisticated drills used to burrow into the rock face for the planting of dynamite. At the other end of the spectrum was the labour group of Ernesto, Víctor, their father Celestino and a few uncles. During the weeks in which I worked with them before the arrival of the rainy season, they had not yet been able to procure much financial or logistical support and were resigned to extracting copper by pick and hand, a much slower and more laborious process.

The entire community was involved in the process, young and old alike, male and female, individuals born in the community and those from the city. Women and girls carried out the gendered domestic work that supported the labour of men, whether in the camps themselves or below in the houses. Elders, some stooped by decades of agricultural and urban labour, hauled large stones from the rock face towards the sacking area, passing their grandsons along the way. Younger cosmopolitan *retornantes*, born in the cities, lowered their heads in respect when coca leaves and *caña* were taken by the wind or poured on the ground as offerings to Pachamama ('Earth Mother'). The spectrums of gender and age, urban and rural upbringing, were washed away amongst a communal hope to see lives in dynamic motion.

While I participated and documented the emergence of artisanal mining in my adopted community, I was ambivalent – caught between the excitement that daily life was once again injected with purpose and activity, and concerns over issues of legality.[53] Perhaps my greatest fear was the consequences for friends and

[53]Peru, like most neoliberal countries in Latin America, establishes a legal distinction between surface and subsoil rights enshrined in the Ley General de Minería (General Mining Law) of 4 June 1992, decree no. 014-92-EM (https://www2.congreso.gob.pe/sicr/cendocbib/con3_uibd.nsf/89E200B65DCF6DE9052578C30077AC47/$FILE/DS_014-92-EM.pdf, last accessed 14 June 2022). While the *comuneros* of Ccancayllo were the proprietors of the land they walked upon, the copper below belonged to the corporate concession holder (MMG).

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communities should the National Police, tasked with enforcing law, or indeed MMG, the legal proprietor of the subterranean minerals, discover the extent of informal copper mining currently under way. As I listened to cantina conversations citing the process of formalising small-scale mining that was currently taking place in the country, I did my best to correct narratives: to point out that the formalisation policy now accepted by the government was aimed at artisanal mines that did not overlap with other formal concessions.[54] These debates invariably fizzled out without agreement, lost between my legal preoccupations and the moral convictions of *comuneros* eager to legitimate their claims to the region's mineral-rich mountains.

To my relief, these fears, increasingly, seemed unjustified. Chucruni mountain, where the majority of the village's artisanal mines at the time were located, formed an immense backdrop to the community. The mounds of rocks and tarped camps became visible indicators of informal labour to anyone who raised their head while in the community's plaza or along the public road on the southern limits of Ccanccayllo. Both the road and the plaza were frequented by MMG *relacionistas* (community relations workers) passing through affected communities to check on development projects and to field concerns and questions. During the final months of my stay in Ccanccayllo, while anxiously eavesdropping on encounters between corporate employees and community members, I overheard uncontentious conversations on the progress of informal mining obvious to all.

Following this realisation – that artisanal mining was neither a taboo subject, nor something to be hidden from corporate employees – I took advantage of an impromptu meeting one afternoon in Challhuahuacho with an MMG *relacionista*. Amongst the idle chit-chat that accompanied the majority of our interactions, I abruptly and candidly asked him about the proliferation of artisanal mining amongst affected communities on the western reaches of the district and, more specifically, about the corporation's position in regard to the process of informal extraction. César, the *relacionista*, did not hesitate when he talked about realities and politics I was already familiar with: 'Listen, communities are frustrated. Demanding work and projects – money. The presence of artisanal mining is something we can accept given these challenges.' The frankness of his response revealed a policy of tacit complicity; a release valve for the structural exclusion produced by mining investment's maturation.[55] It is a point worthy of discussion.

In her analysis of off-shore oil production in Equatorial Guinea, Appel argues that the fantasy of extractive capitalism is 'frictionless profit'.[56] As stated by Appel, for those in industrial management there is a shared desire for 'spaces where the production of profit can flow, evading or minimizing contestation'.[57]

[54]Beginning in late 2016, then President Pedro Pablo Kuczynski began legal proceedings to formalise small-scale mining throughout the country. By 2017 the formalisation process had begun to permeate not only national media but the cantinas of Challhuahuacho as well.

[55]According to a number of friends and acquaintances throughout the region, this tacit agreement was dependent upon a corporate stipulation that no heavy equipment (e.g. excavators, backhoes, etc.) be used in the communities' artisanal mines.

[56]Appel, 'Offshore Work'.

[57]*Ibid*., p. 693.

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Yet, in the absence of a desert ideal – or an ocean oil platform – corporate desire must bend and adjust to the realities of regions where resources co-mingle with local populations. Profit, in these instances, must negotiate the path of least resistance, or what might be called 'low-friction flows'. To a degree, CSR measures or royalty and tax payments to municipal governments work in service of this paradigm. However, amongst extractive locales where historical marginalisation has fostered notions of social mobility and desires for professionalisation that 'gifts' cannot readily appease, corporate techniques for minimising contestation must remain flexible to the agency and projects of affected communities over time. It is a negotiation, in the case of the Las Bambas project, that blurs the boundaries between licit and illicit economies: a compromise, I would argue, that fosters the emergence of 'complementary' relations between the formal and informal poles of labour and production.

Indeed, amongst the peripheries of the Las Bambas copper mine in southern Peru, the contradictions of modern mining, from initiation to production, create not only tension and disillusionment amongst affected communities, but alternative projects of betterment. As *comuneros* navigate the frustrating realities of extraction's maturation, desire for social becoming must seek out informal avenues of reprieve. MMG, as the corporate proprietor of the mineral concession, implicitly accepts the presence of artisanal tunnels throughout the region, recognising the incendiary nature of the mine's margins and the threat that permanent superfluity poses to the profit flow of mining capitalism. Corporate policy, rather than contest ownership over minerals, folds artisanal mining into its strategic engagement with local communities. The result is a bifurcated yet complementary system of extraction: tunnels and pits, modern and ancient, formal and informal, resolving – to a degree and at least momentarily – the incongruences of corporate-led development amongst aspirational communities and individuals.

This is in no way to suggest that complementarity is a sealed equilibrium of harmony or a permanent and stable form of homeostasis. Despite the popular claim that 'all mountains' in the region are 'mineralised', the most successful artisanal ventures during my fieldwork were largely confined to the western perimeter of the Las Bambas concession (where mineral concentration was richest). *Paros* (strikes or protests) were evoked and debated by certain communities and road blockades festered throughout the region as the grand promises and pitfalls of corporate investment were continuously navigated and negotiated. Yet, I would argue, informal mining ventures have provided one particular outlet for the frustrating frictions of social mobility and (de)professional transitions: emergent and temporary breaks to the potential combustibility of extractive development's contradictions and challenges over time.

It was little wonder, then, during my final months of fieldwork in Cotabambas, while I attempted to hitch-hike back to Challhuahuacho, that I consistently encountered out-of-town copper buyers traversing the road towards Abancay, pestering lonely travellers such as myself in the hopes of discovering which communities had minerals for sale. As emergent middlemen, they climbed the beaten tracks to Ccanccayllo, Sonccoccocha, Pichihua and Pincachuacho in search of booty to re-sell at artisanal processing plants along the Peruvian coast. The proliferation of these buyers and investors meant that these once quiet roads of

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eastern Apurímac were no longer dominated or monopolised by the corporate vehicles of MMG, checking in on the various project 'gifts' of responsible social investment. Indeed, this tapestry of traffic constituted the disparate poles of informal and formal economies that sustained the region and highlighted the emergent complementary functioning of mining capitalism throughout the Las Bambas copper zone.

Conclusion

One afternoon, sitting with Óscar on the ridge above the community plaza, we returned to the topic of his future. His labour group had just finished a few hard weeks in the mine and over 100 25 kg sacks of copper sat in expectation of collection. He had been doing some mental calculations on what they might expect to share between them when the informal buyers arrived. His demeanour was once again animated by hope. In the months before informal mining had begun in Ccanccayllo he had descended into a depressive malaise, stumbling through the streets of Challhuahuacho from bar to bar, often drinking on credit or from the generosity of others. He had now regained his confidence and bearings, speaking with sober pride about investing his money in an apparel store in Abancay near his brother's house, moving his family there and starting a new and stable life. Thus, after over a year of fieldwork, as sacks of copper were accumulating near the hilltops of Ccanccayllo, I became witness to an optimistic future that had previously been elusive and fleeting.

In many ways, Óscar's personal journey exemplifies broader trends in the challenges, navigation and compromises that constitute the shifting margins of mining investment. The initiation of the Las Bambas copper mine in a once-forgotten region appeared as a promising opportunity for social mobility, offering, it seemed, professional possibilities for those in search of the better life. Yet the mirage of formal employment and the limited pickings of a boomtown economy forced mineral optimism and agential manoeuvrings into the uncharted territory of rural marginality. Copper, a mineral dispersed throughout the region and beyond the enclosure capacity of government and corporation alike, became a source of opportunity and negotiation; artisanal mining ventures becoming complementary modifications that toned down the starkness of development incongruences over time. The compromises at play in maintaining the feasibility of the Las Bambas copper project challenge scholars of extraction to move beyond the thematics of conflict alone and investigate the unintended outcomes of industrial mining as a negotiated process.

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Spanish abstract

El conflicto se ha vuelto un concepto central para entender la expansión reciente de la minería a lo largo de los Andes. Ahora bien, mientras que puede surgir oposición a la misma y de hecho sucede, la extracción continua de minerales requiere que los académicos atiendan a cómo es que los proyectos mineros mantienen su viabilidad. Este artículo va más allá de los análisis del conflicto para dilucidar el papel de los arreglos para alcanzar situaciones temporales de homeostasis. Utilizando datos etnográficos recolectados en la mina de cobre de Las Bambas en el altiplano del sur del Perú, exploro la agencia de las comunidades afectadas por la minería y los proyectos que desarrollaron en búsqueda de 'una vida mejor'. El artículo dilucida los retos que la producción industrial representa al empleo profesional, las limitaciones del *hustling* (actividad económica informal) para individuos con deseos de mejorar su situación, y el aumento de la minería artesanal como proyecto de movilidad social. Ultimadamente, la aceptación de esta minería 'ilegal' por los propietarios corporativos demuestra la naturaleza complementaria que la extracción formal e informal juega en reducir la conflictividad social.

Spanish keywords: Andes; Perú; minería; desarrollo; informalidad

Portuguese abstract

O conflito tornou-se um conceito central para entender a recente expansão da mineração nos Andes. No entanto, embora a contestação possa surgir e o fez, a extração contínua de minerais exige que os estudiosos observem como os projetos de mineração mantêm a viabilidade. Este artigo vai além das análises de conflito para elucidar o papel do compromisso na obtenção de estados temporários de homeostase. Usando dados etnográficos coletados na mina de cobre Las Bambas, nas terras altas do sul do Peru, exploro a navegação de agentes de comunidades afetadas pela mineração e os projetos que desenvolvem em busca de 'uma vida melhor'. O artigo elucida os desafios que a produção industrial apresenta para o emprego profissional, as limitações do *hustling* (atividade econômica informal) para indivíduos que desejam melhorar sua situação e a ascensão da mineração artesanal como projeto de mobilidade social. Em última análise, a aceitação de tal mineração 'ilegal' por proprietários corporativos demonstra a natureza complementar que a extração informal e formal desempenha para aliviar o ímpeto do conflito.

Portuguese keywords: Andes; Peru; mineração; desenvolvimento; informalidade

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